



**CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING**

May 23, 2019

Wisconsin Department of Natural Resources

Attn: Ms. Carrie Stoltz
107 Sutliff Avenue
Rhineland, WI 54501



Subject:

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

Dear Ms. Stoltz:

Enclosed is the Update Report for the above-mentioned site. This report is specific to the completion of two (2) rounds of approved groundwater sampling prior to the September 2018 soil excavation.

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

Sincerely,
REI Engineering, Inc.

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

Enclosure (A/S)

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



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



REI

**CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING**

**UPDATE REPORT
HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WISCONSIN**

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



**COMPREHENSIVE
SERVICES WITH
PRACTICAL
SOLUTIONS**

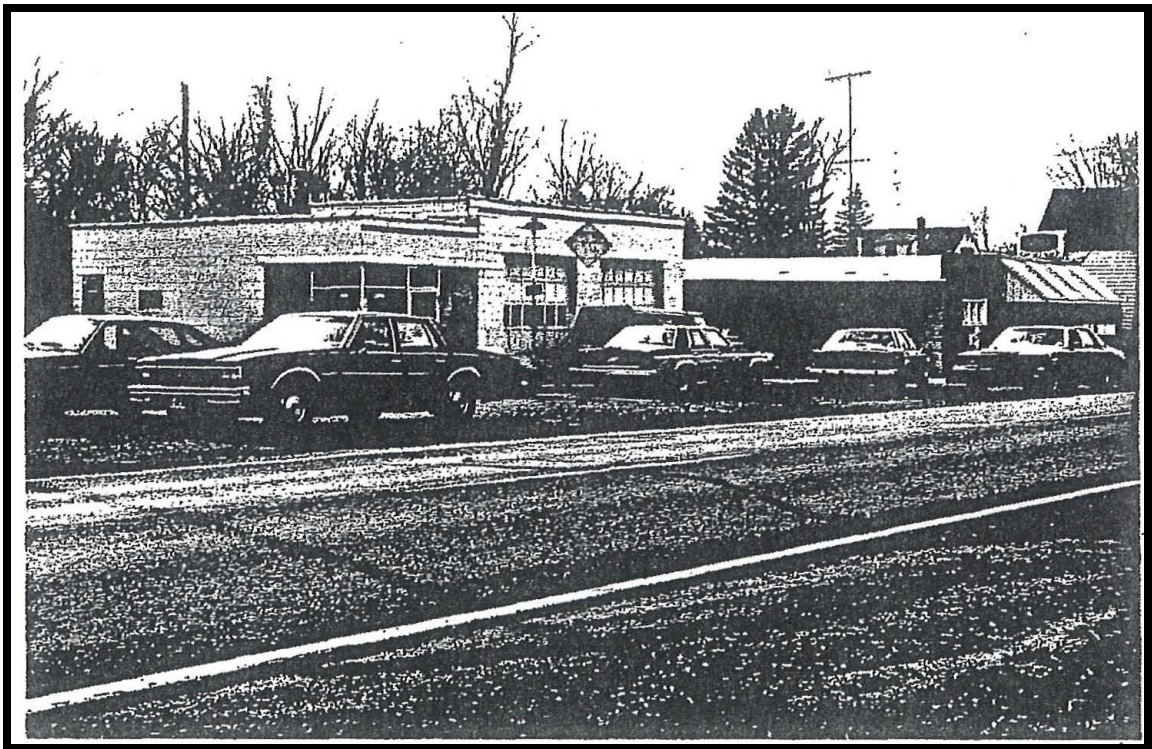


UPDATE REPORT

**HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WI**

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

REI #7367



PREPARED FOR:

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

MAY 2019

UPDATE REPORT

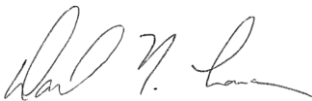
HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WI

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

REI #7367

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

"I, David N. Larsen, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of Ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of Ch. GHSS 3, Wis. Admn. Code, and that to the best of my knowledge, all 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."



Hydrogeologist

05-23-19

Date

"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 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

5-23-19

Date

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UPDATE REPORT

HEDLUND DX
10557 STATE HIGHWAY 70
FALUN, WI

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

REI #7367

1.0 INTRODUCTION

1.1 Purpose

This report presents the completion of two (2) additional rounds of groundwater sampling from select wells at the former Hedlund DX site. These two (2) sampling events were completed prior to contaminated soil removal activities.

2.0 SITE LOCATION

The Hedlund DX site is located in the NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 19, Township 38 North, Range 17 West, in the Town of Daniels, Burnett County, Wisconsin (Figure 1). The site address is 10557 State Highway 70, Falun, Wisconsin 54840. Wisconsin Transverse Mercator (WTM) coordinates are 323585, 591806. A detailed site map, documenting property boundaries and well locations, is depicted on Figure 2.

3.0 SUMMARY OF WORK

3.1 Groundwater Monitoring and Analytical Results

Two (2) rounds of groundwater sampling were completed from select wells from the existing well network on January 26, 2018 and May 16, 2018. Depth to groundwater was measured in each well prior to sampling. Table 1 presents the depth to groundwater and groundwater elevations for this investigation. Groundwater samples were collected and submitted to Pace Analytical, Green Bay, WI for analysis of PVOC and naphthalene compounds. Groundwater analytical results are

summarized in Tables 2a-o. The complete laboratory analytical report is included as Appendix A.

Groundwater sample results document residual groundwater contamination in concentrations exceeding the NR 140.10 Groundwater Quality Enforcement Standards (ES) for petroleum compounds following the May 16, 2018 sample event at MW2, MW3, MW4 and MW5. NR 140.10 Groundwater Quality Preventive Action Limit (PAL) exceedances for petroleum compounds following the May 16, 2018 sample event were only reported at MW6.

The shallow depth to groundwater resulted in frost heaving of the well casings. Groundwater contours were not calculated due to the impact of the frost heaving.

3.2 Potable Well Sampling

REI collected samples from the neighboring property (Backwoods Bait and Tackle 10561 State Hwy 70) potable well during the sampling event May 16, 2018. The samples were submitted to a state certified lab and analyzed for drinking water VOCs (EPA Method 524.2). The potable well samples analyzed revealed no VOC impact to the potable water supply well. Analytical results are summarized in Table 2n and copies of the laboratory analytical reports are included in Appendix A.

4.0 CONCLUSION AND RECOMMENDATIONS

REI has completed two (2) of the four (4) approved groundwater sample events. REI will continue to work through the completion of the approved scope of services which includes a soil excavation and two (2) additional rounds of groundwater sampling.

Table 1
Depth to Water and Water Table Elevations
Hedlund DX
Falun, Wisconsin

Depth to Water (feet) below Reference Elevation											
Date	<u>MW1</u>	<u>MW2</u>	<u>MW3</u>	<u>MW4</u>	<u>MW5</u>	<u>MW6</u>	<u>MW7</u>	<u>MW8</u>	<u>MW9</u>	<u>MW10</u>	<u>MW11</u>
9/14/2016	5.23	2.02	1.74	2.18	2.46	2.50	0.97				
1/12/2017	5.86	froze	2.11	2.66	2.67	2.79	1.04	4.59	3.35	5.83	2.63
1/26/2018	4.34	froze	2.10	3.95	froze	2.62	froze	4.33	3.03	5.45	froze
5/16/2018	5.54	2.85	2.17	2.61	3.04	3.09	1.60	4.89	3.56	6.10	2.89
Measuring Point Elevations											
Elevations referenced to a U.S.G.S. Benchmark (feet MSL)											
Top of Casing Elevation											
Initial Survey	961.15	958.40	957.79	958.04	958.69	958.97	957.21	960.68	959.39	961.41	958.33
Ground Surface Elevation											
Initial Survey	959.18	958.79	958.30	958.57	959.00	959.55	957.76	961.02	959.78	958.25	958.92
Depth to Water (feet) below Ground Surface											
Average	3.58	2.40	2.44	2.95	2.87	3.23	1.55	4.93	3.74	2.67	3.22
Maximum	3.89	2.40	2.62	3.19	2.98	3.37	1.59	4.93	3.74	2.67	3.22
Minimum	3.26	2.40	2.25	2.71	2.77	3.08	1.52	4.93	3.74	2.67	3.22
Range	0.63	0.00	0.37	0.48	0.21	0.29	0.07	0.00	0.00	0.00	0.00
Water Level Elevation (feet MSL)											
Date	<u>MW1</u>	<u>MW2</u>	<u>MW3</u>	<u>MW4</u>	<u>MW5</u>	<u>MW6</u>	<u>MW7</u>	<u>MW8</u>	<u>MW9</u>	<u>MW10</u>	<u>MW11</u>
9/14/2016	955.92	956.38	956.05	955.86	956.23	956.47	956.24				
1/12/2017	955.29		955.68	955.38	956.02	956.18	956.17	956.09	956.04	955.58	955.70
1/26/2018	956.81		955.69	954.09	955.65	956.35	955.61	956.35	956.36	955.96	
5/16/2018	955.61	955.55	955.62	955.43	955.65	955.88	955.61	955.79	955.83	955.31	955.44

Table 2a
Summary of Groundwater Analytical Results
WDOT Investigation
Hedlund DX
Falun, Wisconsin

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

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
NA = Not Analyzed
NS = Not Sampled

BOLD
<i>Italics</i>

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

Table 2b
Summary of Groundwater Analytical Results
Foth & Van Dyke Investigation
Hedlund DX
Falun, Wisconsin

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

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
NA = Not Analyzed
NS = Not Sampled

BOLD
<i>Italics</i>

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

Table 2c
Summary of Groundwater Analytical Results
MW1
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters			Date ->	8/8/2016	9/13/2016	1/11/2017	1/26/2018	5/16/2018
ES	PAL	Units						
5	0.5	µg/l		< 0.40	< 0.40	< 0.40	< 0.40	< 0.31
800	160	µg/l		< 0.39	< 0.39	< 0.39	< 0.39	< 0.49
700	140	µg/l		< 0.39	< 0.39	< 0.39	< 0.39	< 0.33
2,000	400	µg/l		< 0.80	< 0.80	< 0.80	< 0.80	0.67 ^J
60	12	µg/l		< 0.48	< 0.48	< 0.48	< 0.48	< 0.32
480	96	µg/l		< 0.42	< 0.42	< 0.42	< 0.42	0.42 ^J
100	10	µg/l		< 0.42	< 0.42	< 0.42	< 0.42	< 0.51
Field Measurements								
		°F		NA	NA	NA	40.72	NA
		ms/cm		NA	NA	NA	294	NA
		mg/L		NA	NA	NA	2.00	NA
				NA	NA	NA	7.45	NA
		mV		NA	NA	NA	-127.8	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

NA = Not Analyzed

NS = Not Sampled

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

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<i>Italics</i>

Table 2d
Summary of Groundwater Analytical Results
MW2
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters		Date ->		9/13/2016	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units				
Benzene	5	0.5	µg/l	32.7	Water Froze in Well - Not Sampled	Water Froze in Well - Not Sampled	50.8
Toluene	800	160	µg/l	9.1			3.5
Ethylbenzene	700	140	µg/l	19			10.4
Xylenes (mixed isomers)	2,000	400	µg/l	52.1			23.2
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	0.95 ^J			0.67 ^J
Trimethylbenzenes (mixed isomers)	480	96	µg/l	10.1	Water Froze in Well - Not Sampled	Water Froze in Well - Not Sampled	12.4
Naphthalene	100	10	µg/l	3.5			3.1
Field Measurements							
Temperature			°F	NA			NA
Conductivity			ms/cm	NA			NA
Dissolved Oxygen			mg/L	NA			NA
pH				NA			NA
Redox Potential			mV	NA			NA

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
NA = Not Analyzed
NS = Not Sampled

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

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<i>Italics</i>

Table 2e
Summary of Groundwater Analytical Results
MW3
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters			Date ->	9/13/2016	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units				
Benzene	5	0.5	µg/l	165	44.6	< 0.40	607
Toluene	800	160	µg/l	36.1	0.79 ^j	< 0.39	99.5
Ethylbenzene	700	140	µg/l	146	12.3	< 0.39	314
Xylenes (mixed isomers)	2,000	400	µg/l	720	14.4	< 0.80	569
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 1.2	1.0	< 0.48	< 3.2
Trimethylbenzenes (mixed isomers)	480	96	µg/l	183.1	12.0	< 0.42	128.3
Naphthalene	100	10	µg/l	44.9	5.0	< 0.42	49.4
Field Measurements							
Temperature			°F	NA	NA	NA	NA
Conductivity			ms/cm	NA	NA	NA	NA
Dissolved Oxygen			mg/L	NA	NA	NA	NA
pH				NA	NA	NA	NA
Redox Potential			mV	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

NA = Not Analyzed

NS = Not Sampled

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

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Table 2f
Summary of Groundwater Analytical Results
MW4
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters			Date ->	9/13/2016	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units				
Benzene	5	0.5	µg/l	1,130	659	460	884
Toluene	800	160	µg/l	<i>301</i>	18.7	11.6	43.7
Ethylbenzene	700	140	µg/l	395	<i>146</i>	99.2	<i>154</i>
Xylenes (mixed isomers)	2,000	400	µg/l	11,504	160	65	236.4
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 2.4	< 4.8	< 4.8	< 6.4
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>322.7</i>	49.3	21.2	<i>100.4</i>
Naphthalene	100	10	µg/l	<i>74.7</i>	<i>13.9</i>	<i>7.8</i> ^J	<i>22.6</i> ^J
Field Measurements							
Temperature			°F	NA	NA	42.3	NA
Conductivity			ms/cm	NA	NA	33.7	NA
Dissolved Oxygen			mg/L	NA	NA	0.97	NA
pH				NA	NA	7.3	NA
Redox Potential			mV	NA	NA	-212.8	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

NA = Not Analyzed

NS = Not Sampled

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Table 2g
Summary of Groundwater Analytical Results
MW5
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters		ES	PAL	Date ->	9/13/2016	1/11/2017	1/26/2018	5/16/2018
Benzene		5	0.5	Units				
Toluene		800	160	µg/l	119	77.9		175
Ethylbenzene		700	140	µg/l	24	11.7		69.2
Xylenes (mixed isomers)		2,000	400	µg/l	109	65.1		381
Methyl tert-Butyl Ether (MTBE)		60	12	µg/l	285	102		608.4
Trimethylbenzenes (mixed isomers)		480	96	µg/l	2.0	1.3		7.3 ^J
Naphthalene		100	10	µg/l	79.3	32.8		545
Field Measurements					17.2	10.6		91.7
Temperature				°F	NA	NA	Water Froze in Well - Not Sampled	NA
Conductivity				ms/cm	NA	NA		NA
Dissolved Oxygen				mg/L	NA	NA		NA
pH					NA	NA		NA
Redox Potential				mV	NA	NA		NA

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
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Table 2h
Summary of Groundwater Analytical Results
MW6
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters			Date ->	9/13/2016	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units				
Benzene	5	0.5	µg/l	3.5	23.1	6.5	1.6
Toluene	800	160	µg/l	0.88 ^j	< 0.39	< 0.39	< 0.49
Ethylbenzene	700	140	µg/l	2.8	3.9	0.62 ^j	< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	6.4	< 0.80	< 0.80	< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.48	< 0.48	< 0.48	< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	1.3	< 0.42	0.50 ^j	< 0.34
Naphthalene	100	10	µg/l	0.46 ^j	< 0.42	< 0.42	< 0.51
Field Measurements							
Temperature			°F	NA	NA	41.8	NA
Conductivity			ms/cm	NA	NA	303	NA
Dissolved Oxygen			mg/L	NA	NA	3.43	NA
pH				NA	NA	7.32	NA
Redox Potential			mV	NA	NA	-162.9	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

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Table 2i
Summary of Groundwater Analytical Results
MW7
Hedlund DX
Falun, Wisconsin

Dissolved Lead	ES	PAL	Units	9/21/2016	1/11/2017	1/26/2018	5/16/2018
	15	1.5	µg/l	< 3.0	NA	NA	NA
Detected VOC Parameters							
Benzene	5	0.5	µg/l	< 0.40	< 0.40		< 0.31
Toluene	800	160	µg/l	< 0.39	< 0.39		< 0.49
Ethylbenzene	700	140	µg/l	< 0.39	< 0.39		< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.80	< 0.80		< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.48	< 0.48		< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.42	< 0.42		< 0.34
Naphthalene	100	10	µg/l	< 0.42	< 0.42		< 0.51
Field Measurements							
Temperature			°F	NA	NA		NA
Conductivity			ms/cm	NA	NA		NA
Dissolved Oxygen			mg/L	NA	NA		NA
pH				NA	NA		NA
Redox Potential			mV	NA	NA		NA

Notes:

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Table 2j
Summary of Groundwater Analytical Results
MW8
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters			Date ->	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units			
Benzene	5	0.5	µg/l	< 0.50	< 0.40	< 0.31
Toluene	800	160	µg/l	< 0.50	< 0.39	< 0.49
Ethylbenzene	700	140	µg/l	< 0.50	< 0.39	< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0	< 0.80	< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17	< 0.48	< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50	< 0.42	< 0.34
Naphthalene	100	10	µg/l	< 2.5	< 0.42	< 0.51
Tetrachloroethene	5	0.5	µg/l	0.75 ^J	NA	NA
Inorganic Compounds						
Dissolved Iron	300	150	µg/l	4,670	NA	NA
Dissolved Manganese	50	25	µg/l	1,190	NA	NA
Field Measurements						
Temperature			°F	NA	46.98	NA
Conductivity			ms/cm	NA	784	NA
Dissolved Oxygen			mg/L	NA	3.41	NA
pH				NA	7.45	NA
Redox Potential			mV	NA	-31.1	NA

Notes:

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Enforcement Standard exceeded
Preventive Action Limit exceeded
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NS = Not Sampled
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<i>Italics</i>

Table 2k
Summary of Groundwater Analytical Results
MW9
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters			Date ->	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units			
Benzene	5	0.5	µg/l	< 0.50	< 0.40	< 0.31
Toluene	800	160	µg/l	< 0.50	< 0.39	< 0.49
Ethylbenzene	700	140	µg/l	< 0.50	< 0.39	< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.0	< 0.80	< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17	< 0.48	< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50	< 0.42	< 0.34
Naphthalene	100	10	µg/l	< 2.5	< 0.42	< 0.51
Tetrachloroethene	5	0.5	µg/l	<i>1.2</i>	NA	NA
Inorganic Compounds						
Dissolved Iron	300	150	µg/l	2,370	NA	NA
Dissolved Manganese	50	25	µg/l	394	NA	NA
Field Measurements						
Temperature			°F	NA	42.87	NA
Conductivity			ms/cm	NA	339	NA
Dissolved Oxygen			mg/L	NA	2.1	NA
pH				NA	7.37	NA
Redox Potential			mV	NA	-86.3	NA

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
NA = Not Analyzed
NS = Not Sampled

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

BOLD
<i>Italics</i>

Table 21
Summary of Groundwater Analytical Results
MW10
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters				Date ->	1/11/2017	1/26/2018	5/16/2018
	ES	PAL	Units				
Benzene	5	0.5	µg/l		< 0.50	< 0.40	< 0.31
Toluene	800	160	µg/l		< 0.50	< 0.39	< 0.49
Ethylbenzene	700	140	µg/l		< 0.50	< 0.39	< 0.33
Xylenes (mixed isomers)	2,000	400	µg/l		< 1.0	< 0.80	< 0.66
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 0.17	< 0.48	< 0.32
Trimethylbenzenes (mixed isomers)	480	96	µg/l		< 0.50	< 0.42	< 0.34
Naphthalene	100	10	µg/l		< 2.5	< 0.42	< 0.51
Tetrachloroethene	5	0.5	µg/l		< 0.50	NA	NA
Inorganic Compounds							
Dissolved Iron	300	150	µg/l		1,560	NA	NA
Dissolved Manganese	50	25	µg/l		284	NA	NA
Field Measurements							
Temperature			°F		NA	387.93	NA
Conductivity			ms/cm		NA	183	NA
Dissolved Oxygen			mg/L		NA	1.95	NA
pH					NA	7.87	NA
Redox Potential			mV		NA	-111.2	NA

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
NA = Not Analyzed
NS = Not Sampled

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

BOLD
<i>Italics</i>

Table 2m
Summary of Groundwater Analytical Results
MW11
Hedlund DX
Falun, Wisconsin

Detected VOC Parameters				Date ->	1/11/2017	1/26/2018	5/16/2018
	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
Tetrachloroethene	5	0.5	µg/l		< 0.50		NA
Inorganic Compounds							
Dissolved Iron	300	150	µg/l		468		NA
Dissolved Manganese	50	25	µg/l		292		NA
Field Measurements							
Temperature			°F		NA		NA
Conductivity			ms/cm		NA		NA
Dissolved Oxygen			mg/L		NA		NA
pH					NA		NA
Redox Potential			mV		NA		NA

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
Enforcement Standard exceeded
Preventive Action Limit exceeded
NA = Not Analyzed
NS = Not Sampled

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

BOLD
<i>Italics</i>

Table 2n
Summary of Groundwater Analytical Results
10561 State Highway 70 - Potable Well
Hedlund DX
Falun, Wisconsin

	ES	PAL	Units	9/21/2016	1/11/2017	1/26/2018	5/16/2018
Dissolved Lead	15	1.5	µg/l	< 3.0	NS		NS
Detected VOC Parameters							
Benzene	5	0.5	µg/l	< 0.086	< 0.086	Well Not Sampled	< 0.032
Toluene	800	160	µg/l	< 0.080	< 0.080		< 0.12
Ethylbenzene	700	140	µg/l	< 0.051	< 0.051		< 0.017
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.073	< 0.073		< 0.03
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	NA	NA		< 0.016
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.083	< 0.083		< 0.025
Naphthalene	100	10	µg/l	< 0.064	< 0.064		< 0.022
Tetrachloroethene	5	0.5	µg/l	< 0.12	< 0.12		< 0.04

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

NA = Not Analyzed

NS = Not Sampled

¹ = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

BOLD
<i>Italics</i>

Table 2o
Summary of Groundwater Analytical Results
10531 State Highway 70 - Potable Well
Hedlund DX
Falun, Wisconsin

	ES	PAL	Units	9/21/2016	1/11/2017	1/26/2018	5/16/2018
Dissolved Lead	15	1.5	µg/l	< 3.0	NS		
Detected VOC Parameters							
Benzene	5	0.5	µg/l	< 0.086	NS		
Toluene	800	160	µg/l	< 0.080	NS		
Ethylbenzene	700	140	µg/l	< 0.051	NS		
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.073	NS		
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	NA	NS		
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.083	NS		
Naphthalene	100	10	µg/l	< 0.064	NS		
Tetrachloroethene	5	0.5	µg/l	< 0.12	NS		

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

Enforcement Standard exceeded

Preventive Action Limit exceeded

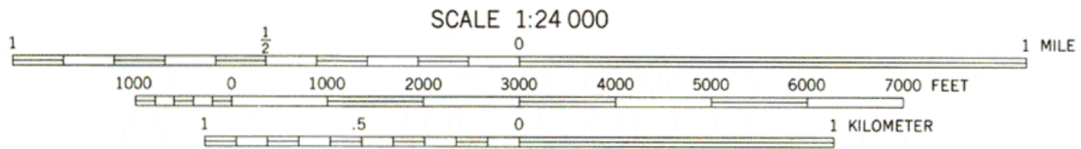
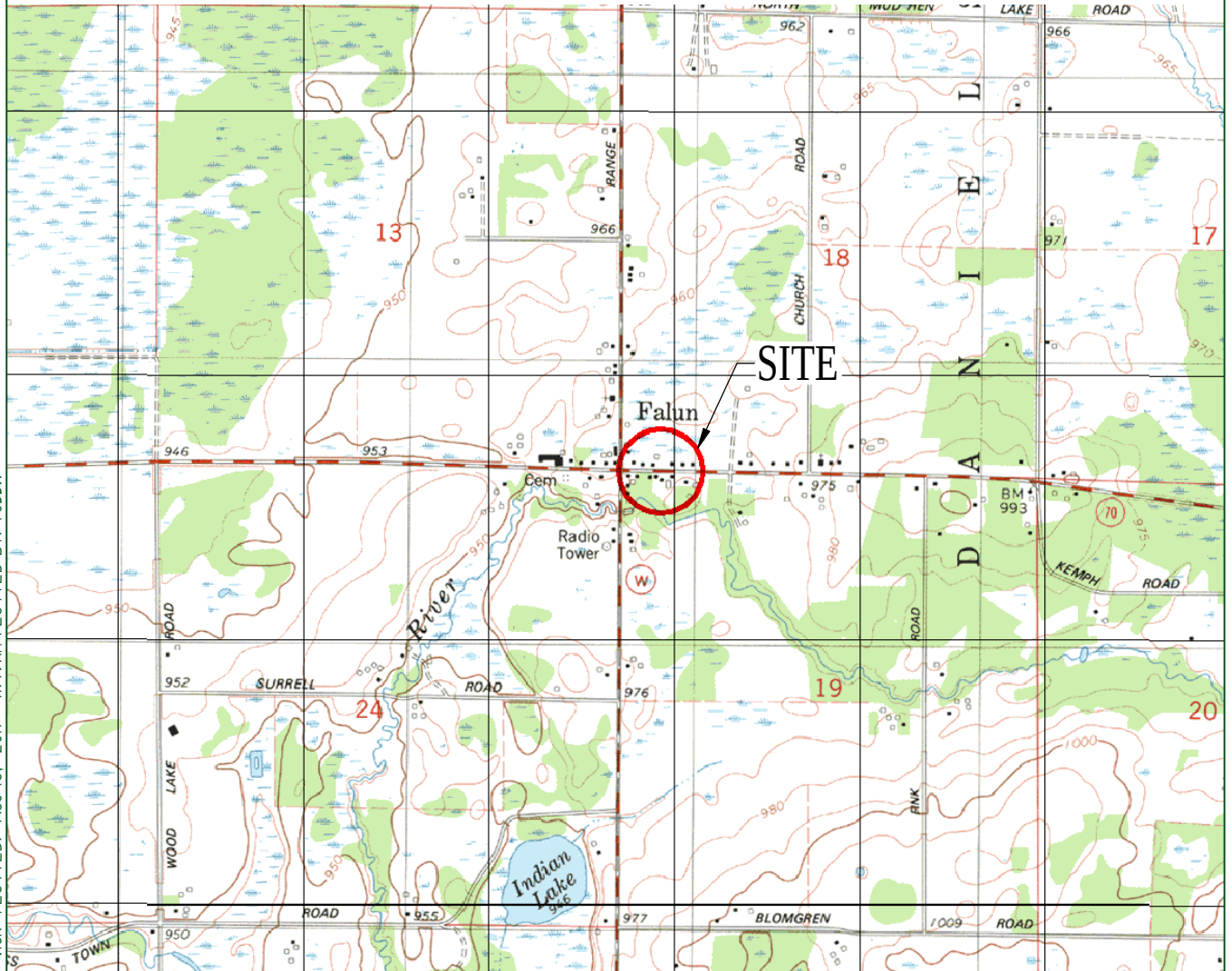
NA = Not Analyzed

NS = Not Sampled

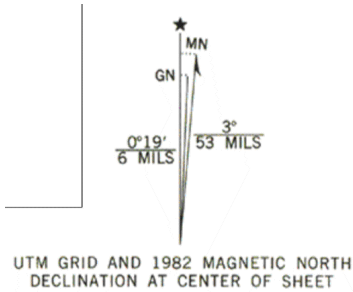
J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

BOLD
<i>Italics</i>

DRAWING FILE: P:\17300-7399\7367 - HEDLUND DX\DWG\7367-VICN.DWG LAYOUT: 7367-VICN PLOTTED: Aug 15, 2017 - 11:49AM PLOTTED BY: ToddW



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



FALUN, WIS.
SE/4 GRANTSBURG 15' QUADRANGLE
N4545-W9230/7.5

1982

DMA 2475 I SE-SERIES V861



QUADRANGLE LOCATION

REI Engineering, INC.

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

FIGURE 1 : SITE VICINITY MAP

PROJECT NO.	DRAWN BY:	DATE:
7367AxUC	TAW	8/15/2017

APPENDIX A

GROUNDWATER ANALYTICAL RESULTS



February 12, 2018

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

RE: Project: 7367 HEDLUND DX
Pace Project No.: 40164102

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on January 30, 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

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CERTIFICATIONS

Project: 7367 HEDLUND DX

Pace Project No.: 40164102

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: 7367 HEDLUND DX

Pace Project No.: 40164102

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40164102001	MW-1	Water	01/26/18 12:15	01/30/18 11:40
40164102002	MW-3	Water	01/26/18 13:30	01/30/18 11:40
40164102003	MW-4	Water	01/26/18 14:15	01/30/18 11:40
40164102004	MW-6	Water	01/26/18 13:00	01/30/18 11:40
40164102005	MW-8	Water	01/26/18 10:15	01/30/18 11:40
40164102006	MW-9	Water	01/26/18 10:45	01/30/18 11:40
40164102007	MW-10	Water	01/26/18 11:45	01/30/18 11:40

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SAMPLE ANALYTE COUNT

Project: 7367 HEDLUND DX

Pace Project No.: 40164102

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40164102001	MW-1	WI MOD GRO	ALD	10
40164102002	MW-3	WI MOD GRO	ALD	10
40164102003	MW-4	WI MOD GRO	ALD	10
40164102004	MW-6	WI MOD GRO	ALD	10
40164102005	MW-8	WI MOD GRO	ALD	10
40164102006	MW-9	WI MOD GRO	ALD	10
40164102007	MW-10	WI MOD GRO	ALD	10

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40164102

Sample: MW-1		Lab ID: 40164102001		Collected: 01/26/18 12:15		Received: 01/30/18 11:40		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	<0.40	ug/L	1.0	0.40	1		01/31/18 18:42	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		01/31/18 18:42	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		01/31/18 18:42	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		01/31/18 18:42	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		01/31/18 18:42	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		01/31/18 18:42	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		01/31/18 18:42	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		01/31/18 18:42	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		01/31/18 18:42	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		01/31/18 18:42	98-08-8	

Sample: MW-3		Lab ID: 40164102002		Collected: 01/26/18 13:30		Received: 01/30/18 11:40		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	<0.40	ug/L	1.0	0.40	1		01/31/18 19:08	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		01/31/18 19:08	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		01/31/18 19:08	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		01/31/18 19:08	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		01/31/18 19:08	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		01/31/18 19:08	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		01/31/18 19:08	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		01/31/18 19:08	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		01/31/18 19:08	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	117	%	80-120		1		01/31/18 19:08	98-08-8	

Sample: MW-4		Lab ID: 40164102003		Collected: 01/26/18 14:15		Received: 01/30/18 11:40		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	460	ug/L	10.0	4.0	10		02/01/18 13:37	71-43-2	
Ethylbenzene	99.2	ug/L	10.0	3.9	10		02/01/18 13:37	100-41-4	
Methyl-tert-butyl ether	<4.8	ug/L	10.0	4.8	10		02/01/18 13:37	1634-04-4	
Naphthalene	7.8J	ug/L	10.0	4.2	10		02/01/18 13:37	91-20-3	
Toluene	11.6	ug/L	10.0	3.9	10		02/01/18 13:37	108-88-3	
1,2,4-Trimethylbenzene	21.2	ug/L	10.0	4.2	10		02/01/18 13:37	95-63-6	
1,3,5-Trimethylbenzene	7.5J	ug/L	10.0	4.2	10		02/01/18 13:37	108-67-8	
m&p-Xylene	65.0	ug/L	20.0	8.0	10		02/01/18 13:37	179601-23-1	
o-Xylene	<4.5	ug/L	10.0	4.5	10		02/01/18 13:37	95-47-6	

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40164102

Sample: MW-4		Lab ID: 40164102003		Collected: 01/26/18 14:15	Received: 01/30/18 11:40	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)	102	%	80-120		10		02/01/18 13:37	98-08-8	

Sample: MW-6		Lab ID: 40164102004		Collected: 01/26/18 13:00	Received: 01/30/18 11:40	Matrix: Water			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	6.5	ug/L	1.0	0.40	1		02/01/18 16:35	71-43-2	
Ethylbenzene	0.62J	ug/L	1.0	0.39	1		02/01/18 16:35	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/01/18 16:35	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/01/18 16:35	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/01/18 16:35	108-88-3	
1,2,4-Trimethylbenzene	0.50J	ug/L	1.0	0.42	1		02/01/18 16:35	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 16:35	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/01/18 16:35	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/01/18 16:35	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1		02/01/18 16:35	98-08-8	

Sample: MW-8		Lab ID: 40164102005		Collected: 01/26/18 10:15	Received: 01/30/18 11:40	Matrix: Water			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	<0.40	ug/L	1.0	0.40	1		02/01/18 17:01	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/01/18 17:01	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/01/18 17:01	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:01	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/01/18 17:01	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:01	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:01	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/01/18 17:01	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/01/18 17:01	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	97	%	80-120		1		02/01/18 17:01	98-08-8	

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ANALYTICAL RESULTS

Project: 7367 HEDLUND DX
Pace Project No.: 40164102

Sample: MW-9 Lab ID: 40164102006 Collected: 01/26/18 10:45 Received: 01/30/18 11:40 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		02/01/18 17:26	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/01/18 17:26	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/01/18 17:26	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:26	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/01/18 17:26	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:26	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:26	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/01/18 17:26	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/01/18 17:26	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%	80-120		1		02/01/18 17:26	98-08-8	

Sample: MW-10 Lab ID: 40164102007 Collected: 01/26/18 11:45 Received: 01/30/18 11:40 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		02/01/18 17:52	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/01/18 17:52	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/01/18 17:52	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:52	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/01/18 17:52	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:52	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/01/18 17:52	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/01/18 17:52	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/01/18 17:52	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	97	%	80-120		1		02/01/18 17:52	98-08-8	

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40164102

QC Batch: 280178 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40164102001, 40164102002

METHOD BLANK: 1644125 Matrix: Water
Associated Lab Samples: 40164102001, 40164102002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	01/31/18 08:29	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	01/31/18 08:29	
Benzene	ug/L	<0.40	1.0	01/31/18 08:29	
Ethylbenzene	ug/L	<0.39	1.0	01/31/18 08:29	
m&p-Xylene	ug/L	<0.80	2.0	01/31/18 08:29	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	01/31/18 08:29	
Naphthalene	ug/L	<0.42	1.0	01/31/18 08:29	
o-Xylene	ug/L	<0.45	1.0	01/31/18 08:29	
Toluene	ug/L	<0.39	1.0	01/31/18 08:29	
a,a,a-Trifluorotoluene (S)	%	102	80-120	01/31/18 08:29	

LABORATORY CONTROL SAMPLE & LCSD:										
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.4	21.2	107	106	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	21.1	21.0	105	105	80-120	1	20	
Benzene	ug/L	20	20.8	20.5	104	102	80-120	2	20	
Ethylbenzene	ug/L	20	21.9	21.9	110	109	80-120	0	20	
m&p-Xylene	ug/L	40	43.0	43.1	108	108	80-120	0	20	
Methyl-tert-butyl ether	ug/L	20	19.4	19.1	97	95	80-120	2	20	
Naphthalene	ug/L	20	20.3	20.9	101	105	80-120	3	20	
o-Xylene	ug/L	20	21.3	21.2	106	106	80-120	0	20	
Toluene	ug/L	20	20.9	20.8	105	104	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				102	103	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:				1644324		1644325						
Parameter	Units	40164101006	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Spike	Spike								Result
1,2,4-Trimethylbenzene	ug/L	<0.42	20	20	19.1	21.0	95	105	11-200	10	20	
1,3,5-Trimethylbenzene	ug/L	<0.42	20	20	17.9	20.1	90	101	54-142	11	20	
Benzene	ug/L	<0.40	20	20	22.0	22.1	110	110	66-140	0	20	
Ethylbenzene	ug/L	<0.39	20	20	23.3	24.1	116	120	66-143	3	20	
m&p-Xylene	ug/L	<0.80	40	40	43.3	45.9	108	115	60-141	6	20	
Methyl-tert-butyl ether	ug/L	<0.48	20	20	19.5	19.9	98	99	70-129	2	20	
Naphthalene	ug/L	<0.42	20	20	21.2	22.6	106	113	64-129	6	20	
o-Xylene	ug/L	<0.45	20	20	21.4	22.6	107	113	68-132	6	20	
Toluene	ug/L	<0.39	20	20	22.1	22.6	111	113	76-130	2	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX

Pace Project No.: 40164102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644324 1644325												
Parameter	Units	40164101006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						103	105	80-120			HS

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX
Pace Project No.: 40164102

QC Batch: 280298 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40164102003, 40164102004, 40164102005, 40164102006, 40164102007

METHOD BLANK: 1644508 Matrix: Water
Associated Lab Samples: 40164102003, 40164102004, 40164102005, 40164102006, 40164102007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	02/01/18 10:37	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	02/01/18 10:37	
Benzene	ug/L	<0.40	1.0	02/01/18 10:37	
Ethylbenzene	ug/L	<0.39	1.0	02/01/18 10:37	
m&p-Xylene	ug/L	<0.80	2.0	02/01/18 10:37	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	02/01/18 10:37	
Naphthalene	ug/L	<0.42	1.0	02/01/18 10:37	
o-Xylene	ug/L	<0.45	1.0	02/01/18 10:37	
Toluene	ug/L	<0.39	1.0	02/01/18 10:37	
a,a,a-Trifluorotoluene (S)	%	103	80-120	02/01/18 10:37	

LABORATORY CONTROL SAMPLE & LCSD: 1644509

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.4	21.7	107	108	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	21.2	21.5	106	108	80-120	1	20	
Benzene	ug/L	20	21.2	20.8	106	104	80-120	2	20	
Ethylbenzene	ug/L	20	22.2	22.3	111	111	80-120	0	20	
m&p-Xylene	ug/L	40	43.5	43.9	109	110	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	18.6	18.9	93	94	80-120	2	20	
Naphthalene	ug/L	20	19.0	20.6	95	103	80-120	8	20	
o-Xylene	ug/L	20	21.3	21.6	106	108	80-120	2	20	
Toluene	ug/L	20	21.3	21.1	106	105	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				102	104	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644614

Parameter	Units	40164102003 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	21.2	200	200	234	243	106	111	11-200	4	20	
1,3,5-Trimethylbenzene	ug/L	7.5J	200	200	220	225	106	109	54-142	2	20	
Benzene	ug/L	460	200	200	702	723	121	131	66-140	3	20	
Ethylbenzene	ug/L	99.2	200	200	324	331	113	116	66-143	2	20	
m&p-Xylene	ug/L	65.0	400	400	489	501	106	109	60-141	3	20	
Methyl-tert-butyl ether	ug/L	<4.8	200	200	169	188	84	94	70-129	11	20	
Naphthalene	ug/L	7.8J	200	200	192	208	92	100	64-129	8	20	
o-Xylene	ug/L	<4.5	200	200	210	215	105	108	68-132	3	20	
Toluene	ug/L	11.6	200	200	210	219	99	104	76-130	4	20	

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QUALITY CONTROL DATA

Project: 7367 HEDLUND DX

Pace Project No.: 40164102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644614 1644615												
Parameter	Units	40164102003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
a,a,a-Trifluorotoluene (S)	%						100	99	80-120			

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QUALIFIERS

Project: 7367 HEDLUND DX

Pace Project No.: 40164102

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).

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367 HEDLUND DX

Pace Project No.: 40164102

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40164102001	MW-1	WI MOD GRO	280178		
40164102002	MW-3	WI MOD GRO	280178		
40164102003	MW-4	WI MOD GRO	280298		
40164102004	MW-6	WI MOD GRO	280298		
40164102005	MW-8	WI MOD GRO	280298		
40164102006	MW-9	WI MOD GRO	280298		
40164102007	MW-10	WI MOD GRO	280298		

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***Preservation Codes**

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

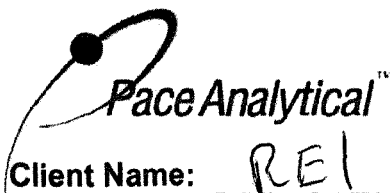
FILTERED?
(YES/NO)

PRESERVATION
(CODE)*

[illegible]

Data Package Options (billable)		MS/MSD	Matrix Codes		
☐ EPA Level III	☐ On your sample (billable)	A = Air	W = Water		
☐ EPA Level IV	☐ NOT needed on your sample	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		MATRIX	
		DATE	TIME		
001	MW-1	1/24/18	12:15	GW	
002	MW-3	↓	1:30	↓	
003	MW-4	↓	2:15	↓	
004	MW-6	↓	1:00	↓	
005	MW-8	↓	10:15	↓	
006	MW-9	↓	10:45	↓	
007	MW-10	↓	11:45	↓	
008	Baitshop Potable	↓	2:30	DW	

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:		Relinquished By: <i>[Signature]</i> Date/Time: <i>1/30/18 11:40a</i>	Received By: <i>[Signature]</i> Date/Time: <i>1/30/18 1140</i>	PACE Project No. <i>40164102</i>
Transmit Prelim Rush Results by (complete what you want):		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	Receipt Temp = <i>62</i> °C
Email #1:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	Sample Receipt pH OK / Adjusted
Email #2:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	Cooler Custody Seal Present / Not Present
Telephone:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	Intact / Not Intact
Fax:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Samples on HOLD are subject to special pricing and release of liability				



Sample Condition Upon Receipt

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

Project #:

WO#: 40164102

Client Name: REI

Courier: ☐ Fed Ex ☐ UPS ☒ Client ☐ Pace Other: _____

Tracking #: _____

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

Thermometer Used

N/A

Type of Ice: ☒ Wet ☐ Blue Dry None☒ Samples on ice, cooling process has begun

Cooler Temperature

Uncorr: 20.1 ICorr: _____

Biological Tissue is Frozen: ☐ yesTemp Blank Present: ☐ yes ☒ no☐ no

Person examining contents:

Date: 1/30/18

Initials: RS

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C.

Comments:

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	5.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time: _____
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No ☐ N/A	7.
Sufficient Volume:	☐ Yes ☒ No ☐ N/A	8. 10 mg/mL 28/1/30/18
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	9.
- Pace Containers Used:	☒ Yes ☐ No ☐ N/A	
- Pace IR Containers Used:	☐ Yes ☐ No ☒ N/A	
Containers Intact:	☒ Yes ☐ No ☐ N/A	10. 005 - vial distended Sept 1-30-18
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: <u>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐ Yes ☐ No ☒ N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤ 2; NaOH + ZnAct ≥ 9, NaOH ≥ 12)	☐ Yes ☐ No ☒ N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☒ Yes ☐ No	Initial when completed _____ Lab Std #ID of preservative _____ Date/Time: _____
Headspace in VOA Vials (>6mm):	☒ Yes ☒ No ☐ N/A	14. 005 and 006 - vial 1-30-18
Trip Blank Present:	☐ Yes ☒ No ☐ N/A	15.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 1-30-18

May 29, 2018

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

RE: Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 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

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CERTIFICATIONS

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40169450001	MW-1	Water	05/16/18 18:10	05/19/18 08:17
40169450002	MW-2	Water	05/16/18 18:40	05/19/18 08:17
40169450003	MW-3	Water	05/16/18 18:50	05/19/18 08:17
40169450004	MW-4	Water	05/16/18 19:15	05/19/18 08:17
40169450005	MW-5	Water	05/16/18 19:00	05/19/18 08:17
40169450006	MW-6	Water	05/16/18 18:30	05/19/18 08:17
40169450007	MW-7	Water	05/16/18 17:50	05/19/18 08:17
40169450008	MW-8	Water	05/16/18 17:30	05/19/18 08:17
40169450009	MW-9	Water	05/16/18 17:40	05/19/18 08:17
40169450010	MW-10	Water	05/16/18 18:00	05/19/18 08:17
40169450011	MW-11	Water	05/16/18 18:20	05/19/18 08:17
40169450012	BAITSHOP	Water	05/16/18 17:39	05/19/18 08:17

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SAMPLE ANALYTE COUNT

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40169450001	MW-1	WI MOD GRO	ALD	10	PASI-G
40169450002	MW-2	WI MOD GRO	ALD	10	PASI-G
40169450003	MW-3	WI MOD GRO	ALD	10	PASI-G
40169450004	MW-4	WI MOD GRO	ALD	10	PASI-G
40169450005	MW-5	WI MOD GRO	ALD	10	PASI-G
40169450006	MW-6	WI MOD GRO	ALD	10	PASI-G
40169450007	MW-7	WI MOD GRO	ALD	10	PASI-G
40169450008	MW-8	WI MOD GRO	ALD	10	PASI-G
40169450009	MW-9	WI MOD GRO	ALD	10	PASI-G
40169450010	MW-10	WI MOD GRO	ALD	10	PASI-G
40169450011	MW-11	WI MOD GRO	ALD	10	PASI-G
40169450012	BAITSHOP	EPA 524.2	AH2	62	PASI-M

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

Sample: MW-1		Lab ID: 40169450001		Collected: 05/16/18 18:10		Received: 05/19/18 08:17		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		05/22/18 20:46	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 20:46	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 20:46	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 20:46	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 20:46	108-88-3	
1,2,4-Trimethylbenzene	0.42J	ug/L	1.1	0.34	1		05/22/18 20:46	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 20:46	108-67-8	
m&p-Xylene	0.67J	ug/L	2.2	0.66	1		05/22/18 20:46	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 20:46	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		05/22/18 20:46	98-08-8	

Sample: MW-2		Lab ID: 40169450002		Collected: 05/16/18 18:40		Received: 05/19/18 08:17		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	50.8	ug/L	1.0	0.31	1		05/22/18 16:06	71-43-2	
Ethylbenzene	10.4	ug/L	1.1	0.33	1		05/22/18 16:06	100-41-4	
Methyl-tert-butyl ether	0.67J	ug/L	1.1	0.32	1		05/22/18 16:06	1634-04-4	
Naphthalene	3.1	ug/L	1.7	0.51	1		05/22/18 16:06	91-20-3	
Toluene	3.5	ug/L	1.6	0.49	1		05/22/18 16:06	108-88-3	
1,2,4-Trimethylbenzene	12.4	ug/L	1.1	0.34	1		05/22/18 16:06	95-63-6	
1,3,5-Trimethylbenzene	0.48J	ug/L	1.1	0.33	1		05/22/18 16:06	108-67-8	
m&p-Xylene	20.8	ug/L	2.2	0.66	1		05/22/18 16:06	179601-23-1	
o-Xylene	2.4	ug/L	1.0	0.32	1		05/22/18 16:06	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		05/22/18 16:06	98-08-8	

Sample: MW-3		Lab ID: 40169450003		Collected: 05/16/18 18:50		Received: 05/19/18 08:17		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	607	ug/L	10.2	3.1	10		05/22/18 16:57	71-43-2	
Ethylbenzene	314	ug/L	11.0	3.3	10		05/22/18 16:57	100-41-4	
Methyl-tert-butyl ether	<3.2	ug/L	10.7	3.2	10		05/22/18 16:57	1634-04-4	
Naphthalene	49.4	ug/L	16.8	5.1	10		05/22/18 16:57	91-20-3	
Toluene	99.5	ug/L	16.3	4.9	10		05/22/18 16:57	108-88-3	
1,2,4-Trimethylbenzene	108	ug/L	11.4	3.4	10		05/22/18 16:57	95-63-6	
1,3,5-Trimethylbenzene	20.3	ug/L	10.9	3.3	10		05/22/18 16:57	108-67-8	
m&p-Xylene	406	ug/L	21.8	6.6	10		05/22/18 16:57	179601-23-1	
o-Xylene	163	ug/L	10.5	3.2	10		05/22/18 16:57	95-47-6	

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

Sample: MW-3		Lab ID: 40169450003		Collected: 05/16/18 18:50		Received: 05/19/18 08:17		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		10		05/22/18 16:57	98-08-8	

Sample: MW-4		Lab ID: 40169450004		Collected: 05/16/18 19:15		Received: 05/19/18 08:17		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	884	ug/L	20.4	6.1	20		05/22/18 16:31	71-43-2	
Ethylbenzene	154	ug/L	22.0	6.6	20		05/22/18 16:31	100-41-4	
Methyl-tert-butyl ether	<6.4	ug/L	21.4	6.4	20		05/22/18 16:31	1634-04-4	
Naphthalene	22.6J	ug/L	33.6	10.1	20		05/22/18 16:31	91-20-3	
Toluene	43.7	ug/L	32.6	9.8	20		05/22/18 16:31	108-88-3	
1,2,4-Trimethylbenzene	78.1	ug/L	22.8	6.8	20		05/22/18 16:31	95-63-6	
1,3,5-Trimethylbenzene	22.3	ug/L	21.8	6.6	20		05/22/18 16:31	108-67-8	
m&p-Xylene	208	ug/L	43.6	13.1	20		05/22/18 16:31	179601-23-1	
o-Xylene	28.4	ug/L	21.0	6.3	20		05/22/18 16:31	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%	80-120		20		05/22/18 16:31	98-08-8	

Sample: MW-5		Lab ID: 40169450005		Collected: 05/16/18 19:00		Received: 05/19/18 08:17		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Benzene	175	ug/L	10.2	3.1	10		05/22/18 17:57	71-43-2	
Ethylbenzene	381	ug/L	11.0	3.3	10		05/22/18 17:57	100-41-4	
Methyl-tert-butyl ether	7.3J	ug/L	10.7	3.2	10		05/22/18 17:57	1634-04-4	
Naphthalene	91.7	ug/L	16.8	5.1	10		05/22/18 17:57	91-20-3	
Toluene	69.2	ug/L	16.3	4.9	10		05/22/18 17:57	108-88-3	
1,2,4-Trimethylbenzene	377	ug/L	11.4	3.4	10		05/22/18 17:57	95-63-6	
1,3,5-Trimethylbenzene	168	ug/L	10.9	3.3	10		05/22/18 17:57	108-67-8	
m&p-Xylene	571	ug/L	21.8	6.6	10		05/22/18 17:57	179601-23-1	
o-Xylene	37.4	ug/L	10.5	3.2	10		05/22/18 17:57	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		10		05/22/18 17:57	98-08-8	

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

Sample: MW-6		Lab ID: 40169450006		Collected: 05/16/18 18:30		Received: 05/19/18 08:17		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	1.6	ug/L	1.0	0.31	1		05/22/18 11:31	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 11:31	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 11:31	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 11:31	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 11:31	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/22/18 11:31	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 11:31	108-67-8	
m&p-Xylene	<0.66	ug/L	2.2	0.66	1		05/22/18 11:31	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 11:31	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		05/22/18 11:31	98-08-8	

Sample: MW-7		Lab ID: 40169450007		Collected: 05/16/18 17:50		Received: 05/19/18 08:17		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		05/22/18 11:56	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 11:56	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 11:56	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 11:56	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 11:56	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/22/18 11:56	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 11:56	108-67-8	
m&p-Xylene	<0.66	ug/L	2.2	0.66	1		05/22/18 11:56	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 11:56	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		05/22/18 11:56	98-08-8	

Sample: MW-8		Lab ID: 40169450008		Collected: 05/16/18 17:30		Received: 05/19/18 08:17		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		05/22/18 12:22	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 12:22	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 12:22	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 12:22	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 12:22	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/22/18 12:22	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 12:22	108-67-8	
m&p-Xylene	<0.66	ug/L	2.2	0.66	1		05/22/18 12:22	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 12:22	95-47-6	

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

Sample: MW-8		Lab ID: 40169450008		Collected: 05/16/18 17:30	Received: 05/19/18 08:17	Matrix: Water			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO							
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1		05/22/18 12:22	98-08-8	

Sample: MW-9		Lab ID: 40169450009		Collected: 05/16/18 17:40	Received: 05/19/18 08:17	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		05/22/18 12:48	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 12:48	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 12:48	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 12:48	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 12:48	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/22/18 12:48	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 12:48	108-67-8	
m&p-Xylene	<0.66	ug/L	2.2	0.66	1		05/22/18 12:48	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 12:48	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		05/22/18 12:48	98-08-8	

Sample: MW-10		Lab ID: 40169450010		Collected: 05/16/18 18:00	Received: 05/19/18 08:17	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		05/22/18 13:14	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 13:14	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 13:14	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 13:14	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 13:14	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/22/18 13:14	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 13:14	108-67-8	
m&p-Xylene	<0.66	ug/L	2.2	0.66	1		05/22/18 13:14	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 13:14	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		05/22/18 13:14	98-08-8	

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

Sample: MW-11 Lab ID: 40169450011 Collected: 05/16/18 18:20 Received: 05/19/18 08:17 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		05/22/18 20:32	71-43-2	
Ethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 20:32	100-41-4	
Methyl-tert-butyl ether	<0.32	ug/L	1.1	0.32	1		05/22/18 20:32	1634-04-4	
Naphthalene	<0.51	ug/L	1.7	0.51	1		05/22/18 20:32	91-20-3	
Toluene	<0.49	ug/L	1.6	0.49	1		05/22/18 20:32	108-88-3	
1,2,4-Trimethylbenzene	<0.34	ug/L	1.1	0.34	1		05/22/18 20:32	95-63-6	
1,3,5-Trimethylbenzene	<0.33	ug/L	1.1	0.33	1		05/22/18 20:32	108-67-8	
m&p-Xylene	<0.66	ug/L	2.2	0.66	1		05/22/18 20:32	179601-23-1	
o-Xylene	<0.32	ug/L	1.0	0.32	1		05/22/18 20:32	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		05/22/18 20:32	98-08-8	

Sample: BAITSHOP Lab ID: 40169450012 Collected: 05/16/18 17:39 Received: 05/19/18 08:17 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV Analytical Method: EPA 524.2									
Benzene	<0.032	ug/L	0.11	0.032	1		05/24/18 03:42	71-43-2	
Bromobenzene	<0.030	ug/L	0.10	0.030	1		05/24/18 03:42	108-86-1	
Bromochloromethane	<0.13	ug/L	0.42	0.13	1		05/24/18 03:42	74-97-5	
Bromodichloromethane	<0.048	ug/L	0.16	0.048	1		05/24/18 03:42	75-27-4	
Bromoform	<0.069	ug/L	0.23	0.069	1		05/24/18 03:42	75-25-2	
Bromomethane	<0.080	ug/L	0.27	0.080	1		05/24/18 03:42	74-83-9	
n-Butylbenzene	<0.035	ug/L	0.12	0.035	1		05/24/18 03:42	104-51-8	
sec-Butylbenzene	<0.013	ug/L	0.043	0.013	1		05/24/18 03:42	135-98-8	
tert-Butylbenzene	<0.021	ug/L	0.070	0.021	1		05/24/18 03:42	98-06-6	
Carbon tetrachloride	<0.065	ug/L	0.22	0.065	1		05/24/18 03:42	56-23-5	
Chlorobenzene	<0.028	ug/L	0.093	0.028	1		05/24/18 03:42	108-90-7	
Chloroethane	<0.053	ug/L	0.18	0.053	1		05/24/18 03:42	75-00-3	
Chloroform	<0.18	ug/L	0.61	0.18	1		05/24/18 03:42	67-66-3	
Chloromethane	<0.023	ug/L	0.075	0.023	1		05/24/18 03:42	74-87-3	
2-Chlorotoluene	<0.023	ug/L	0.076	0.023	1		05/24/18 03:42	95-49-8	
4-Chlorotoluene	<0.017	ug/L	0.058	0.017	1		05/24/18 03:42	106-43-4	
1,2-Dibromo-3-chloropropane	<0.12	ug/L	0.41	0.12	1		05/24/18 03:42	96-12-8	
Dibromochloromethane	<0.060	ug/L	0.20	0.060	1		05/24/18 03:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.046	ug/L	0.15	0.046	1		05/24/18 03:42	106-93-4	
Dibromomethane	<0.041	ug/L	0.14	0.041	1		05/24/18 03:42	74-95-3	
1,2-Dichlorobenzene	<0.041	ug/L	0.14	0.041	1		05/24/18 03:42	95-50-1	
1,3-Dichlorobenzene	<0.028	ug/L	0.092	0.028	1		05/24/18 03:42	541-73-1	
1,4-Dichlorobenzene	<0.042	ug/L	0.14	0.042	1		05/24/18 03:42	106-46-7	
Dichlorodifluoromethane	<0.021	ug/L	0.071	0.021	1		05/24/18 03:42	75-71-8	
1,1-Dichloroethane	<0.033	ug/L	0.11	0.033	1		05/24/18 03:42	75-34-3	
1,2-Dichloroethane	<0.041	ug/L	0.14	0.041	1		05/24/18 03:42	107-06-2	
1,1-Dichloroethene	<0.034	ug/L	0.11	0.034	1		05/24/18 03:42	75-35-4	

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ANALYTICAL RESULTS

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

Sample: BAITSHOP Lab ID: 40169450012 Collected: 05/16/18 17:39 Received: 05/19/18 08:17 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV		Analytical Method: EPA 524.2							
cis-1,2-Dichloroethene	<0.052	ug/L	0.17	0.052	1		05/24/18 03:42	156-59-2	
trans-1,2-Dichloroethene	<0.028	ug/L	0.092	0.028	1		05/24/18 03:42	156-60-5	
1,2-Dichloropropane	<0.064	ug/L	0.21	0.064	1		05/24/18 03:42	78-87-5	
1,3-Dichloropropane	<0.055	ug/L	0.18	0.055	1		05/24/18 03:42	142-28-9	
2,2-Dichloropropane	<0.080	ug/L	0.27	0.080	1		05/24/18 03:42	594-20-7	
1,1-Dichloropropene	<0.038	ug/L	0.12	0.038	1		05/24/18 03:42	563-58-6	
cis-1,3-Dichloropropene	<0.041	ug/L	0.14	0.041	1		05/24/18 03:42	10061-01-5	
trans-1,3-Dichloropropene	<0.034	ug/L	0.11	0.034	1		05/24/18 03:42	10061-02-6	
Ethylbenzene	<0.017	ug/L	0.057	0.017	1		05/24/18 03:42	100-41-4	
Hexachloro-1,3-butadiene	<0.048	ug/L	0.16	0.048	1		05/24/18 03:42	87-68-3	
Isopropylbenzene (Cumene)	<0.011	ug/L	0.036	0.011	1		05/24/18 03:42	98-82-8	
p-Isopropyltoluene	<0.012	ug/L	0.041	0.012	1		05/24/18 03:42	99-87-6	
Methylene Chloride	<0.14	ug/L	0.47	0.14	1		05/24/18 03:42	75-09-2	
Methyl-tert-butyl ether	<0.016	ug/L	0.053	0.016	1		05/24/18 03:42	1634-04-4	
Naphthalene	<0.022	ug/L	0.074	0.022	1		05/24/18 03:42	91-20-3	
n-Propylbenzene	<0.019	ug/L	0.062	0.019	1		05/24/18 03:42	103-65-1	
Styrene	<0.020	ug/L	0.068	0.020	1		05/24/18 03:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.056	ug/L	0.19	0.056	1		05/24/18 03:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.035	ug/L	0.12	0.035	1		05/24/18 03:42	79-34-5	
Tetrachloroethene	<0.040	ug/L	0.13	0.040	1		05/24/18 03:42	127-18-4	
Toluene	<0.12	ug/L	0.40	0.12	1		05/24/18 03:42	108-88-3	
1,2,3-Trichlorobenzene	<0.022	ug/L	0.072	0.022	1		05/24/18 03:42	87-61-6	
1,2,4-Trichlorobenzene	<0.026	ug/L	0.087	0.026	1		05/24/18 03:42	120-82-1	
1,1,1-Trichloroethane	<0.070	ug/L	0.23	0.070	1		05/24/18 03:42	71-55-6	
1,1,2-Trichloroethane	<0.086	ug/L	0.29	0.086	1		05/24/18 03:42	79-00-5	
Trichloroethene	<0.044	ug/L	0.15	0.044	1		05/24/18 03:42	79-01-6	
Trichlorofluoromethane	<0.026	ug/L	0.085	0.026	1		05/24/18 03:42	75-69-4	
1,2,3-Trichloropropane	<0.13	ug/L	0.44	0.13	1		05/24/18 03:42	96-18-4	
1,2,4-Trimethylbenzene	<0.017	ug/L	0.058	0.017	1		05/24/18 03:42	95-63-6	
1,3,5-Trimethylbenzene	<0.025	ug/L	0.082	0.025	1		05/24/18 03:42	108-67-8	
Vinyl chloride	<0.016	ug/L	0.052	0.016	1		05/24/18 03:42	75-01-4	
Xylene (Total)	<0.030	ug/L	0.10	0.030	1		05/24/18 03:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	75-125		1		05/24/18 03:42	460-00-4	
Toluene-d8 (S)	105	%	75-125		1		05/24/18 03:42	2037-26-5	
1,2-Dichloroethane-d4 (S)	108	%	75-125		1		05/24/18 03:42	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

QC Batch: 289560 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 40169450001, 40169450002, 40169450003, 40169450004

METHOD BLANK: 1694550 Matrix: Water
Associated Lab Samples: 40169450001, 40169450002, 40169450003, 40169450004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	05/22/18 09:16	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	05/22/18 09:16	
Benzene	ug/L	<0.31	1.0	05/22/18 09:16	
Ethylbenzene	ug/L	<0.33	1.1	05/22/18 09:16	
m&p-Xylene	ug/L	<0.66	2.2	05/22/18 09:16	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	05/22/18 09:16	
Naphthalene	ug/L	<0.51	1.7	05/22/18 09:16	
o-Xylene	ug/L	<0.32	1.0	05/22/18 09:16	
Toluene	ug/L	<0.49	1.6	05/22/18 09:16	
a,a,a-Trifluorotoluene (S)	%	102	80-120	05/22/18 09:16	

LABORATORY CONTROL SAMPLE & LCSD: 1694551

LABORATORY CONTROL SAMPLE & LCSD: 1694551			1694552							
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	20.2	20.3	101	102	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	19.5	19.7	98	99	80-120	1	20	
Benzene	ug/L	20	20.0	19.6	100	98	80-120	2	20	
Ethylbenzene	ug/L	20	20.0	19.9	100	100	80-120	0	20	
m&p-Xylene	ug/L	40	39.4	39.4	98	99	80-120	0	20	
Methyl-tert-butyl ether	ug/L	20	19.5	19.8	98	99	80-120	1	20	
Naphthalene	ug/L	20	18.7	20.0	94	100	80-120	6	20	
o-Xylene	ug/L	20	19.9	20.0	99	100	80-120	1	20	
Toluene	ug/L	20	20.0	19.8	100	99	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				101	102	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1694828

Parameter	Units	1694829									
		40169449004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD
1,2,4-Trimethylbenzene	ug/L	<0.34	20	20	21.0	20.8	105	104	51-160	1	20
1,3,5-Trimethylbenzene	ug/L	<0.33	20	20	20.5	20.2	102	101	56-146	1	20
Benzene	ug/L	<0.31	20	20	22.0	21.6	110	108	71-137	2	20
Ethylbenzene	ug/L	<0.33	20	20	21.9	21.5	109	107	71-141	2	20
m&p-Xylene	ug/L	<0.66	40	40	42.6	42.0	107	105	66-141	2	20
Methyl-tert-butyl ether	ug/L	<0.32	20	20	20.1	19.8	101	99	80-120	2	20
Naphthalene	ug/L	<0.51	20	20	19.1	19.4	96	97	67-138	2	20
o-Xylene	ug/L	<0.32	20	20	21.4	21.0	107	105	75-133	2	20
Toluene	ug/L	<0.49	20	20	21.9	21.5	110	108	76-134	2	20

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1694828 1694829												
Parameter	Units	40169449004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
a,a,a-Trifluorotoluene (S)	%						101	100	80-120			

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

QC Batch:	289561	Analysis Method:	WI MOD GRO
QC Batch Method:	WI MOD GRO	Analysis Description:	WIGRO GCV Water
Associated Lab Samples: 40169450005, 40169450006, 40169450007, 40169450008, 40169450009, 40169450010, 40169450011			

METHOD BLANK:	1694553	Matrix:	Water
Associated Lab Samples: 40169450005, 40169450006, 40169450007, 40169450008, 40169450009, 40169450010, 40169450011			

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.34	1.1	05/22/18 09:48	
1,3,5-Trimethylbenzene	ug/L	<0.33	1.1	05/22/18 09:48	
Benzene	ug/L	<0.31	1.0	05/22/18 09:48	
Ethylbenzene	ug/L	<0.33	1.1	05/22/18 09:48	
m&p-Xylene	ug/L	<0.66	2.2	05/22/18 09:48	
Methyl-tert-butyl ether	ug/L	<0.32	1.1	05/22/18 09:48	
Naphthalene	ug/L	<0.51	1.7	05/22/18 09:48	
o-Xylene	ug/L	<0.32	1.0	05/22/18 09:48	
Toluene	ug/L	<0.49	1.6	05/22/18 09:48	
a,a,a-Trifluorotoluene (S)	%	100	80-120	05/22/18 09:48	

LABORATORY CONTROL SAMPLE & LCSD: 1694554			1694555							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.4	22.3	107	112	80-120	4	20	
1,3,5-Trimethylbenzene	ug/L	20	20.7	21.6	104	108	80-120	4	20	
Benzene	ug/L	20	20.5	21.4	103	107	80-120	4	20	
Ethylbenzene	ug/L	20	20.9	21.6	104	108	80-120	3	20	
m&p-Xylene	ug/L	40	40.9	42.3	102	106	80-120	3	20	
Methyl-tert-butyl ether	ug/L	20	20.3	20.5	101	102	80-120	1	20	
Naphthalene	ug/L	20	19.9	20.5	99	103	80-120	3	20	
o-Xylene	ug/L	20	20.5	21.3	102	107	80-120	4	20	
Toluene	ug/L	20	20.6	21.3	103	107	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				100	98	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1694849				1694850							
Parameter	Units	40169450006	MS	MSD	MS	MSD	MS	MSD	% Rec	Max			
		Result	Spike	Spike									
1,2,4-Trimethylbenzene	ug/L	<0.34	20	20	16.3	16.2	82	81	51-160	1	20		
1,3,5-Trimethylbenzene	ug/L	<0.33	20	20	12.7	12.5	64	63	56-146	1	20		
Benzene	ug/L	1.6	20	20	23.4	23.3	109	108	71-137	0	20		
Ethylbenzene	ug/L	<0.33	20	20	19.8	19.8	99	99	71-141	0	20		
m&p-Xylene	ug/L	<0.66	40	40	34.3	34.4	86	86	66-141	0	20		
Methyl-tert-butyl ether	ug/L	<0.32	20	20	21.1	21.1	106	106	80-120	0	20		
Naphthalene	ug/L	<0.51	20	20	16.7	17.2	83	86	67-138	3	20		
o-Xylene	ug/L	<0.32	20	20	17.4	17.5	87	87	75-133	1	20		
Toluene	ug/L	<0.49	20	20	20.3	20.3	102	101	76-134	0	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1694849 1694850												
Parameter	Units	40169450006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
a,a,a-Trifluorotoluene (S)	%						98	100	80-120			

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

QC Batch: 540381	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
Associated Lab Samples: 40169450012	

METHOD BLANK: 2938838	Matrix: Water
Associated Lab Samples: 40169450012	

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.056	0.19	05/23/18 20:46	
1,1,1-Trichloroethane	ug/L	<0.070	0.23	05/23/18 20:46	
1,1,2,2-Tetrachloroethane	ug/L	<0.035	0.12	05/23/18 20:46	
1,1,2-Trichloroethane	ug/L	<0.086	0.29	05/23/18 20:46	
1,1-Dichloroethane	ug/L	<0.033	0.11	05/23/18 20:46	
1,1-Dichloroethene	ug/L	<0.034	0.11	05/23/18 20:46	
1,1-Dichloropropene	ug/L	<0.038	0.12	05/23/18 20:46	
1,2,3-Trichlorobenzene	ug/L	<0.022	0.072	05/23/18 20:46	
1,2,3-Trichloropropane	ug/L	<0.13	0.44	05/23/18 20:46	
1,2,4-Trichlorobenzene	ug/L	<0.026	0.087	05/23/18 20:46	
1,2,4-Trimethylbenzene	ug/L	<0.017	0.058	05/23/18 20:46	
1,2-Dibromo-3-chloropropane	ug/L	<0.12	0.41	05/23/18 20:46	
1,2-Dibromoethane (EDB)	ug/L	<0.046	0.15	05/23/18 20:46	
1,2-Dichlorobenzene	ug/L	<0.041	0.14	05/23/18 20:46	
1,2-Dichloroethane	ug/L	<0.041	0.14	05/23/18 20:46	
1,2-Dichloropropane	ug/L	<0.064	0.21	05/23/18 20:46	
1,3,5-Trimethylbenzene	ug/L	<0.025	0.082	05/23/18 20:46	
1,3-Dichlorobenzene	ug/L	<0.028	0.092	05/23/18 20:46	
1,3-Dichloropropane	ug/L	<0.055	0.18	05/23/18 20:46	
1,4-Dichlorobenzene	ug/L	<0.042	0.14	05/23/18 20:46	
2,2-Dichloropropane	ug/L	<0.080	0.27	05/23/18 20:46	
2-Chlorotoluene	ug/L	<0.023	0.076	05/23/18 20:46	
4-Chlorotoluene	ug/L	<0.017	0.058	05/23/18 20:46	
Benzene	ug/L	<0.032	0.11	05/23/18 20:46	
Bromobenzene	ug/L	<0.030	0.10	05/23/18 20:46	
Bromochloromethane	ug/L	<0.13	0.42	05/23/18 20:46	
Bromodichloromethane	ug/L	<0.048	0.16	05/23/18 20:46	
Bromoform	ug/L	<0.069	0.23	05/23/18 20:46	
Bromomethane	ug/L	<0.080	0.27	05/23/18 20:46	
Carbon tetrachloride	ug/L	<0.065	0.22	05/23/18 20:46	
Chlorobenzene	ug/L	<0.028	0.093	05/23/18 20:46	
Chloroethane	ug/L	<0.053	0.18	05/23/18 20:46	
Chloroform	ug/L	<0.18	0.61	05/23/18 20:46	
Chloromethane	ug/L	<0.023	0.075	05/23/18 20:46	
cis-1,2-Dichloroethene	ug/L	<0.052	0.17	05/23/18 20:46	
cis-1,3-Dichloropropene	ug/L	<0.041	0.14	05/23/18 20:46	
Dibromochloromethane	ug/L	<0.060	0.20	05/23/18 20:46	
Dibromomethane	ug/L	<0.041	0.14	05/23/18 20:46	
Dichlorodifluoromethane	ug/L	<0.021	0.071	05/23/18 20:46	
Ethylbenzene	ug/L	<0.017	0.057	05/23/18 20:46	
Hexachloro-1,3-butadiene	ug/L	<0.048	0.16	05/23/18 20:46	

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

METHOD BLANK: 2938838

Matrix: Water

Associated Lab Samples: 40169450012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.011	0.036	05/23/18 20:46	
Methyl-tert-butyl ether	ug/L	<0.016	0.053	05/23/18 20:46	
Methylene Chloride	ug/L	<0.14	0.47	05/23/18 20:46	
n-Butylbenzene	ug/L	<0.035	0.12	05/23/18 20:46	
n-Propylbenzene	ug/L	<0.019	0.062	05/23/18 20:46	
Naphthalene	ug/L	<0.022	0.074	05/23/18 20:46	
p-Isopropyltoluene	ug/L	<0.012	0.041	05/23/18 20:46	
sec-Butylbenzene	ug/L	<0.013	0.043	05/23/18 20:46	
Styrene	ug/L	<0.020	0.068	05/23/18 20:46	
tert-Butylbenzene	ug/L	<0.021	0.070	05/23/18 20:46	
Tetrachloroethene	ug/L	<0.040	0.13	05/23/18 20:46	
Toluene	ug/L	<0.12	0.40	05/23/18 20:46	
trans-1,2-Dichloroethene	ug/L	<0.028	0.092	05/23/18 20:46	
trans-1,3-Dichloropropene	ug/L	<0.034	0.11	05/23/18 20:46	
Trichloroethene	ug/L	<0.044	0.15	05/23/18 20:46	
Trichlorofluoromethane	ug/L	<0.026	0.085	05/23/18 20:46	
Vinyl chloride	ug/L	<0.016	0.052	05/23/18 20:46	
Xylene (Total)	ug/L	<0.030	0.10	05/23/18 20:46	
1,2-Dichloroethane-d4 (S)	%	109	75-125	05/23/18 20:46	
4-Bromofluorobenzene (S)	%	105	75-125	05/23/18 20:46	
Toluene-d8 (S)	%	106	75-125	05/23/18 20:46	

LABORATORY CONTROL SAMPLE & LCSD: 2938839

2938840

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	8.8	9.0	88	90	70-130	2	20	
1,1,1-Trichloroethane	ug/L	10	9.8	10.2	98	102	70-130	4	20	
1,1,2,2-Tetrachloroethane	ug/L	10	8.8	8.9	88	89	70-130	1	20	
1,1,2-Trichloroethane	ug/L	10	9.1	9.1	91	91	70-130	0	20	
1,1-Dichloroethane	ug/L	10	9.1	9.5	91	95	70-130	4	20	
1,1-Dichloroethene	ug/L	10	9.2	10	92	100	70-130	7	20	
1,1-Dichloropropene	ug/L	10	10.1	10.7	101	107	70-130	6	20	
1,2,3-Trichlorobenzene	ug/L	10	10.2	10.5	102	105	70-130	3	20	
1,2,3-Trichloropropane	ug/L	10	9.8	9.3	98	93	70-130	6	20	
1,2,4-Trichlorobenzene	ug/L	10	9.6	10.5	96	105	70-130	8	20	
1,2,4-Trimethylbenzene	ug/L	10	11.9	12.4	119	124	70-130	5	20	
1,2-Dibromo-3-chloropropane	ug/L	25	21.7	21.5	87	86	70-130	1	20	
1,2-Dibromoethane (EDB)	ug/L	10	9.8	9.7	98	97	70-130	1	20	
1,2-Dichlorobenzene	ug/L	10	9.6	9.8	96	98	70-130	2	20	
1,2-Dichloroethane	ug/L	10	10.1	10.3	101	103	70-130	2	20	
1,2-Dichloropropane	ug/L	10	9.4	9.5	94	95	70-130	2	20	
1,3,5-Trimethylbenzene	ug/L	10	10.5	10.9	105	109	70-130	4	20	
1,3-Dichlorobenzene	ug/L	10	9.9	10.2	99	102	70-130	3	20	
1,3-Dichloropropane	ug/L	10	9.1	9.4	91	94	70-130	2	20	

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

LABORATORY CONTROL SAMPLE & LCSD: 2938839			2938840							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dichlorobenzene	ug/L	10	9.0	9.2	90	92	70-130	2	20	
2,2-Dichloropropane	ug/L	10	8.5	10.0	85	100	70-130	16	20	
2-Chlorotoluene	ug/L	10	10.2	10.5	102	105	70-130	3	20	
4-Chlorotoluene	ug/L	10	10.3	10.8	103	108	70-130	5	20	
Benzene	ug/L	10	9.5	9.9	95	99	70-130	3	20	
Bromobenzene	ug/L	10	9.2	9.5	92	95	70-130	3	20	
Bromochloromethane	ug/L	10	9.6	9.9	96	99	70-130	3	20	
Bromodichloromethane	ug/L	10	8.8	9.0	88	90	70-130	2	20	
Bromoform	ug/L	10	9.3	9.2	93	92	70-130	2	20	
Bromomethane	ug/L	10	12.8	14.4	128	144	70-130	11	20	L3
Carbon tetrachloride	ug/L	10	10.1	10.0	101	100	70-130	0	20	
Chlorobenzene	ug/L	10	9.1	9.4	91	94	70-130	3	20	
Chloroethane	ug/L	10	9.5	10.3	95	103	70-130	8	20	
Chloroform	ug/L	10	9.8	10.2	98	102	70-130	4	20	
Chloromethane	ug/L	10	12.9	9.5	129	95	70-130	30	20	R1
cis-1,2-Dichloroethene	ug/L	10	9.8	10.2	98	102	70-130	4	20	
cis-1,3-Dichloropropene	ug/L	10	9.9	10.4	99	104	70-130	6	20	
Dibromochloromethane	ug/L	10	9.9	9.8	99	98	70-130	0	20	
Dibromomethane	ug/L	10	9.3	9.1	93	91	70-130	1	20	
Dichlorodifluoromethane	ug/L	10	10.6	11.6	106	116	70-130	9	20	
Ethylbenzene	ug/L	10	10	10.3	100	103	70-130	3	20	
Hexachloro-1,3-butadiene	ug/L	10	9.1	9.5	91	95	70-130	4	20	
Isopropylbenzene (Cumene)	ug/L	10	12.0	12.6	120	126	70-130	5	20	
Methyl-tert-butyl ether	ug/L	10	9.5	9.9	95	99	70-130	4	20	
Methylene Chloride	ug/L	10	9.1	9.6	91	96	70-130	5	20	
n-Butylbenzene	ug/L	10	10.8	11.4	108	114	70-130	6	20	
n-Propylbenzene	ug/L	10	9.7	10.2	97	102	70-130	4	20	
Naphthalene	ug/L	10	9.8	10	98	100	70-130	2	20	
p-Isopropyltoluene	ug/L	10	12.2	12.8	122	128	70-130	5	20	
sec-Butylbenzene	ug/L	10	11.6	12.1	116	121	70-130	4	20	
Styrene	ug/L	10	12.4	12.7	124	127	70-130	2	20	
tert-Butylbenzene	ug/L	10	11.1	11.5	111	115	70-130	4	20	
Tetrachloroethene	ug/L	10	9.7	10.0	97	100	70-130	4	20	
Toluene	ug/L	10	9.1	9.3	91	93	70-130	3	20	
trans-1,2-Dichloroethene	ug/L	10	10.1	10.9	101	109	70-130	7	20	
trans-1,3-Dichloropropene	ug/L	10	10.3	10.6	103	106	70-130	2	20	
Trichloroethene	ug/L	10	10.2	10.6	102	106	70-130	3	20	
Trichlorofluoromethane	ug/L	10	9.6	10.1	96	101	70-130	6	20	
Vinyl chloride	ug/L	10	10.3	11.3	103	113	70-130	10	20	
Xylene (Total)	ug/L	30	30.4	31.8	101	106	70-130	4	20	
1,2-Dichloroethane-d4 (S)	%				102	102	75-125			
4-Bromofluorobenzene (S)	%				100	100	75-125			
Toluene-d8 (S)	%				96	96	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941423 2941424														
Parameter	Units	40169317006		MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max	Qual
		Result	Conc.	Spike	Spike									
1,1,1,2-Tetrachloroethane	ug/L	<0.056	10	10	10	9.3	9.6	93	96	70-130	3	20		
1,1,1-Trichloroethane	ug/L	<0.070	10	10	10	10.3	10.5	103	105	70-130	2	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.035	10	10	10	8.9	9.1	89	91	70-130	2	20		
1,1,2-Trichloroethane	ug/L	<0.086	10	10	10	9.3	9.4	93	94	70-130	1	20		
1,1-Dichloroethane	ug/L	0.46J	10	10	10	10.1	10.3	96	98	70-130	2	20		
1,1-Dichloroethene	ug/L	<0.034	10	10	10	9.6	10.1	96	101	70-130	4	20		
1,1-Dichloropropene	ug/L	<0.038	10	10	10	10.4	10.7	104	107	70-130	3	20		
1,2,3-Trichlorobenzene	ug/L	<0.022	10	10	10	10.6	10.9	106	109	70-130	3	20		
1,2,3-Trichloropropane	ug/L	<0.13	10	10	10	9.7	9.8	97	98	70-130	1	20		
1,2,4-Trichlorobenzene	ug/L	<0.026	10	10	10	10.4	10.6	104	106	70-130	2	20		
1,2,4-Trimethylbenzene	ug/L	<0.017	10	10	10	12.3	12.8	123	128	70-130	4	20		
1,2-Dibromo-3-chloropropane	ug/L	<0.12	25	25	22.8	23.4	91	94	94	70-130	3	20		
1,2-Dibromoethane (EDB)	ug/L	<0.046	10	10	9.8	10.2	98	102	102	70-130	4	20		
1,2-Dichlorobenzene	ug/L	<0.041	10	10	9.9	10.3	99	103	103	70-130	4	20		
1,2-Dichloroethane	ug/L	<0.041	10	10	10.3	10.4	103	104	104	70-130	1	20		
1,2-Dichloropropane	ug/L	<0.064	10	10	9.9	10.1	99	101	101	70-130	1	20		
1,3,5- Trimethylbenzene	ug/L	<0.025	10	10	10.8	11.1	108	111	111	70-130	3	20		
1,3-Dichlorobenzene	ug/L	<0.028	10	10	10.3	10.6	103	106	106	70-130	3	20		
1,3-Dichloropropane	ug/L	<0.055	10	10	9.4	9.5	94	95	95	70-130	1	20		
1,4-Dichlorobenzene	ug/L	0.11J	10	10	9.4	9.7	93	96	96	70-130	3	20		
2,2-Dichloropropane	ug/L	<0.080	10	10	10.0	10.3	100	103	103	70-130	3	20		
2-Chlorotoluene	ug/L	<0.023	10	10	10.6	10.9	106	109	109	70-130	3	20		
4-Chlorotoluene	ug/L	<0.017	10	10	10.7	11.1	107	111	111	70-130	4	20		
Benzene	ug/L	0.13J	10	10	9.9	10.2	98	100	100	70-130	2	20		
Bromobenzene	ug/L	<0.030	10	10	9.6	9.9	96	99	99	70-130	3	20		
Bromochloromethane	ug/L	<0.13	10	10	10.2	10.3	102	103	103	70-130	1	20		
Bromodichloromethane	ug/L	<0.048	10	10	9.3	9.6	93	96	96	70-130	3	20		
Bromoform	ug/L	<0.069	10	10	9.6	10.0	96	100	100	70-130	5	20		
Bromomethane	ug/L	<0.080	10	10	14.3	14.4	143	144	144	70-130	1	20	M1	
Carbon tetrachloride	ug/L	<0.065	10	10	10.4	10.7	104	107	107	70-130	3	20		
Chlorobenzene	ug/L	0.20J	10	10	9.6	9.8	94	96	96	70-130	2	20		
Chloroethane	ug/L	0.49J	10	10	10.0	10.1	95	96	96	70-130	1	20		
Chloroform	ug/L	<0.18	10	10	9.9	10.4	99	104	104	70-130	5	20		
Chloromethane	ug/L	<0.023	10	10	9.7	9.9	97	99	99	70-130	2	20		
cis-1,2-Dichloroethene	ug/L	0.14J	10	10	10.3	10.6	102	105	105	70-130	3	20		
cis-1,3-Dichloropropene	ug/L	<0.041	10	10	8.6	8.9	86	89	89	70-130	3	20		
Dibromochloromethane	ug/L	<0.060	10	10	10.1	10.3	101	103	103	70-130	2	20		
Dibromomethane	ug/L	<0.041	10	10	9.6	9.6	96	96	96	70-130	0	20		
Dichlorodifluoromethane	ug/L	0.034J	10	10	10.7	10.7	107	106	106	70-130	0	20		
Ethylbenzene	ug/L	<0.017	10	10	10.5	10.7	105	107	107	70-130	2	20		
Hexachloro-1,3-butadiene	ug/L	<0.048	10	10	9.4	9.7	94	97	97	70-130	3	20		
Isopropylbenzene (Cumene)	ug/L	<0.011	10	10	12.5	13.2	125	132	132	70-130	6	20	M1	
Methyl-tert-butyl ether	ug/L	<0.016	10	10	10.1	10.2	101	102	102	70-130	1	20		
Methylene Chloride	ug/L	0.66J	10	10	10.3	10.4	96	97	97	70-130	1	20		
n-Butylbenzene	ug/L	<0.035	10	10	11.2	11.5	112	115	115	70-130	3	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2941423 2941424											
Parameter	Units	40169317006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max	
										RPD	RPD
n-Propylbenzene	ug/L	<0.019	10	10	10.0	10.4	100	104	70-130	3	20
Naphthalene	ug/L	<0.022	10	10	10.2	10.5	102	105	70-130	2	20
p-Isopropyltoluene	ug/L	<0.012	10	10	12.7	13.2	127	132	70-130	4	20 M1
sec-Butylbenzene	ug/L	<0.013	10	10	12.0	12.4	120	124	70-130	4	20
Styrene	ug/L	<0.020	10	10	13.0	13.4	130	134	70-130	2	20 M1
tert-Butylbenzene	ug/L	<0.021	10	10	11.5	11.9	115	119	70-130	4	20
Tetrachloroethene	ug/L	<0.040	10	10	9.9	10.3	99	103	70-130	4	20
Toluene	ug/L	<0.12	10	10	9.3	9.5	93	95	70-130	2	20
trans-1,2-Dichloroethene	ug/L	<0.028	10	10	10.1	10.6	101	106	70-130	5	20
trans-1,3-Dichloropropene	ug/L	<0.034	10	10	10.7	10.9	107	109	70-130	2	20
Trichloroethene	ug/L	<0.044	10	10	10.9	11.0	109	110	70-130	2	20
Trichlorofluoromethane	ug/L	<0.026	10	10	10.2	10.2	102	102	70-130	0	20
Vinyl chloride	ug/L	<0.016	10	10	11.1	11.3	111	113	70-130	2	20
Xylene (Total)	ug/L	<0.030	30	30	31.5	32.8	105	109	70-130	4	20
1,2-Dichloroethane-d4 (S)	%						103	102	75-125		
4-Bromofluorobenzene (S)	%						101	100	75-125		
Toluene-d8 (S)	%						95	95	75-125		

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QUALIFIERS

Project: 7367AXUC HEDLUND DX
Pace Project No.: 40169450

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

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

ANALYTE QUALIFIERS

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 7367AXUC HEDLUND DX

Pace Project No.: 40169450

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40169450001	MW-1	WI MOD GRO	289560		
40169450002	MW-2	WI MOD GRO	289560		
40169450003	MW-3	WI MOD GRO	289560		
40169450004	MW-4	WI MOD GRO	289560		
40169450005	MW-5	WI MOD GRO	289561		
40169450006	MW-6	WI MOD GRO	289561		
40169450007	MW-7	WI MOD GRO	289561		
40169450008	MW-8	WI MOD GRO	289561		
40169450009	MW-9	WI MOD GRO	289561		
40169450010	MW-10	WI MOD GRO	289561		
40169450011	MW-11	WI MOD GRO	289561		
40169450012	BAITSHOP	EPA 524.2	540381		

REPORT OF LABORATORY ANALYSIS

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40169450

FILTERED?
(YES/NO)

PRESERVATION
(CODE)*

[illegible]

Data Package Options (billable)		MS/MSD	Matrix Codes		
☐ EPA Level III	☐ On your sample (billable)	A = Air	W = Water		
☐ EPA Level IV	☐ NOT needed on your sample	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		MATRIX	
		DATE	TIME		
001	MW-1	5/16/18	6:10	GW	
002	MW-2		6:40		
003	MW-3		6:50		
004	MW-4		7:15		
005	MW-5		7:00		
006	MW-6		6:30		
007	MW-7		5:50		
008	MW-8		5:30		
009	MW-9		5:40		
010	MW-10		6:00		
011	MW-11		6:20		
012	Baitshop		5:39	DW	

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:		Relinquished By: <i>[Signature]</i> Date/Time: <i>5/18/18 11:00</i>	Received By: _____ Date/Time: _____	PACE Project No. <i>40169450</i> Receipt Temp = <i>ROT</i> °C Sample Receipt pH OK / Adjusted Cooler Custody Seal Present / <u>Not Present</u> Intact / Not Intact
Transmit Prelim Rush Results by (complete what you want):		Relinquished By: <i>W. H. Co</i> Date/Time: <i>5/19/18 0817</i>	Received By: <i>[Signature]</i> Date/Time: <i>5/18/18 0517</i>	
Email #1:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Email #2:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Telephone:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Fax:		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	
Samples on HOLD are subject to special pricing and release of liability		Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	

Sample Preservation Receipt Form

Client Name: RED

Project # 40169450

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							
001																	3														2.5 / 5 / 10	
002																	2														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	
008																	3														2.5 / 5 / 10	
009																	3														2.5 / 5 / 10	
010																	3														2.5 / 5 / 10	
011																	3														2.5 / 5 / 10	
012																	2														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	SP5T 120 mL plastic Na Thiosulfate ZPLC ziploc bag GN:	
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH		
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI		
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4				

 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 #:

Client Name:

REI

WO#: 40169450

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Waltco

☐ Client ☐ Pace Other: _____

Tracking #:

172 44 34-1



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: 20.1 / Corr: _____

Temp Blank Present: ☐ yes ☒ no

Biological Tissue is Frozen: ☐ yes ☐ no

Person examining contents:

Date: 5/14/18

Initials: SSN

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.
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:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		
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. 002 one vial received broken 5/19/18
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: _____

5-21-18