REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

January 18, 2019

Wisconsin Department of Natural Resources
Attn: Ms. Carrie Stoltz
107 Sutliff Avenue
Rhinelander, WI 54501

Subject:

Soil Excavation Report
Thomas Service Station (Former)
51 Wisconsin Avenue
Montreal, WI
BRRTS #03-26-000788
PECFA #54550-9999-00

Dear Ms. Stoltz:

Enclosed is the Soil Excavation Report for the above-mentioned site. REI has completed the proposed soil excavation along with a pre and post soil excavation groundwater sampling events. The soil excavation was successful in removing the identified residual soil contamination and the post excavation groundwater analytical results report minimal groundwater contamination.

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

Sincerely,
REI Engineering, Inc.

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

Enclosure

CC: Iron County, Attn: Ms. Erika Roeder, 300 Taconite Street, Suite 115, Hurley, WI 54534

REI

CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

Soil Excavation Report

Thomas Service Station
Montreal, Wisconsin

WDNR BRRTS #03-26-000788
PECFA #54550-9999-00
REI Project #7644

COMPREHENSIVE
SERVICES WITH
PRACTICAL
SOLUTIONS

Soil Excavation Report

Thomas Service Station
51 Wisconsin Avenue
Montreal, WI

BRRTS #03-26-000788
PECFA #54550-9999-00

REI #7644

Prepared for:

Iron County
Attn: Ms. Erika Roeder
300 Taconite Street, Suite 115
Hurley, WI 54534

January 2019

SOIL EXCAVATION REPORT

THOMAS SERVICE STATION
51 WISCONSIN AVENUE
MONTREAL, WI

BRRTS #03-26-000788
PECFA #54550-9999-00

REI #7644

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

Environmental Scientist

1-18-19
Date

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THOMAS SERVICE STATION
51 WISCONSIN AVENUE
MONTREAL, WI

BRRTS #03-26-000788
PECFA #54550-9999-00

REI #7644

1.0 INTRODUCTION

1.1 Purpose

This report presents a summary of the completion of an excavation to remove petroleum impacted soil and a round of both pre and post excavation groundwater sampling from former Thomas Service Station site in Montreal, Wisconsin. The site location is shown on Figure 1.

2.0 SITE BACKGROUND AND HISTORY

The former Thomas Service Station site is located in the SE ¼ of the SW ¼ of Section 27, Township 46 North, Range 02 East, in the City of Montreal, Iron County, Wisconsin (Figure 1). The site address is 51 Wisconsin Avenue, Montreal, Wisconsin 54550. Wisconsin Transverse Mercator (WTM) coordinates are 502429, 662035. A site map documenting previous investigative site work is included in Figure 2.

3.0 SUMMARY OF WORK

3.1 Excavation and Removal of Contaminated Soils

On September 17-19, 2018, REI was on site to oversee the excavation of petroleum impacted soils from the former Thomas Service site. The soil excavation was intended to remove the majority of the petroleum impacted soil identified at the site and reduce contaminant loading from the soil to the groundwater through source removal. SGS Environmental Contracting LLC of Merrill, WI was subcontracted to complete the excavation and hauling.

Although the excavation was completed to a depth of approximately eight (8) feet, the depth to groundwater in the excavation was measured at approximately six (6) feet below land surface (bls). Monitoring well MW4, located within the excavated area, was abandoned prior to the excavation and replaced by MW4R following the excavation. A copy of the abandonment form for MW4 is included in Appendix A.

During the completion of the soil excavation it became obvious the impacted soil being removed was fill material from historic mining operations in the immediate area. Much of the excavated material was broken angular rock, with minimal actual soil. This made excavation efforts quite difficult. Soil contaminant concentrations were very high, and sparks generated by the excavator bucket scraping on the rock started numerous small fires. The soil excavation was completed to a depth of approximately eight (8) feet bls. The area of the completed soil excavation is presented in Figure 3. A total of 876.34 tons of petroleum impacted soil was removed from the site and hauled to the Waste Management Timberland Trail Landfill in Weyerhaeuser, WI for final treatment and disposal. A copy of the landfill scale data documenting soil disposal is included in Appendix B. Photographs of the soil excavation are included in Appendix C.

The completed soil excavation was backfilled with granular material and compacted to a depth of approximately eight (8) inches bls. Gravel was used as final cover over the entire are of the soil excavation.

3.2 Confirmatory Soil Analytical Results

During the excavation activities, soil samples were field screened with a RAE photo ionization detector (PID) equipped with a 10.6 eV lamp for the presence of total organic vapors. PID results aided in determining the final extent and direction of the completed soil excavation. Nineteen (19) soil samples were collected from the sidewalls of the excavation for field screening with the PID. No bottom of excavation samples were collected as the excavation extended into the water table and groundwater was present in the bottom of the excavation. A total of seventeen (17) select soil samples were collected and analyzed for Petroleum Volatile Organic Compounds (PVOC's) and naphthalene at Pace Laboratories, Green Bay, Wisconsin.

Figure 3 documents the locations of the confirmatory soil samples taken during the excavation.

Following the completion of the soil excavation, no residual soil contamination concentrations remain in excess of the allowable NR 720 Non-Industrial Not to Exceed Direct Contact RCL and the NR 140 Groundwater Pathway Protection values established for petroleum compounds. Table 1 summarizes the laboratory analytical results from the seventeen (17) soil samples collected for laboratory analysis during the soil excavation activities. The soil laboratory analytical reports from the soil excavation are presented in Appendix D.

3.3 Monitoring Well Installation

On September 26, 2018, REI was on site to direct and oversee the installation of replacement monitoring well MW4R. Gestra Engineering, Inc. of Milwaukee, WI was contracted to install the well. MW4R was blind drilled, developed, sampled and surveyed into the existing well network. A soil boring log, well construction form and well development form are included in Appendix A. All purge water was containerized in 55-gallon DOT approved steel drums and taken to Wausau Wastewater Treatment Plant for disposal. Soil cuttings were also containerized in 55-gallon DOT approved steel drums and taken to the Lincoln County Landfill. Disposal Documentation is included in Appendix E.

3.4 Groundwater Monitoring and Analytical Results

One (1) round of groundwater sampling was completed prior to the soil excavation on August 27, 2018 and a single post soil excavation sample event on November 26, 2018. Depth to groundwater was measured in each well prior to sampling. Table 2 presents the depth to groundwater and groundwater elevations for this investigation. Figure 4 is a groundwater contour map completed for the November 26, 2018 sampling date. Groundwater is shown flowing northwesterly and is consistent with previous groundwater flow directions.

Groundwater samples were collected and submitted to Pace Analytical, Green Bay, WI for analysis of PVOC and naphthalene compounds. Groundwater analytical

results are summarized in Tables 3a-j. The complete laboratory analytical report is included as Appendix F.

Analysis of the groundwater analytical data collected on November 26, 2018 indicated minimal presence of petroleum compounds above NR 140.10 Groundwater Quality Enforcement Standard (ES) and/or Preventive Action Limits (PAL). No NR 140.10 Groundwater Quality ES exceedances were reported in any of the monitoring points and the NR 140.10 Groundwater Quality PAL was only exceeded at MW4R for benzene.

4.0 CONCLUSION AND RECOMMENDATIONS

The former Thomas Service site had significant levels of petroleum related soil contamination and minimal concentrations of petroleum related groundwater contamination. The completed soil excavation was successful in removing the known areas of petroleum related soil contamination and eliminated the direct contact threat from the shallow soil contamination beneath the former Thomas Service site.

The single post soil excavation groundwater sampling event results were consistent with historical groundwater sampling results and minimal petroleum related groundwater contamination was reported in the wells. REI is recommending the completion of previously approved quarterly groundwater sampling events at which time the investigation would likely be ready for case closure consideration.

Table 1
Summary of Soil Analytical Results
Soil Excavation
Former Thomas Service Station
Montreal, Wisconsin

			Sample ID -->	CSS#1	CSS#2	CSS#3	CSS#4	CSS#5	CSS#6	CSS#7	CSS#8	CSS#9
			Date -->	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/18/2018	9/19/2018	9/19/2018	9/19/2018	9/19/2018
			Sample Depth -->	4	4	4	4	4	4	4	4	4
			Percent Moisture -->	11.2%	19.8%	15.9%	16.2%	14.6%	14.5%	8.4%	10.6%	12.9%
			Sampler -->	REI Engineering, Inc.								
Petroleum VOC's (µg/kg)	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	NR 140 Groundwater Pathway Protection									
Benzene	1,600	7,070	5.10	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Ethylbenzene	8,020	35,400	1,570	< 25	< 25	< 25	< 25	< 25	< 25	< 25	29[J]	< 25
Toluene	63,800	282,000	27	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Xylenes (Total)	5,520	24,100	658.20	< 50	< 50	281	< 50	< 50	< 50	< 25	30.9[J]	< 50
Methly tert Butyl Ether	818,000	818,000	1,107.20	< 25	< 25	< 25	< 25	< 25	< 25	< 25	30[J]	< 25
1,2,4-Trimethylbenzene	219,000	219,000	1.3787	< 25	< 25	239	< 25	< 25	< 25	87.3	51.4[J]	< 25
1,3,5-Trimethylbenzene	182,000	182,000		< 25	< 25	79.6	< 25	< 25	< 25	< 25	< 25	< 25
Trimethylbenzenes (Total)	260	260	3.96	< 25	< 25	318.6	< 25	< 25	< 25	87.3	51.4[J]	< 25
Naphthalene				< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25

			Sample ID -->	CSS#10	CSS#11	CSS#12	CSS#13	CSS#14	CSS#15	CSS#16	CSS#17
			Date -->	9/19/2018	9/19/2018	9/19/2018	9/19/2018	9/19/2018	9/19/2018	9/19/2018	9/19/2018
			Sample Depth -->	4	4	4	4	4	4	4	4
			Percent Moisture -->	14.2%	14.8%	12.0%	11.7%	9.8%	12.8%	12.5%	19.9%
			Sampler -->	REI Engineering, Inc.							
Petroleum VOC's (µg/kg)	Non-Industrial Not-To-Exceed DC RCL		NR 140 Groundwater Pathway Protection (DF=2)								
Benzene	1,600	7,070	5.10	< 26.3	< 25	< 29.1	< 25	< 25	< 65.8	< 25	< 25
Ethylbenzene	8,020	35,400	1,570	< 26.3	< 25	< 29.1	< 25	< 25	< 65.8	< 25	< 25
Toluene	63,800	282,000	27	< 26.3	< 25	< 29.1	< 25	< 25	< 65.8	< 25	< 25
Xylenes (Total)	5,520	24,100	658.20	< 52.6	< 50	< 58.1	< 50	< 50	< 132	< 50	< 50
Methly tert Butyl Ether	818,000	818,000	1,107.20	< 26.3	< 25	< 29.1	< 25	< 25	< 65.8	< 25	< 25
1,2,4-Trimethylbenzene	219,000	219,000	1.3787	< 26.3	< 25	83.8	< 25	< 25	91.3[J]	< 25	49.1[J]
1,3,5-Trimethylbenzene	182,000	182,000		< 26.3	< 25	< 29.1	< 25	< 25	< 65.8	< 25	< 25
Trimethylbenzenes (Total)	260	260	3.96	< 26.3	< 25	83.8	< 25	< 25	91.3[J]	< 25	49.1[J]
Naphthalene				< 26.3	< 25	< 29.1	< 25	< 25	< 65.8	< 25	< 25

Notes:

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

Table 2
Depth to Water and Water Table Elevations
Thomas Service
Montreal, Wisconsin

Depth to Water (feet) below Reference Elevation

Date	MW1	MW2	MW3	MW4	MW4R	MW5	MW6	MW7	MW8
9/21/2011	7.18	4.33	5.29	4.11					
8/27/2012	7.31	4.40	5.37	4.08					
6/21/2017	6.55	3.73	4.52	3.32		3.38		5.26	7.57
7/6/2017	6.29	3.73	4.53	3.32		3.43	5.11	5.03	7.54
8/30/2017	6.58	3.91	4.80	3.44		3.51	5.49	5.04	7.53
8/27/2018	5.93	3.49	4.26	3.15		3.34	4.97	4.66	7.41
11/26/2018	5.92	3.03	3.91	Abandoned	2.94	3.12	4.94	5.53	dry

Measuring Point Elevations

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

Top of Casing Elevation

Initial Survey	103.38	98.99	99.71	99.86					
7/6/2017	1,461.01	1,456.58	1,457.32	1,457.48		1,457.52	1,460.65	1,456.19	1,456.41
9/26/2018					1,457.24				

Ground Surface Elevation

Initial Survey	100.47	99.41	100.01	100.13					
7/6/2017	1,458.03	1,457.00	1457.56	1,457.73		1,457.79	1,457.49	1,456.85	1,456.66
9/26/2018					1,457.59				

Depth to Water (feet) below Ground Surface

Average	3.34	4.00	4.70	3.58		3.36	5.13	5.10	7.51
Maximum	3.67	4.33	5.10	3.71		3.51	5.49	5.53	7.57
Minimum	3.01	3.45	4.21	3.42		3.12	4.94	4.66	7.41
Range	0.66	0.88	0.89	0.29		0.39	0.55	0.87	0.16

Water Level Elevation (feet MSL)

Date	MW1	MW2	MW3	MW4		MW5	MW6	MW7	MW8
9/21/2011	96.20	94.66	94.42	95.75					0.00
8/27/2012	96.07	94.59	94.34	95.78					0.00
6/21/2017	1,454.46	1,452.85	1,452.80	1,454.16		1,454.14		1,450.93	1,448.84
7/6/2017	1,454.72	1,452.85	1,452.79	1,454.16		1,454.09	1,455.54	1,451.16	1,448.87
8/30/2017	1,454.43	1,452.67	1,452.52	1,454.04		1,454.01	1,455.16	1,451.15	1,448.88
8/27/2018	1,455.08	1,453.09	1,453.06	1,454.33		1,454.18	1,455.68	1,451.53	1,449.00
11/26/2018	1,455.09	1,453.55	1,453.41		1,454.30	1,454.40	1,455.71	1,450.66	

Table 3a
Summary of Groundwater Analytical Results
Soil Borings
Thomas Service
Montreal, Wisconsin

				Collected by EnviroScience						
			Sample Location ->	SB-6	MW1A		MW2A		MW3A	
			Date ->	5/25/1994	5/4/1995	6/26/1995	5/4/1995	6/26/1995	5/4/1995	6/26/1995
Detected VOC Parameters	ES	PAL	Units							
Benzene	5	0.5	µg/l	< 1.0	< 0.4	< 1.0	< 0.4	< 1.0	< 0.4	< 1.0
Toluene	800	160	µg/l	< 1.0	< 0.6	< 1.0	< 0.6	< 1.0	< 0.6	< 1.0
Ethylbenzene	700	140	µg/l	< 1.0	< 0.8	< 1.0	< 0.8	< 1.0	< 0.8	< 1.0
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0	< 1.3	< 2.0	< 1.3	< 2.0	< 1.3	< 2.0
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 1.0	< 1.0	< 4.0	< 1.0	< 4.0	< 1.0	< 4.0
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 1.0	< 0.7	< 1.0	< 0.7	< 1.0	< 0.7	< 1.0
Naphthalene	100	10	µg/l	NA	< 1.6	NA	< 1.6	NA	< 1.6	NA
Diesel Range Organics (DRO)			mg/l	NA	< 0.1	< 0.1	< 0.1	< 0.1	0.29	< 0.1
Gasoline Range Organics (GRO)			mg/l	NA	NA	< 50	NA	< 50	NA	< 50
PAH Parameters										
Acenaphthene			µg/l	NA	< 2.0	NA	< 2.0	NA	< 2.0	NA
Acenaphthylene			µg/l	NA	< 1.5	NA	< 1.5	NA	< 1.5	NA
Anthracene	3,000	600	µg/l	NA	< 0.05	NA	< 0.05	NA	< 0.05	NA
Benzo(a)Anthracene			µg/l	NA	< 0.10	NA	< 0.10	NA	< 0.10	NA
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	< 0.10	NA	< 0.10	NA	< 0.10	NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	< 0.20	NA	< 0.20	NA	< 0.20	NA
Benzo(ghi)Perylene			µg/l	NA	< 0.20	NA	< 0.20	NA	< 0.20	NA
Benzo(k)Fluoranthene			µg/l	NA	< 0.05	NA	< 0.05	NA	< 0.05	NA
Chrysene	0.2	0.02	µg/l	NA	< 0.10	NA	< 0.10	NA	< 0.10	NA
Dibenzo(a,h)anthracene			µg/l	NA	< 0.20	NA	< 0.20	NA	< 0.20	NA
Fluoranthene	400	80	µg/l	NA	< 0.30	NA	< 0.30	NA	< 0.30	NA
Fluorene	400	80	µg/l	NA	< 0.31	NA	< 0.31	NA	< 0.31	NA
Indeno(1,2,3-cd)Pyrene			µg/l	NA	< 0.20	NA	< 0.20	NA	< 0.20	NA
1-Methyl Naphthalene			µg/l	NA	< 1.5	NA	< 1.5	NA	< 1.5	NA
2-Methyl Naphthalene			µg/l	NA	< 1.5	NA	< 1.5	NA	< 1.5	NA
Naphthalene	100	10	µg/l	NA	< 1.5	NA	< 1.5	NA	< 1.5	NA
Phenanthrene			µg/l	NA	< 0.20	NA	< 0.20	NA	< 0.20	NA
Pyrene	250	50	µg/l	NA	< 0.10	NA	< 0.10	NA	< 0.10	NA

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

Table 3b
Summary of Groundwater Analytical Results
Soil Borings
Thomas Service
Montreal, Wisconsin

				Collected by Coleman Engineering			
			Sample Location ->	Tank Pit	B-1 (well)	B-6 (well)	B-7 (well)
			Date ->	9/16/2010	11/17/2010	11/17/2010	11/17/2010
Detected VOC Parameters	ES	PAL	Units				
Benzene	5	0.5	µg/l	1.5	**31.9**	< 7.8	*4.6*
Toluene	800	160	µg/l	7.5	35.5	17.6[J]	< 0.42
Ethylbenzene	700	140	µg/l	8.4	*444*	27.4	< 0.41
Xylenes (mixed isomers)	2,000	400	µg/l	54.7	**2,521**	43[J]	< 1.0
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38	11.9	*55.1*	< 0.38
Trimethylbenzenes (mixed isomers)	480	96	µg/l	5.1	**1,800**	71.2	< 0.43
Naphthalene	100	10	µg/l	NA	**132**	*30.1*	< 0.40
PAH Parameters							
Acenaphthene			µg/l	NA	NA	NA	NA
Acenaphthylene			µg/l	NA	NA	NA	NA
Anthracene	3,000	600	µg/l	NA	NA	NA	NA
Benzo(a)Anthracene			µg/l	NA	NA	NA	NA
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	NA	NA	NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	NA	NA	NA
Benzo(ghi)Perylene			µg/l	NA	NA	NA	NA
Benzo(k)Fluoranthene			µg/l	NA	NA	NA	NA
Chrysene	0.2	0.02	µg/l	NA	NA	NA	NA
Dibenzo(a,h)anthracene			µg/l	NA	NA	NA	NA
Fluoranthene	400	80	µg/l	NA	NA	NA	NA
Fluorene	400	80	µg/l	NA	NA	NA	NA
Indeno(1,2,3-cd)Pyrene			µg/l	NA	NA	NA	NA
1-Methyl Naphthalene			µg/l	NA	NA	NA	NA
2-Methyl Naphthalene			µg/l	NA	NA	NA	NA
Naphthalene	100	10	µg/l	NA	NA	NA	NA
Phenanthrene			µg/l	NA	NA	NA	NA
Pyrene	250	50	µg/l	NA	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
[J] = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3c
Summary of Groundwater Analytical Results
MW1
Thomas Service
Montreal, Wisconsin

	Samples Collected By ->			Coleman		REI				
			Date ->	9/21/2011	8/27/2012	4/27/2017	6/21/2017	8/27/2018	9/17/2018	11/26/2018
Detected VOC Parameters	ES	PAL	Units							
Benzene	5	0.5	µg/l	1.6	< 0.39	<0.40	<0.50	< 0.31		< 0.31
Toluene	800	160	µg/l	1.9	< 0.42	<0.39	<0.50	< 0.49		< 0.49
Ethylbenzene	700	140	µg/l	0.54[J]	< 0.41	<0.39	<0.50	< 0.33		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	0.83[J]	< 0.87	<0.80	<1.0	< 0.66		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38	< 0.38	<0.48	<0.17	< 0.32		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	3.3	< 0.43	<0.42	<0.50	< 0.34		< 0.34
Naphthalene	100	10	µg/l	0.99[J]	NA	<0.42	<2.5	< 0.51		< 0.51
PAH Parameters										
Acenaphthene			µg/l	NA	0.025[J]	NA	0.014[J]	NA		NA
Acenaphthylene			µg/l	NA	0.006[J]	NA	0.010[J]	NA		NA
Anthracene	3,000	600	µg/l	NA	0.0098[J]	NA	0.017[J]	NA		NA
Benzo(a)Anthracene			µg/l	NA	< 0.0042	NA	0.016[J]	NA		NA
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	< 0.0042	NA	0.011[J]	NA		NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	< 0.0045	NA	0.014[J]	NA		NA
Benzo(ghi)Perylene			µg/l	NA	< 0.0053	NA	0.019[J]	NA		NA
Benzo(k)Fluoranthene			µg/l	NA	< 0.0047	NA	0.0078[J]	NA	Soil	NA
Chrysene	0.2	0.02	µg/l	NA	0.0061[J]	NA	0.026[J]	NA	Excavation	NA
Dibenzo(a,h)anthracene			µg/l	NA	< 0.0089	NA	<0.0096	NA		NA
Fluoranthene	400	80	µg/l	NA	0.0094[J]	NA	0.043[J]	NA		NA
Fluorene	400	80	µg/l	NA	0.043[J]	NA	0.045	NA		NA
Indeno(1,2,3-cd)Pyrene			µg/l	NA	< 0.0052	NA	<0.017	NA		NA
1-Methyl Naphthalene			µg/l	NA	0.0092[J]	NA	<0.0057	NA		NA
2-Methyl Naphthalene			µg/l	NA	< 0.0046	NA	0.0053[J]	NA		NA
Naphthalene	100	10	µg/l	NA	0.032[J]	NA	<0.018	NA		NA
Phenanthrene			µg/l	NA	0.0098[J]	NA	<0.013	NA		NA
Pyrene	250	50	µg/l	NA	0.018[J]	NA	0.095	NA		NA
Field Measurements										
Temperature			°F	NA	NA	NA	NA	57.9		44.1
Conductivity			µS/cm	NA	NA	NA	NA	1,275		1,341
pH				NA	NA	NA	NA	6.46		6.7
Dissolved Oxygen			mg/l	NA	NA	NA	NA	0.31		1.86
ORP			mV	NA	NA	NA	NA	-10.1		66.1

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

Table 3d
Summary of Groundwater Analytical Results
MW2
Thomas Service
Montreal, Wisconsin

	Samples Collected By ->			Coleman		REI				
			Date ->	9/21/2011	8/27/2012	4/27/2017	6/21/2017	8/27/2018	9/17/2018	11/26/2018
Detected VOC Parameters	ES	PAL	Units							
Benzene	5	0.5	µg/l	< 0.39	< 0.39	**22.8**	**10.6**	< 0.31		0.67[J]
Toluene	800	160	µg/l	< 0.42	< 0.42	3.5	0.94[J]	< 0.49		< 0.49
Ethylbenzene	700	140	µg/l	< 0.41	< 0.41	80.4	28.4	< 0.33		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.87	< 0.87	82.7	20.4	< 0.66		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38	< 0.38	2.6	<0.17	< 0.32		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43	< 0.43	87.7	22.9	< 0.34		< 0.34
Naphthalene	100	10	µg/l	< 0.40	NA	*22.1*	2.6[J]	< 0.51		< 0.51
PAH Parameters										
Acenaphthene			µg/l	NA	0.0057[J]	NA	0.069	NA		NA
Acenaphthylene			µg/l	NA	< 0.0029	NA	0.031	NA		NA
Anthracene	3,000	600	µg/l	NA	< 0.0026	NA	0.012[J]	NA		NA
Benzo(a)Anthracene			µg/l	NA	< 0.0042	NA	<0.0069	NA		NA
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	< 0.0042	NA	<0.0096	NA		NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	< 0.0045	NA	<0.0052	NA		NA
Benzo(ghi)Perylene			µg/l	NA	< 0.0053	NA	<0.0062	NA		NA
Benzo(k)Fluoranthene			µg/l	NA	< 0.0047	NA	<0.0069	NA	Soil	NA
Chrysene	0.2	0.02	µg/l	NA	< 0.0046	NA	<0.012	NA	Excavation	NA
Dibenzo(a,h)anthracene			µg/l	NA	< 0.0089	NA	<0.0091	NA		NA
Fluoranthene	400	80	µg/l	NA	0.0036[J]	NA	<0.0097	NA		NA
Fluorene	400	80	µg/l	NA	< 0.0029	NA	0.074	NA		NA
Indeno(1,2,3-cd)Pyrene			µg/l	NA	< 0.0052	NA	<0.016	NA		NA
1-Methyl Naphthalene			µg/l	NA	< 0.0044	NA	3.6	NA		NA
2-Methyl Naphthalene			µg/l	NA	0.0047[J]	NA	0.88	NA		NA
Naphthalene	100	10	µg/l	NA	0.032[J]	NA	6.1	NA		NA
Phenanthrene			µg/l	NA	0.0088[J]	NA	0.077	NA		NA
Pyrene	250	50	µg/l	NA	0.0055[J]	NA	0.013[J]	NA		NA
Field Measurements										
Temperature			°F	NA	NA	NA	NA	67.3		45.0
Conductivity			µS/cm	NA	NA	NA	NA	1,731		820
pH				NA	NA	NA	NA	6.72		7.64
Dissolved Oxygen			mg/l	NA	NA	NA	NA	0.49		0.73
ORP			mV	NA	NA	NA	NA	-62.3		-79.1

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

Table 3e
Summary of Groundwater Analytical Results
MW3
Thomas Service
Montreal, Wisconsin

	Samples Collected By ->			Coleman		REI				
			Date ->	9/21/2011	8/27/2012	4/27/2017	6/21/2017	8/27/2018	9/17/2018	11/29/2018
Detected VOC Parameters	ES	PAL	Units							
Benzene	5	0.5	µg/l	< 0.39	< 0.39	<0.40	<0.50	< 0.31		< 0.31
Toluene	800	160	µg/l	< 0.42	< 0.42	<0.39	<0.50	< 0.49		< 0.49
Ethylbenzene	700	140	µg/l	< 0.41	< 0.41	<0.39	<0.50	< 0.33		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.87	< 0.87	<0.80	<1.0	< 0.66		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38	< 0.38	<0.48	<0.17	< 0.32		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43	< 0.43	<0.42	<0.50	< 0.34		< 0.34
Naphthalene	100	10	µg/l	< 0.40	NA	<0.42	<2.5	< 0.51		< 0.51
PAH Parameters										
Acenaphthene			µg/l	NA	0.0045[J]	NA	<0.0058	NA		NA
Acenaphthylene			µg/l	NA	< 0.0029	NA	0.0049[J]	NA		NA
Anthracene	3,000	600	µg/l	NA	0.0044[J]	NA	0.011[J]	NA		NA
Benzo(a)Anthracene			µg/l	NA	< 0.0042	NA	<0.0072	NA		NA
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	< 0.0042	NA	<0.010	NA		NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	< 0.0045	NA	<0.0055	NA		NA
Benzo(ghi)Perylene			µg/l	NA	< 0.0053	NA	<0.0065	NA		NA
Benzo(k)Fluoranthene			µg/l	NA	< 0.0047	NA	<0.0072	NA	Soil	NA
Chrysene	0.2	0.02	µg/l	NA	< 0.0046	NA	<0.012	NA	Excavation	NA
Dibenzo(a,h)anthracene			µg/l	NA	< 0.0089	NA	<0.0095	NA		NA
Fluoranthene	400	80	µg/l	NA	0.0093[J]	NA	0.020[J]	NA		NA
Fluorene	400	80	µg/l	NA	0.000[J]	NA	0.042	NA		NA
Indeno(1,2,3-cd)Pyrene			µg/l	NA	< 0.0052	NA	<0.017	NA		NA
1-Methyl Naphthalene			µg/l	NA	< 0.0044	NA	<0.0056	NA		NA
2-Methyl Naphthalene			µg/l	NA	< 0.0046	NA	0.0060[J]	NA		NA
Naphthalene	100	10	µg/l	NA	0.021[J]	NA	<0.017	NA		NA
Phenanthrene			µg/l	NA	< 0.0081	NA	<0.013	NA		NA
Pyrene	250	50	µg/l	NA	0.030[J]	NA	0.056	NA		NA
Field Measurements										
Temperature			°F	NA	NA	NA	NA	57.3		44.2
Conductivity			µS/cm	NA	NA	NA	NA	236.1		223.8
pH				NA	NA	NA	NA	5.74		5.94
Dissolved Oxygen			mg/l	NA	NA	NA	NA	2.82		1.04
ORP			mV	NA	NA	NA	NA	118.4		207.6

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

Table 3f
Summary of Groundwater Analytical Results
MW4/MW4R
Thomas Service
Montreal, Wisconsin

			Well ->	MW4						MW4R	
			Samples Collected By ->	Coleman		REI					
			Date ->	9/21/2011	8/27/2012	4/27/2017	6/21/2017	8/27/2018	9/17/2018	9/29/2018	11/29/2018
Detected VOC Parameters	ES	PAL	Units								
Benzene	5	0.5	µg/l	**18.8**	**7.4**	**7.8**	*2.2*	*3.1*		**18.4**	*2.4*
Toluene	800	160	µg/l	6.3	0.74[J]	2.5	<0.50	1.1[J]		*211*	2.1
Ethylbenzene	700	140	µg/l	99.5	37.5	34.6	15.5	17.4		*218*	67.2
Xylenes (mixed isomers)	2,000	400	µg/l	*505*	60.1	118.8	12.5	55		**2,770**	186.1
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	7.1	0.58[J]	2.7	<0.17	0.66[J]		< 3.2	3.8
Trimethylbenzenes (mixed isomers)	480	96	µg/l	*380*	55.7	48.8	57.3	38.9		**1,226**	552
Naphthalene	100	10	µg/l	*36.3*	NA	7.2	2.9[J]	4.6		**134**	52.1
PAH Parameters											
Acenaphthene			µg/l	NA	0.030[J]	NA	0.034	NA		NA	NA
Acenaphthylene			µg/l	NA	< 0.029	NA	0.013[J]	NA		NA	NA
Anthracene	3,000	600	µg/l	NA	< 0.026	NA	<0.0094	NA		NA	NA
Benzo(a)Anthracene			µg/l	NA	< 0.042	NA	<0.0068	NA		NA	NA
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	< 0.042	NA	<0.0095	NA		NA	NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	< 0.045	NA	<0.0052	NA		NA	NA
Benzo(ghi)Perylene			µg/l	NA	< 0.053	NA	<0.0061	NA	Soil	NA	NA
Benzo(k)Fluoranthene			µg/l	NA	< 0.047	NA	<0.0068	NA	Excavation	NA	NA
Chrysene	0.2	0.02	µg/l	NA	< 0.046	NA	<0.012	NA	and MW4	NA	NA
Dibenzo(a,h)anthracene			µg/l	NA	< 0.089	NA	<0.0090	NA	Abandoned	NA	NA
Fluoranthene	400	80	µg/l	NA	0.0036[J]	NA	0.010[J]	NA		NA	NA
Fluorene	400	80	µg/l	NA	< 0.029	NA	0.047	NA		NA	NA
Indeno(1,2,3-cd)Pyrene			µg/l	NA	< 0.052	NA	<0.016	NA		NA	NA
1-Methyl Naphthalene			µg/l	NA	1.2	NA	0.75	NA		NA	NA
2-Methyl Naphthalene			µg/l	NA	0.99	NA	0.13	NA		NA	NA
Naphthalene	100	10	µg/l	NA	3.4	NA	1.4	NA		NA	NA
Phenanthrene			µg/l	NA	< 0.081	NA	0.023[J]	NA		NA	NA
Pyrene	250	50	µg/l	NA	< 0.041	NA	0.021[J]	NA		NA	NA
Field Measurements											
Temperature			°F	NA	NA	NA	NA	63.7		NA	37.7
Conductivity			µS/cm	NA	NA	NA	NA	1,529		NA	1,192
pH				NA	NA	NA	NA	6.79		NA	7.03
Dissolved Oxygen			mg/l	NA	NA	NA	NA	0.83		NA	3.02
ORP			mV	NA	NA	NA	NA	-112		NA	143.8

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

Table 3g
Summary of Groundwater Analytical Results
MW5
Thomas Service
Montreal, Wisconsin

	Samples Collected By ->			REI			
			Date ->	6/21/2017	8/27/2018	9/17/2018	11/29/2018
Detected VOC Parameters	ES	PAL	Units				
Benzene	5	0.5	µg/l	<0.50	< 0.31		< 0.31
Toluene	800	160	µg/l	<0.50	< 0.49		< 0.49
Ethylbenzene	700	140	µg/l	<0.50	< 0.33		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	<1.0	< 0.66		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	<0.17	< 0.32		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	1.9[J]	< 0.34		< 0.34
Naphthalene	100	10	µg/l	<2.5	< 0.51		< 0.51
n-Propylbenzene	NS	NS	ug/l	0.88[J]	NA		NA
Isopropylbenzene	NS	NS	ug/l	0.86[J]	NA		NA
PAH Parameters							
Acenaphthene			µg/l	0.0089[J]	NA		NA
Acenaphthylene			µg/l	<0.0046	NA		NA
Anthracene	3,000	600	µg/l	<0.0097	NA		NA
Benzo(a)Anthracene			µg/l	<0.0070	NA		NA
Benzo(a)Pyrene	0.2	0.02	µg/l	<0.0098	NA		NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	<0.0053	NA		NA
Benzo(ghi)Perylene			µg/l	<0.0063	NA	Soil	NA
Benzo(k)Fluoranthene			µg/l	<0.0070	NA	Excavation	NA
Chrysene	0.2	0.02	µg/l	<0.012	NA		NA
Dibenzo(a,h)anthracene			µg/l	<0.0093	NA		NA
Fluoranthene	400	80	µg/l	<0.0099	NA		NA
Fluorene	400	80	µg/l	0.011[J]	NA		NA
Indeno(1,2,3-cd)Pyrene			µg/l	<0.016	NA		NA
1-Methyl Naphthalene			µg/l	0.12	NA		NA
2-Methyl Naphthalene			µg/l	0.099	NA		NA
Naphthalene	100	10	µg/l	0.041[J]	NA		NA
Phenanthrene			µg/l	0.018[J]	NA		NA
Pyrene	250	50	µg/l	<0.0071	NA		NA
Field Measurements							
Temperature			°F	NA	64.1		46.0
Conductivity			µS/cm	NA	2,116		1,008
pH				NA	6.92		7.37
Dissolved Oxygen			mg/l	NA	0.95		6.24
ORP			mV	NA	142.4		77.7

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

Table 3h
Summary of Groundwater Analytical Results
MW6
Thomas Service
Montreal, Wisconsin

	Samples Collected By ->			REI			
			Date ->	6/21/2017	8/27/2018	9/17/2018	11/29/2018
Detected VOC Parameters	ES	PAL	Units				
Benzene	5	0.5	µg/l	<0.50	< 0.31		< 0.31
Toluene	800	160	µg/l	<0.50	< 0.49		< 0.49
Ethylbenzene	700	140	µg/l	<0.50	< 0.33		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	<1.0	< 0.66		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	<0.17	< 0.32		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<0.50	< 0.34		< 0.34
Naphthalene	100	10	µg/l	<2.5	< 0.51		< 0.51
PAH Parameters							
Acenaphthene			µg/l	0.0099[J]	NA		NA
Acenaphthylene			µg/l	<0.0047	NA		NA
Anthracene	3,000	600	µg/l	<0.0099	NA		NA
Benzo(a)Anthracene			µg/l	<0.0071	NA		NA
Benzo(a)Pyrene	0.2	0.02	µg/l	<0.0099	NA		NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	<0.0054	NA		NA
Benzo(ghi)Perylene			µg/l	<0.0064	NA		NA
Benzo(k)Fluoranthene			µg/l	<0.0071	NA	Soil	NA
Chrysene	0.2	0.02	µg/l	<0.012	NA	Excavation	NA
Dibenzo(a,h)anthracene			µg/l	<0.0095	NA		NA
Fluoranthene	400	80	µg/l	<0.010	NA		NA
Fluorene	400	80	µg/l	<0.0075	NA		NA
Indeno(1,2,3-cd)Pyrene			µg/l	<0.017	NA		NA
1-Methyl Naphthalene			µg/l	0.03	NA		NA
2-Methyl Naphthalene			µg/l	0.018[J]	NA		NA
Naphthalene	100	10	µg/l	0.018[J]	NA		NA
Phenanthrene			µg/l	0.021[J]	NA		NA
Pyrene	250	50	µg/l	0.0078[J]	NA		NA
Field Measurements							
Temperature			°F	NA	60.5		42.3
Conductivity			µS/cm	NA	911		549.2
pH				NA	6.15		6.94
Dissolved Oxygen			mg/l	NA	0.29		2.41
ORP			mV	NA	157.4		118.0

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

Table 3i
Summary of Groundwater Analytical Results
MW7
Thomas Service
Montreal, Wisconsin

	Samples Collected By ->			REI			
			Date ->	6/21/2017	8/27/2018	9/17/2018	11/29/2018
Detected VOC Parameters	ES	PAL	Units				
Benzene	5	0.5	µg/l	<0.50	< 0.31		< 0.31
Toluene	800	160	µg/l	<0.50	< 0.49		< 0.49
Ethylbenzene	700	140	µg/l	<0.50	< 0.33		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	<1.0	< 0.66		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	<0.17	< 0.32		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<0.50	< 0.34		< 0.34
Naphthalene	100	10	µg/l	<2.5	< 0.51		< 0.51
PAH Parameters							
Acenaphthene			µg/l	<0.0065	NA		NA
Acenaphthylene			µg/l	<0.0054	NA		NA
Anthracene	3,000	600	µg/l	<0.011	NA		NA
Benzo(a)Anthracene			µg/l	<0.0081	NA		NA
Benzo(a)Pyrene	0.2	0.02	µg/l	<0.011	NA		NA
Benzo(b)Fluoranthene	0.2	0.02	µg/l	<0.0062	NA		NA
Benzo(ghi)Perylene			µg/l	<0.0073	NA		NA
Benzo(k)Fluoranthene			µg/l	<0.0081	NA	Soil	NA
Chrysene	0.2	0.02	µg/l	<0.014	NA	Excavation	NA
Dibenzo(a,h)anthracene			µg/l	<0.011	NA		NA
Fluoranthene	400	80	µg/l	<0.011	NA		NA
Fluorene	400	80	µg/l	<0.0086	NA		NA
Indeno(1,2,3-cd)Pyrene			µg/l	<0.019	NA		NA
1-Methyl Naphthalene			µg/l	0.34	NA		NA
2-Methyl Naphthalene			µg/l	0.48	NA		NA
Naphthalene	100	10	µg/l	0.16	NA		NA
Phenanthrene			µg/l	0.020[J]	NA		NA
Pyrene	250	50	µg/l	0.011[J]	NA		NA
Field Measurements							
Temperature			°F	NA	61.4		46.5
Conductivity			µS/cm	NA	1,298		988
pH				NA	5.97		6.67
Dissolved Oxygen			mg/l	NA	0.96		1.76
ORP			mV	NA	207.6		186.4

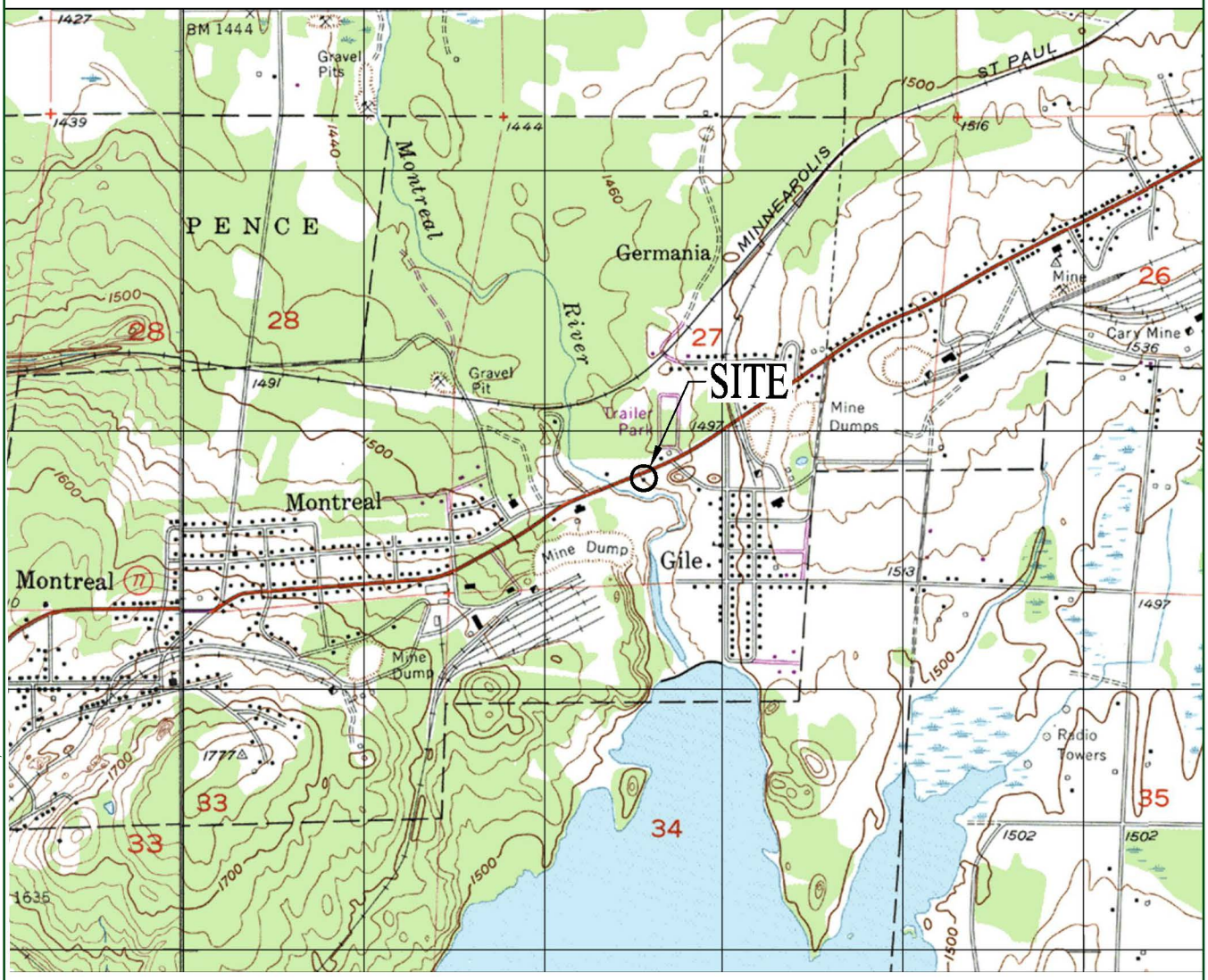
Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*
NA = Not Analyzed
NS = Not Sampled
[J] = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 3j
Summary of Groundwater Analytical Results
MW8
Thomas Service
Montreal, Wisconsin

				REI			
			Samples Collected By ->				
			Date ->	6/21/2017	8/27/2018	9/17/2018	11/29/2018
Detected VOC Parameters	ES	PAL	Units				
Benzene	5	0.5	µg/l	<0.50	< 0.31		
Toluene	800	160	µg/l	<0.50	< 0.49		
Ethylbenzene	700	140	µg/l	<0.50	< 0.33		
Xylenes (mixed isomers)	2,000	400	µg/l	<1.0	< 0.66		
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	<0.17	< 0.32		
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<0.50	< 0.34		
Naphthalene	100	10	µg/l	<2.5	< 0.51		
PAH Parameters							
Acenaphthene			µg/l	NA	NA		
Acenaphthylene			µg/l	NA	NA		
Anthracene	3,000	600	µg/l	NA	NA		
Benzo(a)Anthracene			µg/l	NA	NA		
Benzo(a)Pyrene	0.2	0.02	µg/l	NA	NA		
Benzo(b)Fluoranthene	0.2	0.02	µg/l	NA	NA		
Benzo(ghi)Perylene			µg/l	NA	NA		
Benzo(k)Fluoranthene			µg/l	NA	NA	Soil	Well Dry
Chrysene	0.2	0.02	µg/l	NA	NA	Excavation	Not
Dibenzo(a,h)anthracene			µg/l	NA	NA		Sampled
Fluoranthene	400	80	µg/l	NA	NA		
Fluorene	400	80	µg/l	NA	NA		
Indeno(1,2,3-cd)Pyrene			µg/l	NA	NA		
1-Methyl Naphthalene			µg/l	NA	NA		
2-Methyl Naphthalene			µg/l	NA	NA		
Naphthalene	100	10	µg/l	NA	NA		
Phenanthrene			µg/l	NA	NA		
Pyrene	250	50	µg/l	NA	NA		
Field Measurements							
Temperature			°F	NA	61.9		
Conductivity			µS/cm	NA	3,370		
pH				NA	6.76		
Dissolved Oxygen			mg/l	NA	2.75		
ORP			mV	NA	161.3		

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

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

UTM GRID AND 1975 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

IRONWOOD, MICH.-WIS.

NW/4 IRONWOOD 15' QUADRANGLE
N4622.5-W9007.5
PHOTOINSPECTED 1981
1955
PHOTOREVISED 1975
AMS 2976 I NW-SERIES V861

REI Engineering, INC.

FORMER THOMAS SERVICE STATION
51 WISCONSIN AVENUE
MONTREAL, WI 54525

FIGURE 1 : SITE VICINITY MAP

PROJECT NO.	DRAWN BY:	DATE:
7644	MCM	1/17/2019

DRAWING FILE: P:\7600-7699\7644 - THOMAS SERVICE\DWG\7644-VICN.DWG LAYOUT: VICN PLOTTED: JAN 17, 2019 - 2:28PM PLOTTED BY: MATTM

STATE HIGHWAY 77 (WISCONSIN AVENUE)

DRIVEWAY INLET/OUTLET

DRIVEWAY INLET/OUTLET

SBIA

SB-2A

SB5A/MW-1A

SB-5

MW5

FORMER PUMP ISLAND

SB-4A/MN-3A

MW8

MW2

GP4

GP3B

GP2

B-4

GP5

B-3

MW4

NORTH TANK PIT

MW6

SB3A/MW-2A

SB6

MW7

B-7

GP3A

B-5

B-2

SS-2

SS-1

MW4R

GP7

B-8

B-9

GP1

B-1

GP6

FORMER UST LOCATION

B-6

GP8

SOUTH TANK PIT

GP9

GP10

FORMER BUILDING

GP12

GP11

MW3

MW1

APPROXIMATE PROPERTY BOUNDARY

REI Engineering, INC.

LEGEND

0 30

SCALE: 1" = 30'

- MONITORING WELL
- MONITORING WELL (ABANDONED)
- GEOPROBE SOIL BORING
- SOIL SAMPLE
- SOIL BORING
- NATURAL GAS UTILITY LINE
- FIBER OPTIC UTILITY LINE
- WATER LINE
- STORM SEWER LINE
- OVERHEAD UTILITY LINE
- PROPERTY BOUNDARY (APPROXIMATE)

N

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

FORMER THOMAS SERVICE STATION
51 WISCONSIN AVENUE
MONTREAL, WI 54525

FIGURE 2 : SITE MAP

PROJECT No.	DRAWN BY:	DATE:
7644	MCM	1/17/2019

DRAWING FILE: P:\7600-7699\7644 - THOMAS SERVICE\DWG\7644-SITE.DWG LAYOUT: SITE PLOTTED: JAN 17, 2019 - 3:14PM PLOTTED BY: MATTM

STATE HIGHWAY 77 (WISCONSIN AVENUE)

DRIVEWAY INLET/OUTLET

DRIVEWAY INLET/OUTLET

FORMER PUMP ISLAND

FORMER UST LOCATION

SOUTH TANK PIT

NORTH TANK PIT

FORMER BUILDING

APPROXIMATE PROPERTY BOUNDARY

SBIA

SB-2A

SB5A/MW-IA

SB-4A/MN-3A

SB-5

SB3A/MW-2A

SB6

MW1 MW2 MW3 MW4 MW4R MW5 MW6 MW7 MW8

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9

SS-1 SS-2

GP1 GP2 GP3A GP3B GP4 GP5 GP6 GP7 GP8 GP9 GP10 GP11 GP12

CSS1 CSS2 CSS3 CSS4 CSS5 CSS6 CSS7 CSS8 CSS9 CSS10 CSS11 CSS12 CSS13 CSS14 CSS15 CSS16 CSS17

OH HO G FO W SS

MR

LEGEND

0 30

SCALE: 1" = 30'

- CONFIRMATION SOIL SAMPLE
- MONITORING WELL
- MONITORING WELL (ABANDONED)
- GEOPROBE SOIL BORING
- SOIL SAMPLE
- SOIL BORING

EXCAVATION BOUNDARY

NATURAL GAS UTILITY LINE

FIBER OPTIC UTILITY LINE

WATER LINE

STORM SEWER LINE

OVERHEAD UTILITY LINE

PROPERTY BOUNDARY (APPROXIMATE)

N

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

FORMER THOMAS SERVICE STATION
51 WISCONSIN AVENUE
MONTREAL, WI 54525

FIGURE 3 : AREA OF COMPLETED SOIL EXCAVATION

PROJECT No.	DRAWN BY:	DATE:
7644	MCM	1/17/2019

REI Engineering, INC.

DRAWING FILE: P:\7600-7699\7644 - THOMAS SERVICE\DWG\7644-SITE WEXCAVATION.DWG LAYOUT: SITE PLOTTED: JAN 17, 2019 - 3:12PM PLOTTED BY: MATTM

STATE HIGHWAY 77 (WISCONSIN AVENUE)

DRIVEWAY INLET/OUTLET

DRIVEWAY INLET/OUTLET

FORMER PUMP ISLAND

FORMER UST LOCATION

FORMER BUILDING

APPROXIMATE PROPERTY BOUNDARY

MW8

MW2 1453.55

1450.66 MW7

MW4

MW4R 1454.30

1454.40 MW5

MW6 1455.71

MW3 1453.41

MW1 1455.09

1451.50 1452.00 1452.50 1453.00 1453.50 1454.00 1454.50 1455.00

LEGEND

0 30

SCALE: 1" = 30'

- MONITORING WELL
- MONITORING WELL (ABANDONED)
- NATURAL GAS UTILITY LINE
- FIBER OPTIC UTILITY LINE
- WATER LINE
- STORM SEWER LINE
- OVERHEAD UTILITY LINE
- PROPERTY BOUNDARY (APPROXIMATE)

N

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

FORMER THOMAS SERVICE STATION
51 WISCONSIN AVENUE
MONTREAL, WI 54525

FIGURE 4 : GROUNDWATER CONTOUR MAP (11/26/2018)

PROJECT No.	DRAWN BY:	DATE:
7644	MCM	1/17/2019

REI Engineering, INC.

DRAWING FILE: P:\7600-7699\7644 - THOMAS SERVICE\DWG\7644-GW FLOW 112618.DWG LAYOUT: SITE PLOTTED: JAN 18, 2019 - 7:27AM PLOTTED BY: MATTM

APPENDIX A

WELL ABANDONMENT FORM (MW4)

SOIL BORING LOG (MW4R)

WELL CONSTRUCTION FORM (MW4R)

WELL DEVELOPMENT FORM (MW4R)

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

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☑ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Iron	MW4	

Latitude / Longitude (see instructions): _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: 51 Wisconsin Avenue

Well City, Village or Town	Well ZIP Code
Montreal	54873

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
	MW4

2. Facility / Owner Information

Facility Name: Former Thomas Service
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner: Iron County
Present Well Owner: Iron County
Mailing Address of Present Owner: 300 Taconite St, Suite 115

City of Present Owner	State	ZIP Code
Hurley	WI	54534

3. Filled & Sealed Well / Drillhole / Borehole Information

☑ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 9-20-2011

If a Well Construction Report is available, please attach.

Construction Type:
☑ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
8.5	2.25

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☑ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

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

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

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

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☑ Bentonite Chips

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

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" bentonite Chips	Surface	8.5'	1/4 bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
REI Engineering, Inc.		9/17/18

Street or Route	Telephone Number
4080 N. 20th Avenue	(715) 675-9784

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Wausau	WI	54401		11/8/18

DNR Use Only

Date Received	Noted By

Comments:

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Thomas Service Center	Local Grid Location of Well ☐ ft. ☐ N. ☐ S. ☐ ft. ☐ E. ☐ W.	Well Name: MW4R
Facility License, Permit or Monitoring No.: BRRTS# 03-26-000788	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID: 826034110	St. Plane ft. N, ft. E. S/C/N	Date Well Installed: 9 / 26 / 2018 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SW 1/4 of Sec. 27, T. 46 N, R. 2 ☑ E ☐ W	Well Installed By: Name (first, last) and Firm: Gestra Engineering
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1 ft.

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

13. Sieve analysis performed? ☐ Yes ☑ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☑ 41
Other ☐ _____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☑ 99

16. Drilling additives used? ☐ Yes ☐ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 0.25 ft.

F. Fine sand, top _____ ft. MSL or 1 ft.

G. Filter pack, top _____ ft. MSL or 1.5 ft.

H. Screen joint, top _____ ft. MSL or 2 ft.

I. Well bottom _____ ft. MSL or 9 ft.

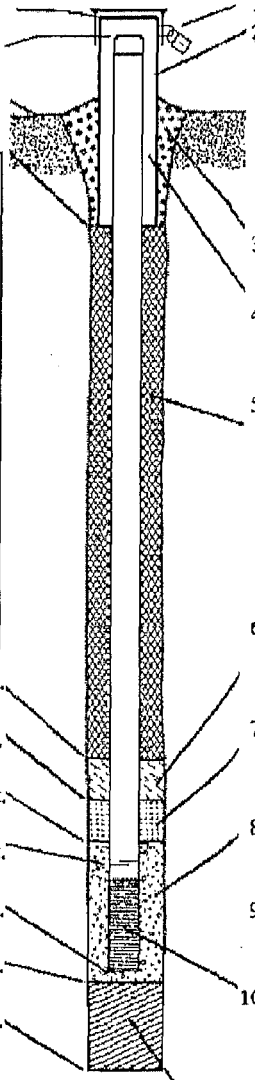
J. Filter pack, bottom _____ ft. MSL or 9 ft.

K. Borehole, bottom _____ ft. MSL or 9 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.04 in.



1. Cap and lock? ☑ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: in.
b. Length: ft.
c. Material: Steel ☑ 04
Other ☐
d. Additional protection? ☐ Yes ☑ No
If yes, describe:
3. Surface seal: Bentonite ☐ 30
Concrete ☑ 01
Other ☐
4. Material between well casing and protective pipe:
Bentonite ☑ 30
Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☑ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☑ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☑ 3/8 in. ☐ 1/2 in. Bentonite chips ☑ 32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 0.17 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 2.5 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☑ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: _____
a. Screen type: Factory cut ☑ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer Johnson Screen
c. Slot size: 0.10 in.
d. Slotted length: 7 ft.
11. Backfill material (below filter pack): None ☑ 14
Other ☐

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

Signature	Firm
	REI Engineering, Inc

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Thomas Service Station (Former)	BRRTS #03-26-000788	MW4R

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Gestra Engineering	9/26/2018	9/26/2018	Hollow Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW4R		0	8"

V4R

Local Grid Orgin ☐ (estimated) ☐ or Boring Location ☒MW4R	Lat	Local Grid Location
State Plane WI	Long	N ☐ E ☐ S ☐ W ☐

Facility ID	County	County Code	Civil Town/City/or Village
826034110	Iron	26	Montreal

Sample Number	Sample Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				0	Blind Drilled										
				9	End of Boring 9' bls Monitoring well set to 9' bls										

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

Signature	Firm
	REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4.90

Facility/Project Name	County Name	Well Name
Thomas Service Station	Iron County	MW4R
Facility Licence, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	26	

1. **Can this well be purged dry?** ☐ Yes ☒ No

2. **Well development method**

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

	Before Development	After Development
3. **Time spent developing well**	23 *min.*	
4. **Depth of well (from top of Casing)**	8.12 *ft.*	
5. **Inside diameter of well**	2.07 *in.*	
6. **Volume of water in filter pack and well casing**	4.79 *gal.*	
7. **Volume of water removed from well**	35 *gal.*	
8. **Volume of water added (if any)**	0 *gal.*	
9. **Source of water added**		
10. **Analysis performed on water added?** (If yes, attach results)	☐ Yes ☐ No	
11. **Depth to Water** (from top of well casing)	a. 3.07 *ft.*	3.41 *ft.*
Data *mm/dd/yy*	b. 9/26/18	9/26/18
Time	c. 3:17 ☒ p.m. ☐ a.m.	3:40 ☒ p.m. ☐ a.m.
12. **Sediment in well bottom**	6 *inches*	0 *inches*
13. **Water clarity**	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 10 Turbid ☐ 15 (Describe) Water Clear at 25 gallons

Fill in if drilling fluids were used and well is at solid waste facility:

14. **Total suspended solids**	*mg/l*	*mg/l*
15. **COD**	*mg/l*	*mg/l*

16. **Additional comments on development:**

Well developed by: Person's Name and Firm

Name: David Larsen (REI)

Firm: REI Engineering, Inc.
4020 N 20th Ave.
Wausau, WI 54401

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

Signature: [signature]

Print Initials: D M L

Firm: REI Engineering, Inc.

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

APPENDIX B

LANDFILL DISPOSAL DOCUMENTATION

Toggle navigation

WASTE MANAGEMENT

WMSolutions.com

800-963-4776

- David
- Profiles & Documents
- Log Out

- David
- Profiles & Documents

- Locations
- Solutions
  - Total Resource Management
  - Transportation Management
  - On-Site Services
  - Industrial Waste
  - Hazardous Waste
  - Oil & Gas
  - Residential Services
- Industries
  - Automotive
  - Broker/Remediation
  - Construction
  - Education
  - Engineering & Consulting
  - General Manufacturing
  - Healthcare
  - Municipalities
  - Oil & Gas
  - Pharmaceutical
  - Refinery & Petrochemical
  - Steel & Primary Metals
  - Terminals & Pipeline
  - Transportation
  - TSDF
  - Utilities
- Resources
- Contact
- Log Out

TRANSACTION HISTORY

Feedback

Viewing Profile # BIO129600WI

Between
and
Search: Manifest #, Ticket #

Non-Hazardous Waste Summary

Number of Manifests:	40
Total Tons:	876.340
Average Tons:	21.909

Export As CSV Print
Show 50 entries

Date	Profile #	Manifest #	Ticket #	Material	Facility	Carrier	Vehicle	Tons / Tonnes	Material Quantit
09/19/2018	BIO129600WI	7217581	1000157	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	126	23.00	23.00
09/19/2018	BIO129600WI	7217590	1000158	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	124	20.25	20.25
09/19/2018	BIO129600WI	7217588	1000149	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	111	23.51	23.51
09/19/2018	BIO129600WI	7217582	1000147	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	118	19.62	19.62
09/19/2018	BIO129600WI	7217583	1000144			OLYNICK	124	21.21	21.21

Date	Profile #	Manifest #	Ticket #	Material	Facility	Carrier	Vehicle	Tons / Tonnes	Material Quantit
				GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF				
09/19/2018	BIO129600WI	7217583	1000143	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	127	20.27	20.27
09/19/2018	BIO129600WI	7217585	1000142	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	129	20.09	20.09
09/19/2018	BIO129600WI	7217587	1000140	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	126	22.31	22.31
09/19/2018	BIO129600WI	7217587	1000139	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	128	23.69	23.69
09/19/2018	BIO129600WI	X	1000133	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	122	22.76	22.76
09/19/2018	BIO129600WI	7217578	1000132	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		207	18.87	18.87
09/19/2018	BIO129600WI	X	1000131	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		216	20.64	20.64
09/19/2018	BIO129600WI	7217579	1000128	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	125	20.50	20.50
09/19/2018	BIO129600WI	7217580	1000125	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	122	22.78	22.78
09/19/2018	BIO129600WI	7217563	1000106	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	126	19.69	19.69
09/19/2018	BIO129600WI	7217563	1000105	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	124	20.01	20.01
09/19/2018	BIO129600WI	7217575	1000100	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	118	21.77	21.77
09/19/2018	BIO129600WI	7217576	1000099	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	124	21.04	21.04
09/19/2018	BIO129600WI	7217572	1000094	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	127	23.02	23.02
09/19/2018	BIO129600WI	7217572	1000093	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	129	22.64	22.64
09/19/2018	BIO129600WI	7217559	1000092	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	126	21.87	21.87
09/19/2018	BIO129600WI	7217559	1000091	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	111	21.11	21.11
09/19/2018	BIO129600WI	7217559	1000090	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	128	21.71	21.71
09/19/2018	BIO129600WI	7217556	1000085	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	OLYNICK	122	21.36	21.36
09/19/2018	BIO129600WI	x	1000080	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		216	24.40	24.40
09/19/2018	BIO129600WI	7217556	1000079	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	125	22.87	22.87
09/19/2018	BIO129600WI	7217557	1000076	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	122	23.65	23.65
09/19/2018	BIO129600WI	7217554	1000075	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		207	21.09	21.09
09/18/2018	BIO129600WI	7217550	1000052	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		216	23.89	23.89

Date	Profile #	Manifest #	Ticket #	Material	Facility	Carrier	Vehicle	Tons / Tonnes	Material Quantit
09/18/2018	BIO129600WI	7217552	1000050	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		207	23.03	23.03
09/18/2018	BIO129600WI	7217551	1000047	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	122	21.25	21.25
09/18/2018	BIO129600WI	7217553	1000046	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	125	22.72	22.72
09/18/2018	BIO129600WI	7217549	1000005	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		216	22.27	22.27
09/18/2018	BIO129600WI	7217548	1000004	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		207	24.89	24.89
09/18/2018	BIO129600WI	7217547	1000003	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	125	22.16	22.16
09/18/2018	BIO129600WI	7217546	1000001	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	122	22.95	22.95
09/17/2018	BIO129600WI	7217544	999983	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	122	22.47	22.47
09/17/2018	BIO129600WI	7217543	999982	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		216	22.63	22.63
09/17/2018	BIO129600WI	7217545	999981	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF	RUSS THOMPSO N	125	21.83	21.83
09/17/2018	BIO129600WI	7214542	999980	GASOLINE DIESEL FUEL IMPACTED SOIL WM012B	Timberline Trail RDF		207	20.52	20.52

Viewing 1 to 40 of 40 Transactions
First Previous 1 Next Last

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We partner with our customers and communities to manage and reduce waste from collection to disposal while recovering valuable resources and creating clean, renewable energy.

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APPENDIX C

SITE PHOTOGRAPHS

Former Thomas Service	Appendix C	Photographs of the Soil Excavation
51 Wisconsin Avenue, Montreal, Wisconsin	REI Project: 7059	p:\7600-7699\7644 - thomas service\reports\soil excavation\[7644seappc.xls]photo sheet 1

Former Thomas Service	Appendix C	Photographs of the Soil Excavation
51 Wisconsin Avenue, Montreal, Wisconsin	REI Project: 7059	p:\7600-7699\7644 - thomas service\reports\soil excavation\[7644seappc.xls]photo sheet 2

Former Thomas Service	Appendix C	Photographs of the Soil Excavation
51 Wisconsin Avenue, Montreal, Wisconsin	REI Project: 7059	p:\7600-7699\7644 - thomas service\reports\soil excavation\[7644seappc.xls]photo sheet 3

APPENDIX D

SOIL ANALYTICAL REPORT

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

October 03, 2018

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

RE: Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on September 21, 2018. 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
(920)469-2436
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40176293001	**CSS #1**	Solid	09/18/18 12:10	09/21/18 09:00
40176293002	**CSS #2**	Solid	09/18/18 12:11	09/21/18 09:00
40176293003	**CSS #3**	Solid	09/18/18 12:13	09/21/18 09:00
40176293004	**CSS #4**	Solid	09/18/18 17:30	09/21/18 09:00
40176293005	**CSS #5**	Solid	09/18/18 17:31	09/21/18 09:00
40176293006	**CSS #6**	Solid	09/19/18 17:32	09/21/18 09:00
40176293007	**CSS #7**	Solid	09/19/18 09:57	09/21/18 09:00
40176293008	**CSS #8**	Solid	09/19/18 09:58	09/21/18 09:00
40176293009	**CSS #9**	Solid	09/19/18 09:59	09/21/18 09:00
40176293010	**CSS #10**	Solid	09/19/18 12:00	09/21/18 09:00
40176293011	**CSS #11**	Solid	09/19/18 12:05	09/21/18 09:00
40176293012	**CSS #12**	Solid	09/19/18 16:20	09/21/18 09:00
40176293013	**CSS #13**	Solid	09/19/18 16:21	09/21/18 09:00
40176293014	**CSS #14**	Solid	09/19/18 16:22	09/21/18 09:00
40176293015	**CSS #15**	Solid	09/19/18 16:26	09/21/18 09:00
40176293016	**CSS #16**	Solid	09/19/18 16:28	09/21/18 09:00
40176293017	**CSS #17**	Solid	09/19/18 16:30	09/21/18 09:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

SAMPLE ANALYTE COUNT

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40176293001	**CSS #1**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293002	**CSS #2**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293003	**CSS #3**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293004	**CSS #4**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293005	**CSS #5**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293006	**CSS #6**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293007	**CSS #7**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293008	**CSS #8**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293009	**CSS #9**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293010	**CSS #10**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293011	**CSS #11**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293012	**CSS #12**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293013	**CSS #13**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293014	**CSS #14**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293015	**CSS #15**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293016	**CSS #16**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1
40176293017	**CSS #17**	WI MOD GRO	PMS	10
		ASTM D2974-87	AH	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #1 **Lab ID: 40176293001** Collected: 09/18/18 12:10 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 10:40	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 10:40	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	09/25/18 07:45	09/25/18 10:40	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.2**	%	0.10	0.10	1		10/02/18 10:24		

Sample: CSS #2 **Lab ID: 40176293002** Collected: 09/18/18 12:11 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 11:05	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:05	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 11:05	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.8**	%	0.10	0.10	1		10/02/18 10:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #3 **Lab ID: 40176293003** Collected: 09/18/18 12:13 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:31	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:31	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:31	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:31	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:31	108-88-3	W
1,2,4-Trimethylbenzene	**239**	ug/kg	71.4	29.7	1	09/25/18 07:45	09/25/18 11:31	95-63-6	
1,3,5-Trimethylbenzene	**79.6**	ug/kg	71.4	29.7	1	09/25/18 07:45	09/25/18 11:31	108-67-8	
m&p-Xylene	**189**	ug/kg	143	59.5	1	09/25/18 07:45	09/25/18 11:31	179601-23-1	
o-Xylene	**92.0**	ug/kg	71.4	29.7	1	09/25/18 07:45	09/25/18 11:31	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	09/25/18 07:45	09/25/18 11:31	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.9**	%	0.10	0.10	1		10/02/18 10:24		

Sample: CSS #4 **Lab ID: 40176293004** Collected: 09/18/18 17:30 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 11:56	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 11:56	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 11:56	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.2**	%	0.10	0.10	1		10/02/18 10:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #5 **Lab ID: 40176293005** Collected: 09/18/18 17:31 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 12:22	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:22	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	09/25/18 07:45	09/25/18 12:22	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.6**	%	0.10	0.10	1		10/02/18 10:24		

Sample: CSS #6 **Lab ID: 40176293006** Collected: 09/19/18 17:32 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 12:47	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 12:47	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	09/25/18 07:45	09/25/18 12:47	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.5**	%	0.10	0.10	1		10/02/18 10:25		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #7 **Lab ID: 40176293007** Collected: 09/19/18 09:57 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	108-88-3	W
1,2,4-Trimethylbenzene	**87.3**	ug/kg	65.5	27.3	1	09/25/18 07:45	09/25/18 13:13	95-63-6	
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 13:13	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 13:13	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	109	%	80-120		1	09/25/18 07:45	09/25/18 13:13	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.4**	%	0.10	0.10	1		10/02/18 10:25		

Sample: CSS #8 **Lab ID: 40176293008** Collected: 09/19/18 09:58 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:30	71-43-2	W
Ethylbenzene	**29.0J**	ug/kg	67.1	28.0	1	09/25/18 07:45	09/25/18 14:30	100-41-4	
Methyl-tert-butyl ether	**30.0J**	ug/kg	67.1	28.0	1	09/25/18 07:45	09/25/18 14:30	1634-04-4	
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:30	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:30	108-88-3	W
1,2,4-Trimethylbenzene	**51.4J**	ug/kg	67.1	28.0	1	09/25/18 07:45	09/25/18 14:30	95-63-6	
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:30	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 14:30	179601-23-1	W
o-Xylene	**30.9J**	ug/kg	67.1	28.0	1	09/25/18 07:45	09/25/18 14:30	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	173	%	80-120		1	09/25/18 07:45	09/25/18 14:30	98-08-8	S7
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.6**	%	0.10	0.10	1		10/02/18 10:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #9 **Lab ID: 40176293009** Collected: 09/19/18 09:59 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 14:55	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 14:55	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	09/25/18 07:45	09/25/18 14:55	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.9**	%	0.10	0.10	1		10/02/18 10:25		

Sample: CSS #10 **Lab ID: 40176293010** Collected: 09/19/18 12:00 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	71-43-2	W
Ethylbenzene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	100-41-4	W
Methyl-tert-butyl ether	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	1634-04-4	W
Naphthalene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	91-20-3	W
Toluene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	108-88-3	W
1,2,4-Trimethylbenzene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	95-63-6	W
1,3,5-Trimethylbenzene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	108-67-8	W
m&p-Xylene	**<52.6**	ug/kg	126	52.6	1	09/25/18 07:45	09/25/18 15:21	179601-23-1	W
o-Xylene	**<26.3**	ug/kg	63.2	26.3	1	09/25/18 07:45	09/25/18 15:21	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 15:21	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.2**	%	0.10	0.10	1		10/02/18 10:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #11 **Lab ID: 40176293011** Collected: 09/19/18 12:05 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 15:46	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 15:46	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 15:46	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.8**	%	0.10	0.10	1		10/02/18 10:43		

Sample: CSS #12 **Lab ID: 40176293012** Collected: 09/19/18 16:20 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	71-43-2	W
Ethylbenzene	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	100-41-4	W
Methyl-tert-butyl ether	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	1634-04-4	W
Naphthalene	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	91-20-3	W
Toluene	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	108-88-3	W
1,2,4-Trimethylbenzene	**83.8**	ug/kg	79.3	33.0	1	09/25/18 07:45	09/25/18 16:12	95-63-6	
1,3,5-Trimethylbenzene	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	108-67-8	W
m&p-Xylene	**<58.1**	ug/kg	140	58.1	1	09/25/18 07:45	09/25/18 16:12	179601-23-1	W
o-Xylene	**<29.1**	ug/kg	69.8	29.1	1	09/25/18 07:45	09/25/18 16:12	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	09/25/18 07:45	09/25/18 16:12	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.0**	%	0.10	0.10	1		10/02/18 10:43		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #13 **Lab ID: 40176293013** Collected: 09/19/18 16:21 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 16:37	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 16:37	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 16:37	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.7**	%	0.10	0.10	1		10/02/18 10:44		

Sample: CSS #14 **Lab ID: 40176293014** Collected: 09/19/18 16:22 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 17:03	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:03	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	09/25/18 07:45	09/25/18 17:03	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.8**	%	0.10	0.10	1		10/02/18 10:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #15 **Lab ID: 40176293015** Collected: 09/19/18 16:26 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	71-43-2	W
Ethylbenzene	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	100-41-4	W
Methyl-tert-butyl ether	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	1634-04-4	W
Naphthalene	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	91-20-3	W
Toluene	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	108-88-3	W
1,2,4-Trimethylbenzene	**91.3J**	ug/kg	181	75.5	1	09/25/18 07:45	09/25/18 17:28	95-63-6	
1,3,5-Trimethylbenzene	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	108-67-8	W
m&p-Xylene	**<132**	ug/kg	316	132	1	09/25/18 07:45	09/25/18 17:28	179601-23-1	W
o-Xylene	**<65.8**	ug/kg	158	65.8	1	09/25/18 07:45	09/25/18 17:28	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 17:28	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.8**	%	0.10	0.10	1		10/02/18 10:44		

Sample: CSS #16 **Lab ID: 40176293016** Collected: 09/19/18 16:28 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	108-88-3	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 17:54	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 17:54	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 17:54	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.5**	%	0.10	0.10	1		10/02/18 10:44		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Sample: CSS #17 **Lab ID: 40176293017** Collected: 09/19/18 16:30 Received: 09/21/18 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	108-88-3	W
1,2,4-Trimethylbenzene	**49.1J**	ug/kg	74.9	31.2	1	09/25/18 07:45	09/25/18 18:19	95-63-6	
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	108-67-8	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	09/25/18 07:45	09/25/18 18:19	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	09/25/18 07:45	09/25/18 18:19	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	09/25/18 07:45	09/25/18 18:19	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.9**	%	0.10	0.10	1		10/02/18 11:13		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

QC Batch: 301127 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 40176293001, 40176293002, 40176293003, 40176293004, 40176293005, 40176293006, 40176293007, 40176293008, 40176293009, 40176293010, 40176293011, 40176293012, 40176293013, 40176293014, 40176293015, 40176293016, 40176293017

METHOD BLANK: 1758791 Matrix: Solid
Associated Lab Samples: 40176293001, 40176293002, 40176293003, 40176293004, 40176293005, 40176293006, 40176293007, 40176293008, 40176293009, 40176293010, 40176293011, 40176293012, 40176293013, 40176293014, 40176293015, 40176293016, 40176293017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	50.0	09/25/18 08:57	
1,3,5-Trimethylbenzene	ug/kg	<25.0	50.0	09/25/18 08:57	
Benzene	ug/kg	<25.0	50.0	09/25/18 08:57	
Ethylbenzene	ug/kg	<25.0	50.0	09/25/18 08:57	
m&p-Xylene	ug/kg	<50.0	100	09/25/18 08:57	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	09/25/18 08:57	
Naphthalene	ug/kg	<25.0	50.0	09/25/18 08:57	
o-Xylene	ug/kg	<25.0	50.0	09/25/18 08:57	
Toluene	ug/kg	<25.0	50.0	09/25/18 08:57	
a,a,a-Trifluorotoluene (S)	%	99	80-120	09/25/18 08:57	

LABORATORY CONTROL SAMPLE & LCSD: 1758792 1758793

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1010	968	101	97	80-120	4	20	
1,3,5-Trimethylbenzene	ug/kg	1000	972	936	97	94	80-120	4	20	
Benzene	ug/kg	1000	1050	1030	105	103	80-120	2	20	
Ethylbenzene	ug/kg	1000	1070	1030	107	103	80-120	3	20	
m&p-Xylene	ug/kg	2000	2100	2030	105	101	80-120	4	20	
Methyl-tert-butyl ether	ug/kg	1000	1030	992	103	99	80-120	4	20	
Naphthalene	ug/kg	1000	1050	976	105	98	80-120	7	20	
o-Xylene	ug/kg	1000	1050	1010	105	101	80-120	3	20	
Toluene	ug/kg	1000	1090	1060	109	106	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				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

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

QC Batch: 301897 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40176293001, 40176293002, 40176293003, 40176293004, 40176293005, 40176293006, 40176293007, 40176293008, 40176293009

SAMPLE DUPLICATE: 1763334

Parameter	Units	40176261005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.5	5.7	3	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

QC Batch: 301910 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40176293010, 40176293011, 40176293012, 40176293013, 40176293014, 40176293015, 40176293016

SAMPLE DUPLICATE: 1763376

Parameter	Units	40176245001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.2	15.4	2	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

QC Batch: 301914
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40176293017

SAMPLE DUPLICATE: 1763384

Parameter	Units	40176329008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.5	14.1	2	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

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

S7	Surrogate recovery outside control limits (not confirmed by re-analysis).
W	Non-detect results are reported on a wet weight basis.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176293

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40176293001	**CSS #1**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293002	**CSS #2**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293003	**CSS #3**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293004	**CSS #4**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293005	**CSS #5**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293006	**CSS #6**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293007	**CSS #7**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293008	**CSS #8**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293009	**CSS #9**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293010	**CSS #10**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293011	**CSS #11**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293012	**CSS #12**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293013	**CSS #13**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293014	**CSS #14**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293015	**CSS #15**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293016	**CSS #16**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293017	**CSS #17**	TPH GRO/PVOC WI ext.	301127	WI MOD GRO	301128
40176293001	**CSS #1**	ASTM D2974-87	301897		
40176293002	**CSS #2**	ASTM D2974-87	301897		
40176293003	**CSS #3**	ASTM D2974-87	301897		
40176293004	**CSS #4**	ASTM D2974-87	301897		
40176293005	**CSS #5**	ASTM D2974-87	301897		
40176293006	**CSS #6**	ASTM D2974-87	301897		
40176293007	**CSS #7**	ASTM D2974-87	301897		
40176293008	**CSS #8**	ASTM D2974-87	301897		
40176293009	**CSS #9**	ASTM D2974-87	301897		
40176293010	**CSS #10**	ASTM D2974-87	301910		
40176293011	**CSS #11**	ASTM D2974-87	301910		
40176293012	**CSS #12**	ASTM D2974-87	301910		
40176293013	**CSS #13**	ASTM D2974-87	301910		
40176293014	**CSS #14**	ASTM D2974-87	301910		
40176293015	**CSS #15**	ASTM D2974-87	301910		
40176293016	**CSS #16**	ASTM D2974-87	301910		
40176293017	**CSS #17**	ASTM D2974-87	301914		

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

40176293 Page 1 of 1/2

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CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	ET
Branch/Location:	
Project Contact:	David Carlson
Phone:	715-625-9784
Project Number:	7644
Project Name:	Thomas Service
Project State:	WI
Sampled By (Print):	David Carlson
Sampled By (Sign):	
PO #:	Regulatory Program: PECFA

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

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

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

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

FILTERED? (YES/NO) Y/N: N
PRESERVATION (CODE)* Pick Letter: F
Analyses Requested: PVOC/N

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	CSS #1	9-18-18	12:10	Soil			
002	CSS #2		12:11				
003	CSS #3		12:13				
004	CSS #4		5:30				
005	CSS #5	—	5:31				
006	CSS #6	9-19-18	5:32				
007	CSS #7		9:57				
008	CSS #8		9:59				
009	CSS #9		9:59				
010	CSS #10		12:00				
011	CSS #11		12:05				
012	CSS #12		4:20				
013	CSS #13	↓	4:21	↓			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	9-20-18 1:45		
Walter	9/21/18 0900		9/21/18 0900

PACE Project No. 40176293

Receipt Temp = R01 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

40176293 Page 1 of 2

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	RC7
Branch/Location:	
Project Contact:	David Carlson
Phone:	715-675-9784
Project Number:	7644
Project Name:	Thomas Svc
Project State:	WI
Sampled By (Print):	David Carlson
Sampled By (Sign):	
PO #:	
Regulatory Program:	RCRA

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

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	F	Perchl			
014	CSS#14	9-9-16	4:22	Soil			X			
015	CSS#15		4:26				X			
016	CSS#16		4:28				X			
017	CSS#17		4:30				X			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	1:45pm		
Waltco	9/12/16 0900		9/12/16 0900

PACE Project No.: 40176293

Receipt Temp = Reg °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / ~~Not Present~~ Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: RE1 Project # 40176293

All containers needing preservation have been checked and noted below: □Yes □No ~~□N/A~~ Initial when completed: Date/ Time:

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted):

	Glass							Plastic							Vials						Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN							
001																																	2.5 / 5 / 10
002																																	2.5 / 5 / 10
003																																	2.5 / 5 / 10
004																																	2.5 / 5 / 10
005																																	2.5 / 5 / 10
006																																	2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
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016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: Headspace in VOA Vials (>6mm) : □Yes □No ~~□N/A~~ ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical 1241 Bellevue Street, Green Bay, WI 54302	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: 25Apr2018
	Document No.: **F-GB-C-031-Rev.07**	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40176293

40176293

Client Name: REI

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☑ Waltco ☐ Client ☐ Pace Other:

Tracking #: 184067

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used SR - NA **Type of Ice:** (Wet) Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01

Temp Blank Present: ☐ yes ☑ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 9/21/18
Initials: AK

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

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☑No ☐N/A	2. mail to, invoice to ~~COC~~ 9/21/18
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3. page 2 no date AK 9/21/18
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☑No ☐N/A		8.
Correct Containers Used:	☑Yes ☐No	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: S	☐Yes ☑No ☐N/A	12. 003 - collect time 12:12 95m 9/21/18
Trip Blank Present:	☐Yes ☐No ☑N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: TWO poly jars received one CSS# + CSS# 11 placed on PM hold shelf. CSS# 11 received broken AK 9/24/18

Project Manager Review: **Date:** 9/24/18

APPENDIX E

SOIL DISPOSAL DOCUMENTATION (MW4R)

LINCOLN COUNTY LANDFILL 715-536-9636
Site: N4750 Landfill Lane, Merrill, WI 54452
Mailing: 801 N Sales St, Ste 201, Merrill, WI 54452
OPERATING HOURS:
Monday-Friday
SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
1st and 3rd Sat. 8:00 am - Noon

DATE: 10/23/2018 TICKET #: 254707 Vehicle #:
Time In: 11:07 AM Time Out: 11:07 AM

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

JOB : 18 - 59 B - REI #7644axuc Thomas Service, Montreal
PO# : REI job #7644axuc
PEFCA DRUMS (PECFA) 1 un
Gross: 1 Tare: 0 Net Weight: 1

Scale Notes: Charge Transaction

HAVE A NICE DAY!

Customer Signature _____
Weighed By: Administrator

I certify that the waste in this vehicle complies with the Wisconsin Recycling law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.

APPENDIX F

GROUNDWATER ANALYTICAL REPORT

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

August 30, 2018

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

RE: Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 2018. 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
(920)469-2436
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

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: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40174731001	**MW1**	Water	08/27/18 10:15	08/28/18 09:10
40174731002	**MW2**	Water	08/27/18 11:45	08/28/18 09:10
40174731003	**MW3**	Water	08/27/18 10:30	08/28/18 09:10
40174731004	**MW4**	Water	08/27/18 12:00	08/28/18 09:10
40174731005	**MW5**	Water	08/27/18 11:00	08/28/18 09:10
40174731006	**MW6**	Water	08/27/18 10:45	08/28/18 09:10
40174731007	**MW7**	Water	08/27/18 11:30	08/28/18 09:10
40174731008	**MW8**	Water	08/27/18 11:15	08/28/18 09:10

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SAMPLE ANALYTE COUNT

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40174731001	**MW1**	WI MOD GRO	ALD	10
40174731002	**MW2**	WI MOD GRO	ALD	10
40174731003	**MW3**	WI MOD GRO	ALD	10
40174731004	**MW4**	WI MOD GRO	ALD	10
40174731005	**MW5**	WI MOD GRO	ALD	10
40174731006	**MW6**	WI MOD GRO	ALD	10
40174731007	**MW7**	WI MOD GRO	ALD	10
40174731008	**MW8**	WI MOD GRO	ALD	10

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ANALYTICAL RESULTS

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Sample: MW1 **Lab ID: 40174731001** Collected: 08/27/18 10:15 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		08/29/18 10:26	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 10:26	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 10:26	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 10:26	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 10:26	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 10:26	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 10:26	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 10:26	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 10:26	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		08/29/18 10:26	98-08-8	

Sample: MW2 **Lab ID: 40174731002** Collected: 08/27/18 11:45 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**0.67J**	ug/L	1.0	0.31	1		08/29/18 13:00	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 13:00	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 13:00	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 13:00	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 13:00	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 13:00	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 13:00	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 13:00	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 13:00	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	117	%	80-120		1		08/29/18 13:00	98-08-8	

Sample: MW3 **Lab ID: 40174731003** Collected: 08/27/18 10:30 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		08/29/18 10:51	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 10:51	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 10:51	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 10:51	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 10:51	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 10:51	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 10:51	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 10:51	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 10:51	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Sample: MW3 **Lab ID: 40174731003** Collected: 08/27/18 10:30 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		08/29/18 10:51	98-08-8	

Sample: MW4 **Lab ID: 40174731004** Collected: 08/27/18 12:00 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**3.1**	ug/L	1.0	0.31	1		08/29/18 13:25	71-43-2	
Ethylbenzene	**17.4**	ug/L	1.1	0.33	1		08/29/18 13:25	100-41-4	
Methyl-tert-butyl ether	**0.66J**	ug/L	1.1	0.32	1		08/29/18 13:25	1634-04-4	
Naphthalene	**4.6**	ug/L	1.7	0.51	1		08/29/18 13:25	91-20-3	
Toluene	**1.1J**	ug/L	1.6	0.49	1		08/29/18 13:25	108-88-3	
1,2,4-Trimethylbenzene	**33.3**	ug/L	1.1	0.34	1		08/29/18 13:25	95-63-6	
1,3,5-Trimethylbenzene	**5.6**	ug/L	1.1	0.33	1		08/29/18 13:25	108-67-8	
m&p-Xylene	**38.1**	ug/L	2.2	0.66	1		08/29/18 13:25	179601-23-1	
o-Xylene	**16.9**	ug/L	1.0	0.32	1		08/29/18 13:25	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	152	%	80-120		1		08/29/18 13:25	98-08-8	S7

Sample: MW5 **Lab ID: 40174731005** Collected: 08/27/18 11:00 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		08/29/18 11:43	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 11:43	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 11:43	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 11:43	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 11:43	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 11:43	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 11:43	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 11:43	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 11:43	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	108	%	80-120		1		08/29/18 11:43	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Sample: MW6 **Lab ID: 40174731006** Collected: 08/27/18 10:45 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		08/29/18 12:08	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 12:08	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 12:08	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 12:08	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 12:08	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 12:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 12:08	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 12:08	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 12:08	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		08/29/18 12:08	98-08-8	

Sample: MW7 **Lab ID: 40174731007** Collected: 08/27/18 11:30 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		08/29/18 12:34	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 12:34	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 12:34	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 12:34	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 12:34	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 12:34	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 12:34	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 12:34	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 12:34	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		08/29/18 12:34	98-08-8	

Sample: MW8 **Lab ID: 40174731008** Collected: 08/27/18 11:15 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		08/29/18 11:17	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 11:17	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		08/29/18 11:17	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		08/29/18 11:17	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		08/29/18 11:17	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		08/29/18 11:17	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		08/29/18 11:17	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		08/29/18 11:17	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		08/29/18 11:17	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Sample: MW8 **Lab ID: 40174731008** Collected: 08/27/18 11:15 Received: 08/28/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		08/29/18 11:17	98-08-8	HS

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

QC Batch: 298560 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40174731001, 40174731002, 40174731003, 40174731004, 40174731005, 40174731006, 40174731007, 40174731008

METHOD BLANK: 1743580 Matrix: Water
Associated Lab Samples: 40174731001, 40174731002, 40174731003, 40174731004, 40174731005, 40174731006, 40174731007, 40174731008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	08/29/18 08:44	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	08/29/18 08:44	
Benzene	ug/L	<0.31	1.0	08/29/18 08:44	
Ethylbenzene	ug/L	<0.33	1.1	08/29/18 08:44	
m&p-Xylene	ug/L	<0.66	2.2	08/29/18 08:44	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	08/29/18 08:44	
Naphthalene	ug/L	<0.51	1.7	08/29/18 08:44	
o-Xylene	ug/L	<0.32	1.0	08/29/18 08:44	
Toluene	ug/L	<0.49	1.6	08/29/18 08:44	
a,a,a-Trifluorotoluene (S)	%	101	80-120	08/29/18 08:44	

LABORATORY CONTROL SAMPLE & LCSD: 1743581 1743582

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.8	20.5	99	102	80-120	3	20	
1,3,5-Trimethylbenzene	ug/L	20	19.3	20.0	97	100	80-120	3	20	
Benzene	ug/L	20	19.1	19.7	96	98	80-120	3	20	
Ethylbenzene	ug/L	20	19.6	20.2	98	101	80-120	3	20	
m&p-Xylene	ug/L	40	38.7	39.8	97	100	80-120	3	20	
Methyl-tert-butyl ether	ug/L	20	18.4	18.9	92	94	80-120	2	20	
Naphthalene	ug/L	20	19.1	19.7	95	99	80-120	3	20	
o-Xylene	ug/L	20	19.1	19.8	96	99	80-120	4	20	
Toluene	ug/L	20	19.5	20.1	98	100	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				102	103	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1743850 1743851

Parameter	Units	40174731001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	<0.34	20	20	21.1	21.1	105	106	51-160	0	20	
1,3,5-Trimethylbenzene	ug/L	<0.33	20	20	20.4	20.6	102	103	56-146	1	20	
Benzene	ug/L	<0.31	20	20	20.3	20.5	101	103	71-137	1	20	
Ethylbenzene	ug/L	<0.33	20	20	21.2	21.4	106	107	71-141	1	20	
m&p-Xylene	ug/L	<0.66	40	40	41.8	42.2	105	106	66-141	1	20	
Methyl-tert-butyl ether	ug/L	<0.32	20	20	19.0	19.3	95	96	80-120	2	20	
Naphthalene	ug/L	<0.51	20	20	20.0	20.6	100	103	67-138	3	20	
o-Xylene	ug/L	<0.32	20	20	20.6	20.9	103	104	75-133	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1743850 1743851

Parameter	Units	40174731001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Toluene	ug/L	<0.49	20	20	21.0	21.3	105	107	76-134	2	20	
a,a,a-Trifluorotoluene (S)	%						104	102	80-120			

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

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QUALIFIERS

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

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

HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
S7	Surrogate recovery outside control limits (not confirmed by re-analysis).

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7644AXUC THOMAS SOURCE
Pace Project No.: 40174731

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40174731001	**MW1**	WI MOD GRO	298560		
40174731002	**MW2**	WI MOD GRO	298560		
40174731003	**MW3**	WI MOD GRO	298560		
40174731004	**MW4**	WI MOD GRO	298560		
40174731005	**MW5**	WI MOD GRO	298560		
40174731006	**MW6**	WI MOD GRO	298560		
40174731007	**MW7**	WI MOD GRO	298560		
40174731008	**MW8**	WI MOD GRO	298560		

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

CHAIN OF CUSTODY

401747 31

SDA

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

(Please Print Clearly)	
Company Name:	REI
Branch/Location:	Waunsau
Project Contact:	Dave Larsen
Phone:	715-675-9784
Project Number:	Thomas Source
Project Name:	7644 axle
Project State:	WI
Sampled By (Print):	Ben J. Bailey
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	REI
Mail To Company:	Dave Larsen
Mail To Address:	dlarsen@reiengineering.com
Invoice To Contact:	SDA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: VOC + Naphthalene	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW1	8/27/18	10:15	GW	N	B	X			
002	MW2		11:45				X			
003	MW3		10:30				X			
004	MW4		12:00				X			
005	MW5		11:00				X			
006	MW6		10:45				X			
007	MW7		11:30				X			
008	MW8		11:15				X			

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	8/27/18 1400		
Relinquished By: Waltco	8/28/18 0910	FEDEX	pace 8/28/18 0910
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
401747 31

Receipt Temp = 2.0 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: REI Project # 40174731

All containers needing preservation have been checked and noted below: □Yes □No ☑N/A Initial when completed: Date/ Time:

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted):

	Glass							Plastic							Vials						Jars			General							
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001																		3															2.5 / 5 / 10
002																		3															2.5 / 5 / 10
003																		3															2.5 / 5 / 10
004																		3															2.5 / 5 / 10
005																		3															2.5 / 5 / 10
006																		3															2.5 / 5 / 10
007																		2															2.5 / 5 / 10
008																		1															2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : □Yes ☑No □N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: REI

Project # **WO# : 40174731**

40174731

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☑ Waltco
☐ Client ☐ Pace Other:

Tracking #: 181593-1

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used SR - N/A **Type of Ice:** Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Rad /Corr:

Temp Blank Present: ☐ yes ☑ no **Biological Tissue is Frozen:** ☐ yes ☐ no

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

Person examining contents:
Date: 8/28/18
Initials: NB

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD:	☐Yes ☑No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☐Yes ☑No ☐N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 8-28-18

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

October 04, 2018

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

RE: Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2018. 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
(920)469-2436
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

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

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SAMPLE SUMMARY

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40176768001	**MW4R**	Water	09/26/18 15:40	09/29/18 08:05

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40176768001	**MW4R**	WI MOD GRO	ALD	10

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

Sample: MW4R **Lab ID: 40176768001** Collected: 09/26/18 15:40 Received: 09/29/18 08:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**18.4**	ug/L	10.2	3.1	10		10/03/18 16:46	71-43-2	
Ethylbenzene	**218**	ug/L	11.0	3.3	10		10/03/18 16:46	100-41-4	
Methyl-tert-butyl ether	**<3.2**	ug/L	10.7	3.2	10		10/03/18 16:46	1634-04-4	
Naphthalene	**134**	ug/L	16.8	5.1	10		10/03/18 16:46	91-20-3	
Toluene	**211**	ug/L	16.3	4.9	10		10/03/18 16:46	108-88-3	
1,2,4-Trimethylbenzene	**895**	ug/L	11.4	3.4	10		10/03/18 16:46	95-63-6	
1,3,5-Trimethylbenzene	**331**	ug/L	10.9	3.3	10		10/03/18 16:46	108-67-8	
m&p-Xylene	**1650**	ug/L	21.8	6.6	10		10/03/18 16:46	179601-23-1	
o-Xylene	**1120**	ug/L	10.5	3.2	10		10/03/18 16:46	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		10		10/03/18 16:46	98-08-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

QC Batch: 302012 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40176768001

METHOD BLANK: 1763903 Matrix: Water
Associated Lab Samples: 40176768001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	10/03/18 08:31	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	10/03/18 08:31	
Benzene	ug/L	<0.31	1.0	10/03/18 08:31	
Ethylbenzene	ug/L	<0.33	1.1	10/03/18 08:31	
m&p-Xylene	ug/L	<0.66	2.2	10/03/18 08:31	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	10/03/18 08:31	
Naphthalene	ug/L	<0.51	1.7	10/03/18 08:31	
o-Xylene	ug/L	<0.32	1.0	10/03/18 08:31	
Toluene	ug/L	<0.49	1.6	10/03/18 08:31	
a,a,a-Trifluorotoluene (S)	%	100	80-120	10/03/18 08:31	

LABORATORY CONTROL SAMPLE & LCSD: 1763904 1763905

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.6	20.9	103	104	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	20.1	20.3	101	102	80-120	1	20	
Benzene	ug/L	20	20.2	20.3	101	101	80-120	0	20	
Ethylbenzene	ug/L	20	20.6	20.7	103	104	80-120	1	20	
m&p-Xylene	ug/L	40	40.8	41.0	102	102	80-120	0	20	
Methyl-tert-butyl ether	ug/L	20	19.2	19.3	96	96	80-120	1	20	
Naphthalene	ug/L	20	19.4	20.0	97	100	80-120	3	20	
o-Xylene	ug/L	20	20.4	20.4	102	102	80-120	0	20	
Toluene	ug/L	20	20.6	20.7	103	104	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1764745 1764746

Parameter	Units	40176769005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	334	100	100	428	454	95	121	51-160	6	20	
1,3,5-Trimethylbenzene	ug/L	107	100	100	205	215	98	108	56-146	5	20	
Benzene	ug/L	247	100	100	332	349	85	102	71-137	5	20	
Ethylbenzene	ug/L	267	100	100	360	378	93	111	71-141	5	20	
m&p-Xylene	ug/L	604	200	200	783	824	90	110	66-141	5	20	
Methyl-tert-butyl ether	ug/L	3.5J	100	100	93.6	95.0	90	92	80-120	2	20	
Naphthalene	ug/L	56.7	100	100	148	156	91	99	67-138	5	20	
o-Xylene	ug/L	33.5	100	100	130	135	97	101	75-133	3	20	
Toluene	ug/L	57.8	100	100	154	160	96	102	76-134	3	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1764745 1764746

Parameter	Units	40176769005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						99	98	80-120			

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7644 THOMAS SERVICE
Pace Project No.: 40176768

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40176768001	**MW4R**	WI MOD GRO	302012		

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www.pacelabs.com

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

Page 1 of

40176768

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	RET
Branch/Location:	
Project Contact:	DAVID LARSEN
Phone:	715-675-9764
Project Number:	7644
Project Name:	THOMAS SERVICE
Project State:	WI
Sampled By (Print):	DAVID LARSEN
Sampled By (Sign):	
PO #:	Regulatory Program:

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

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001 ~~007~~ JM 9/30/18	MW4R	9/26/18	3:40	GW	N	H	PVC/N			

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	9/27/18 2:00		
WALTCO	9/29/18 0805	PACE	9/29/18 0805

PACE Project No.: 40176768

Receipt Temp = 2.0 1 °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: REF

Project # 41176768

All containers needing preservation have been checked and noted below: □Yes □No ☒N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/ Time:

	Glass							Plastic							Vials						Jars			General							
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001																		2															2.5 / 5 / 10
002																																	2.5 / 5 / 10
003																																	2.5 / 5 / 10
004																																	2.5 / 5 / 10
005																																	2.5 / 5 / 10
006																																	2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : □Yes □No □N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40176768

40176768

Client Name: REI

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Waltco ☐ Client ☐ Pace Other:

Tracking #: 1848 2811

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

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used SR - N/A **Type of Ice:** ☒ Wet Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 2.1 /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

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

Person examining contents:
Date: 9/8/18
Initials: JM

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. no qty #, mail/invoice JM 9/12/18
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD:	☐Yes ☒No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☐Yes ☒No ☐N/A	12. HPM GS 0341 JM 9/12/18
Trip Blank Present:	☐Yes ☒No ☐N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 10-1-18

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

December 03, 2018

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

RE: Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Dear DAVID LARSEN:
Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2018. 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
(920)469-2436
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40180217001	**MW-1**	Water	11/26/18 14:30	11/29/18 09:40
40180217002	**MW-2**	Water	11/26/18 14:35	11/29/18 09:40
40180217003	**MW-3**	Water	11/26/18 14:40	11/29/18 09:40
40180217004	**MW-4R**	Water	11/26/18 14:45	11/29/18 09:40
40180217005	**MW-5**	Water	11/26/18 14:55	11/29/18 09:40
40180217006	**MW-6**	Water	11/26/18 14:50	11/29/18 09:40
40180217007	**MW-7**	Water	11/26/18 15:00	11/29/18 09:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

SAMPLE ANALYTE COUNT

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40180217001	**MW-1**	WI MOD GRO	ALD	10
40180217002	**MW-2**	WI MOD GRO	ALD	10
40180217003	**MW-3**	WI MOD GRO	ALD	10
40180217004	**MW-4R**	WI MOD GRO	ALD	10
40180217005	**MW-5**	WI MOD GRO	ALD	10
40180217006	**MW-6**	WI MOD GRO	ALD	10
40180217007	**MW-7**	WI MOD GRO	ALD	10

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Sample: MW-1 **Lab ID: 40180217001** Collected: 11/26/18 14:30 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		11/30/18 15:17	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 15:17	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		11/30/18 15:17	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		11/30/18 15:17	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		11/30/18 15:17	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		11/30/18 15:17	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 15:17	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		11/30/18 15:17	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		11/30/18 15:17	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%	80-120		1		11/30/18 15:17	98-08-8	

Sample: MW-2 **Lab ID: 40180217002** Collected: 11/26/18 14:35 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		11/30/18 15:43	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 15:43	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		11/30/18 15:43	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		11/30/18 15:43	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		11/30/18 15:43	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		11/30/18 15:43	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 15:43	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		11/30/18 15:43	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		11/30/18 15:43	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		1		11/30/18 15:43	98-08-8	

Sample: MW-3 **Lab ID: 40180217003** Collected: 11/26/18 14:40 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		11/30/18 16:08	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 16:08	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		11/30/18 16:08	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		11/30/18 16:08	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		11/30/18 16:08	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		11/30/18 16:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 16:08	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		11/30/18 16:08	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		11/30/18 16:08	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Sample: MW-3 **Lab ID: 40180217003** Collected: 11/26/18 14:40 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%	80-120		1		11/30/18 16:08	98-08-8	

Sample: MW-4R **Lab ID: 40180217004** Collected: 11/26/18 14:45 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**2.4**	ug/L	1.0	0.31	1		12/03/18 10:03	71-43-2	
Ethylbenzene	**67.2**	ug/L	1.1	0.33	1		12/03/18 10:03	100-41-4	
Methyl-tert-butyl ether	**3.8**	ug/L	1.1	0.32	1		12/03/18 10:03	1634-04-4	
Naphthalene	**52.1**	ug/L	1.7	0.51	1		12/03/18 10:03	91-20-3	
Toluene	**2.1**	ug/L	1.6	0.49	1		12/03/18 10:03	108-88-3	
1,2,4-Trimethylbenzene	**387**	ug/L	1.1	0.34	1		12/03/18 10:03	95-63-6	
1,3,5-Trimethylbenzene	**165**	ug/L	1.1	0.33	1		12/03/18 10:03	108-67-8	
m&p-Xylene	**162**	ug/L	2.2	0.66	1		12/03/18 10:03	179601-23-1	
o-Xylene	**24.1**	ug/L	1.0	0.32	1		12/03/18 10:03	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	125	%	80-120		1		12/03/18 10:03	98-08-8	S7

Sample: MW-5 **Lab ID: 40180217005** Collected: 11/26/18 14:55 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		11/30/18 19:07	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 19:07	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		11/30/18 19:07	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		11/30/18 19:07	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		11/30/18 19:07	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		11/30/18 19:07	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 19:07	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		11/30/18 19:07	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		11/30/18 19:07	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1		11/30/18 19:07	98-08-8	

REPORT OF LABORATORY ANALYSIS

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

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Sample: MW-6 **Lab ID: 40180217006** Collected: 11/26/18 14:50 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		11/30/18 19:32	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 19:32	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		11/30/18 19:32	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		11/30/18 19:32	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		11/30/18 19:32	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		11/30/18 19:32	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 19:32	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		11/30/18 19:32	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		11/30/18 19:32	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1		11/30/18 19:32	98-08-8	

Sample: MW-7 **Lab ID: 40180217007** Collected: 11/26/18 15:00 Received: 11/29/18 09:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.31**	ug/L	1.0	0.31	1		11/30/18 19:58	71-43-2	
Ethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 19:58	100-41-4	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.1	0.32	1		11/30/18 19:58	1634-04-4	
Naphthalene	**<0.51**	ug/L	1.7	0.51	1		11/30/18 19:58	91-20-3	
Toluene	**<0.49**	ug/L	1.6	0.49	1		11/30/18 19:58	108-88-3	
1,2,4-Trimethylbenzene	**<0.34**	ug/L	1.1	0.34	1		11/30/18 19:58	95-63-6	
1,3,5-Trimethylbenzene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 19:58	108-67-8	
m&p-Xylene	**<0.66**	ug/L	2.2	0.66	1		11/30/18 19:58	179601-23-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	1		11/30/18 19:58	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%	80-120		1		11/30/18 19:58	98-08-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

QC Batch: 307978 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40180217001, 40180217002, 40180217003, 40180217004, 40180217005, 40180217006, 40180217007

METHOD BLANK: 1799578 Matrix: Water
Associated Lab Samples: 40180217001, 40180217002, 40180217003, 40180217004, 40180217005, 40180217006, 40180217007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	11/30/18 09:49	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	11/30/18 09:49	
Benzene	ug/L	<0.31	1.0	11/30/18 09:49	
Ethylbenzene	ug/L	<0.33	1.1	11/30/18 09:49	
m&p-Xylene	ug/L	<0.66	2.2	11/30/18 09:49	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	11/30/18 09:49	
Naphthalene	ug/L	<0.51	1.7	11/30/18 09:49	
o-Xylene	ug/L	<0.32	1.0	11/30/18 09:49	
Toluene	ug/L	<0.49	1.6	11/30/18 09:49	
a,a,a-Trifluorotoluene (S)	%	100	80-120	11/30/18 09:49	

LABORATORY CONTROL SAMPLE & LCSD: 1799579 1799580

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.1	19.8	100	99	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	19.5	19.2	98	96	80-120	2	20	
Benzene	ug/L	20	19.8	19.3	99	97	80-120	2	20	
Ethylbenzene	ug/L	20	20.1	19.6	100	98	80-120	2	20	
m&p-Xylene	ug/L	40	39.4	38.6	99	97	80-120	2	20	
Methyl-tert-butyl ether	ug/L	20	20.0	19.6	100	98	80-120	2	20	
Naphthalene	ug/L	20	19.9	20.1	100	101	80-120	1	20	
o-Xylene	ug/L	20	19.7	19.4	99	97	80-120	2	20	
Toluene	ug/L	20	19.9	19.3	99	97	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				101	99	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800502 1800503

Parameter	Units	40180217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	<0.34	20	20	20.0	20.1	100	101	51-160	1	20	
1,3,5-Trimethylbenzene	ug/L	<0.33	20	20	21.1	20.9	106	105	56-146	1	20	
Benzene	ug/L	<0.31	20	20	22.7	22.6	113	113	71-137	0	20	
Ethylbenzene	ug/L	<0.33	20	20	23.6	23.3	118	117	71-141	1	20	
m&p-Xylene	ug/L	<0.66	40	40	44.9	44.4	112	111	66-141	1	20	
Methyl-tert-butyl ether	ug/L	<0.32	20	20	22.4	22.4	112	112	80-120	0	20	
Naphthalene	ug/L	<0.51	20	20	23.4	23.1	117	115	67-138	1	20	
o-Xylene	ug/L	<0.32	20	20	22.4	22.1	112	111	75-133	1	20	
Toluene	ug/L	<0.49	20	20	23.0	23.0	115	115	76-134	0	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800502 1800503

Parameter	Units	40180217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						108	106	80-120			

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALIFIERS

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

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, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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

S7 Surrogate recovery outside control limits (not confirmed by re-analysis).

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7644 THOMAS SERVICE
Pace Project No.: 40180217

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40180217001	**MW-1**	WI MOD GRO	307978		
40180217002	**MW-2**	WI MOD GRO	307978		
40180217003	**MW-3**	WI MOD GRO	307978		
40180217004	**MW-4R**	WI MOD GRO	307978		
40180217005	**MW-5**	WI MOD GRO	307978		
40180217006	**MW-6**	WI MOD GRO	307978		
40180217007	**MW-7**	WI MOD GRO	307978		

Pace Analytical®
www.pacelabs.com

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

Page 1 of

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	REI Engineering Inc
Branch/Location:	Wausau
Project Contact:	Dave Larsen
Phone:	715-675-2084
Project Number:	7644
Project Name:	Thomas Service
Project State:	WI
Sampled By (Print):	Ryan Resch
Sampled By (Sign):	
PO #:	Regulatory Program: WDNR

Quote #:	40180217
Mail To Contact:	Dave Larsen
Mail To Company:	REI Engineering Inc
Mail To Address:	DLarsen@reiengineering.com
Invoice To Contact:	SAA
Invoice To Company:	1
Invoice To Address:	1
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PVOC + Naphthalene	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW-1	11/28/2018	2:30	GW	N	B	X			
002	MW-2	"	2:35	"			X			
003	MW-3	"	2:40	"			X			
004	MW-4R	"	2:45	"			X			
005	MW-5	"	2:50	"			X			
006	MW-6	"	2:55	"			X			
007	MW-7	"	3:00	"			X			

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/29/18 3:45pm		
Walked	11/29/18 0940	Pace	11/29/18 0940

PACE Project No. 40180217
Receipt Temp = 1.0 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: REI Engineering Project # 40182047

All containers needing preservation have been checked and noted below: □Yes □No ☒N/A

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted):

Initial when completed: Date/ Time:

Pace Lab #	Glass							Plastic							Vials						Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN							
001																		3															2.5 / 5 / 10
002																		3															2.5 / 5 / 10
003																		3															2.5 / 5 / 10
004																		3															2.5 / 5 / 10
005																		3															2.5 / 5 / 10
006																		3															2.5 / 5 / 10
007																		3															2.5 / 5 / 10
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018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : □Yes ☒No □N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: WO#: 40180217

40180217

Client Name: REI Engineering

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Waltco ☐ Client ☐ Pace Other:

Tracking #: 1910092-1

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

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

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

Thermometer Used SR - NA **Type of Ice:** Wet Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

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

Person examining contents:
Date: 11-29-18
Initials: JK

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. No pace number 11-29-18 JK
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10. Sediment in all samples 11-29-18 JK
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☐Yes ☒No ☐N/A	12. 005 time on sample "2:55" 11-29-18 JK
-Includes date/time/ID/Analysis Matrix: W		006 time on sample "2:50"
Trip Blank Present:	☐Yes ☒No ☐N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: (12) Follow times on labels per PB 11-30-18 JK

Project Manager Review: Date: 11-29-18