



## Meridian Environmental Consulting, LLC

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January 20, 2020

Carrie Stoltz  
Wisconsin Department of Natural Resources  
107 Sutliff Avenue  
Rhineland, Wisconsin 54501

Subject:           **Progress Report:**  
                      ▪ **Ground Water Sampling (August 27, November 20 – 2019)**

Olson & Goodman, Inc  
328 S. Hwy 13  
Stetsonville, Wisconsin 54480  
PECFA No. 54480-9742-28  
DNR BRRTS No. 03-61-563926  
Meridian No. 05F807

Dear Carrie:

This Progress Report describes recent work completed at the above referenced site.

This included:

- Sample monitoring well network (August 27 & November 20, 2019)
- Re-survey monitoring well network (due to frost-heaving and well repairs)

The results of this work are described in this report. Based on these results, we recommend this site be submitted for Closure. A Change Order will be submitted in separate correspondence.

## BACKGROUND INFORMATION

The reader is referred to file reports for more detail regarding the site and previous work. A brief summary is provided below for reference.

The site is a commercial property located at 328 South State Hwy. 13 in the Village of Stetsonville, Wisconsin (Taylor County)(Figures 1 and 2). There was a buried underground storage tank (500 gallon gasoline) in use at the south end of the parking area (Figure 2). This tank was removed November 12, 1992.

There are reports that a diesel tank was buried along the south side of the property. The tank was believed to have been removed in the late 1960's/early 1970's. No further information has been found regarding this tank.

A Site Investigation was completed beginning in 2015. Soil borings and monitoring wells were installed to define the extent of impacted soil and ground water. The wells designated 'A' are water table wells and the wells designated 'B' or 'P' are piezometers.

The ground water monitoring well network was installed to determine the extent of impacted ground water. This network included four wells (MW-7, MW-7P, MW-9, MW-9P) installed during the nearby Ed's Service (BRRTS No. 03-61-183093) Site Investigation. These wells are now considered part of the Olson Goodman monitoring well network.

Ground water sampling of the monitoring well network identified MTBE concentrations in MW-9P above the NR140 Preventative Action Limit (PAL). The DNR Closure Committee recommended the extent of MTBE above PALs be defined with additional monitoring wells. Monitoring wells MW-10A, -10B, -11A, -11B were installed October 8 & 9, 2018 in the locations shown on Figure 2 to define the extent of MTBE PAL exceedances.

A vapor intrusion investigation was completed for the adjacent residence (108 Mink Ave). DNR Action Levels for Vapor Intrusion were not exceeded in these air samples. No further investigation is recommended with respect to vapor intrusion.

A remedial excavation (595.52 tons) of the former gasoline tank area was completed in fall 2016.

## RECENT WORK

### Ground Water Sampling

The monitoring well network was sampled August 27 & November 20, 2019. The analytical reports are provided in Appendix A and summarized in Table 1.

The depth to ground water (Table 2) and natural attenuation parameters (e.g., dissolved oxygen, temperature, pH, conductivity, ORP) (Table 3) were measured during each sampling event.

### Monitoring Well Repair and Re-Survey

The monitoring well elevations were re-surveyed August 29, 2019. The PVC casing in monitoring wells MW-2A, -2B, -3A, -7, -9, and MW-9P had “frost-heaved” and had to be cut down to allow the lid to be re-attached to the manway. The lid and well plug on monitoring well MW-3A were loose and surface water was observed running into the well. The PVC casing was cut down and the lid re-attached.

## DATA EVALUATION

### Hydrogeology

Stetsonville is located at a drainage divide between the Black River watershed (to the north and west) and the Big Eau Pleine River watershed (to the south). Wetlands are located south and east of the village connecting to the West Branch of the Big Eau Pleine River which drains to the south (see Figure 1). The surface topography around Stetsonville is relatively flat with a gentle slope to the south at the site.

Based on nearby well logs, the site is underlain by 50 - 60 feet of glacial sediments resting on granite bedrock. The glacial sediments are fine-grained silts with sand and clay layers. Figure 3 is a cross-section illustrating the local geology.

Ground water is typically within 5 feet of grade with a southerly flow direction (Figure 4). There is a downward vertical gradient measured in well nests (see Table 2).

There was a dewatering sump located adjacent to a loading ramp on the south side of the Olson Goodman building (see Figure 2). The loading ramp sloped downward about 5 feet below grade to allow trucks to be off-loaded into the building. The dewatering sump kept the loading ramp dry. This dewatering action likely influenced shallow ground water flow within the immediate vicinity of the sump.

The ramp and sump were filled in the fall of 2018. This allows ground water to flow more naturally to the south although the drainage ditches likely influence ground water flow locally.

### Extent of Impacted Soil

Figure 5 illustrates the interpreted extent of impacted soil based on the soil boring data (Table 4) and confirmation samples from the remedial excavation. The remedial excavation removed all

accessible soils from the former tank basin area. Residual impacts were measured along the south wall of the excavation adjacent to the house located at 108 Mink Ave.

Vapor intrusion sampling along the north side of the house (the house is constructed on a concrete slab) did not measure any impacts above DNR Action Levels (see Table 5).

#### Extent of Impacted Ground Water

MTBE concentrations above NR140 Enforcement Standards and/or Preventative Action Limits (PALs) were measured repeatedly in monitoring well MW-9P (Table 1) which was installed as part of the nearby Ed's Service investigation. The MTBE concentrations steadily decreased in MW-1R and MW-9P after the remedial excavation and the NR140 PAL exceedance for MTBE is no longer measured in any of the monitoring wells.

Benzene concentrations above the NR140 ES or PAL were measured in the May 16, 2019 ground water samples from MW-2A, MW-3A, and MW-7P (see Table 1). The concentrations may be due to several factors including the frost-heaving and manway damage. The recent filling of the loading ramp and adjacent dewatering sump may have also influenced ground water quality and flow locally.

The benzene concentrations have decreased to below NR140 ES throughout the monitoring well network. No NR140 ES exceedances are measured in any of the monitoring wells.

### **CONCLUSIONS AND RECOMMENDATIONS**

The Site Investigation has characterized the site hydrogeology. The extent of impacted soil and ground water has been defined.

Residual soil contamination remains along the south wall of the remedial excavation. These impacts can be allowed to naturally degrade. Vapor intrusion sampling indicates the residual soil contamination is not impacting the adjacent home at 108 Mink Ave.

No ground water impacts above NR140 ES were measured in the monitoring well network.

We recommend the site be submitted for Closure and the monitoring wells be abandoned per NR141.

A Change Order will be prepared for the above recommendations.

Sincerely,  
**MERIDIAN ENVIRONMENTAL CONSULTING, LLC**



Kenneth Shimko, PG  
Project Manager

C: Gary Gilbert – Project Engineer

# TABLES

**Table 1: Ground Water Analytical Data**

Olson Goodman/Stetsonville

Sample	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Total TMBs	m,p-xylenes	o-xylenes	Xylene (Total)
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l			ug/l
NR140 ES	5	700	60	100	800			480			2000
NR140 PAL	0.5	140	12	10	160			96			400
<b>MW-1</b>											
	<i>Installed 10/16/15</i>										
11/5/2015	22200	2670	890	709	37600	2300	704	3004			18100
3/30/2016	22900	5240	201	4960	61800	6740	1850	8590			30000
6/14/2016	27200	9590	<485	3130	81400	15400	5060	20460			53200
<i>Abandoned October 2016 for Remedial Excavation</i>											
<b>MW-1R</b>											
	<i>Installed 4/26/17</i>										
5/24/2017	<.5	<.5	4	<2.5	<.5	<.5	<.5	<.5	<1	<.5	<1
8/29/2017	6.3	<.39	1.7	2.4	<.39	<.42	<.42	<.84			<1.2
11/13/2017	1	<.39	.66J	<.42	<.39	<.42	<.42	<.84			<1.2
5/7/2018	.37J	<.33	<.32	<.51	<.49	<.34	<.33	<.67			<.97
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.67			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	.29J	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-2A</b>											
	<i>Installed 4/24/2017</i>										
5/24/2017	<.5	<.5	1.8	<2.5	<.5	<.5	<.5	<.5	<1	<.5	<1
8/29/2017	<.4	<.39	1.8	<.42	<.39	<.42	<.42	<.42			<1.2
11/13/2017	<.4	<.39	1.1	<.42	<.39	<.42	<.42	<.42			<1.2
5/7/2018	<.31	<.33	.85J	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	.82J	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	.78J	<.22	1.7J	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	1.1	<.22	2.8J	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	0.54J	<.22	3.8J	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-2B</b>											
	<i>Installed 4/24/2017</i>										
5/24/2017	<.5	<.5	<.17	<2.5	<.5	<.5	<.5	<.5	<1	<.5	<1
8/29/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<1.2
11/13/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<1.2
5/7/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-3A</b>											
	<i>Installed 4/25/2017</i>										
5/24/2017	<.5	<.5	.57J	<2.5	<.5	<.5	<.5	<.5	<1	<.5	<1
8/29/2017	<.4	<.39	1.1	<.42	<.39	<.42	<.42	<.42			<1.2
11/13/2017	<.4	<.39	.89J	<.42	<.39	<.42	<.42	<.42			<1.2
5/7/2018	<.31	<.33	1.0J	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	3.1	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	8.2	<.22	4.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	5.8	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	4.1J	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-3B</b>											
	<i>Installed 4/25/2017</i>										
5/24/2017	<.5	<.5	<.17	<2.5	<.5	<.5	<.5	<.5	<1	<.5	<1
8/29/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<1.2
11/13/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<1.2
5/7/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73

Table 1: Ground Water Analytical Data

Olson Goodman/Stetsonville

Sample	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Total TMBs	m,p-xylenes	o-xylenes	Xylene (Total)
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l			ug/l
NR140 ES	5	700	60	100	800			480			2000
NR140 PAL	0.5	140	12	10	160			96			400
<b>MW-4</b>	<i>Installed 4/26/2017</i>										
5/24/2017	<.5	<.5	<.17	<.25	<.5	<.5	<.5	<.5	<.1	<.5	<.1
8/29/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
11/13/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
5/7/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
8/27/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
11/20/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
<b>MW-5</b>	<i>Installed 4/26/2017</i>										
5/24/2017	<.5	.57J	<.17	<.25	<.5	<.5	<.5	<.5	<.1	<.5	<.1
8/29/2017	.88J	<.39	<.48	.71J	<.39	<.42	<.42	<.42			<.12
11/13/2017	<.4	<.39	<.48	.59J	<.39	<.42	<.42	<.42			<.12
5/7/2018	2.3	4.1	.87J	<.51	<.49	.37J	.44J	.81J			.99J
10/25/2018	.31J	.68J	<.32	.63J	<.49	<.34	<.33	<.34			<.97
5/16/2019	2.5	1.1	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
8/27/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
11/20/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
<b>MW-7</b>	<i>Installed 2/20/2008 (as part of Ed's Service site)</i>										
5/24/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
8/29/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
11/13/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
5/7/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
8/27/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
11/20/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
<b>MW-7P</b>	<i>Installed 1/22/2010 (as part of Ed's Service site)</i>										
5/24/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
8/29/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
11/13/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
5/7/2018	<.31	.76J	<.32	<.51	<.49	.35J	<.33	.35J			2.4J
10/25/2018	Vehicle over well										
5/16/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
8/27/2019	6.8	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
12/7/2019	1.4	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
<b>MW-9</b>	<i>Installed 1/22/2010 (as part of Ed's Service site)</i>										
<i>(samples collected as part of Ed's Service site)</i>											
3/24/2010	<.2	<.2	<.5	<.1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
6/21/2010	<.2	<.2	<.5	<.1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
9/20/2010	<.2	<.2	<.5	<.1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
12/7/2010	<.2	<.2	<.5	<.1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
11/8/2011	<.2	<.2	<.5	NA	<.4	<.2	<.2	<.2	<.4	<.2	<.4
5/10/2012	0.87	<.2	<.5	NA	<.4	<.2	<.2	<.2	<.4	<.2	<.4
6/20/2014	<.5	<.5	<.17	NA	<.5	<.5	<.5	<.5			<.15
9/23/2014	<.5	<.5	<.17	NA	<.5	<.5	<.5	<.5			<.15
6/14/2016	<.4	<.39	<.48	NA	<.48	<.42	<.42	<.42			<.12
<i>(samples collected as part of Olson Goodman site)</i>											
5/24/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
8/29/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
11/13/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42			<.12
5/7/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
8/27/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73
11/20/2019	<.25	<.22	<.12	<.12	<.17	<.84	<.87	<.171	<.47	<.26	<.73

**Table 1: Ground Water Analytical Data**

Olson Goodman/Stetsonville

Sample	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Total TMBs	m,p-xylenes	o-xylenes	Xylene (Total)
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l			ug/l
NR140 ES	5	700	60	100	800			480			2000
NR140 PAL	0.5	140	12	10	160			96			400
<b>MW-9P</b>	<i>Installed 1/22/2010 (as part of Ed's Service site)</i>										
<i>(samples collected as part of Ed's Service site)</i>											
3/24/2010	0.54	<.2	<b>88.8</b>	<1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
6/21/2010	<.2	<.2	<b>142</b>	<1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
9/20/2010	<.2	<.2	<b>99.7</b>	<1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
12/7/2010	<.2	<.2	<b>111</b>	<1	<.4	<.2	<.2	<.2	<.4	<.2	<.4
11/8/2011	<.2	<.2	<b>69.5</b>	NA	<.4	<.2	<.2	<.2	<.4	<.2	<.4
5/10/2012	0.49	<.2	<b>171</b>	NA	<.4	<.2	<.2	<.2	<.4	<.2	<.4
6/20/2014	<.5	<.5	<b>141</b>	NA	<.5	<.5	<.5	<.5			<1.5
9/23/2014	<.5	<.5	<b>146</b>	NA	<.5	<.5	<.5	<.5			<1.5
3/30/2016	<.4	<.39	<b>106</b>	<.42	<.39	<.42	<.42	<.42			<1.2
6/14/2016	<.4	<.39	<b>83.3</b>	NA	<.39	<.42	<.42	<.42			<1.2
<i>(samples collected as part of Olson Goodman site) (excavation completed October 2016)</i>											
5/24/2017	<.4	<.39	31.2	<.42	<.39	<.42	<.42	<.42			<1.2
8/29/2017	.53J	<.39	44.2	<.42	<.39	<.42	<.42	<.42			<1.2
11/13/2017	.67J	<.39	39.2	<.42	<.39	<.42	<.42	<.42			<1.2
5/7/2018	<.31	<.33	29.5	<.51	<.49	<.34	<.33	<.34			<.97
10/25/2018	<.31	<.33	26.5	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	10.3	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	7.3	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-10A</b>	<i>Installed 10/8/18</i>										
10/25/2018	<.31	<.33	.48J	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-10B</b>	<i>Installed 10/8/18</i>										
10/25/2018	<.31	<.33	6.9	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	2.8J	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	1.9J	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-11A</b>	<i>Installed 10/9/18</i>										
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
<b>MW-11B</b>	<i>Installed 10/9/18</i>										
10/25/2018	<.31	<.33	<.32	<.51	<.49	<.34	<.33	<.34			<.97
5/16/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
8/27/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73
11/20/2019	<.25	<.22	<1.2	<1.2	<.17	<.84	<.87	<1.71	<.47	<.26	<.73



**Table 2: Ground Water Elevations**

Olson Goodman/Stetsonville

MW-1 (installed October 16, 2015)			MW-1R (installed April 26, 2017)		
Surface Elevation (ft)		98	Surface Elevation (ft)		101.75
Top of Casing elevation (ft)		97.73	Top of Casing elevation (ft)		101.66
Top of Screen Elevation (ft)		92.73	Top of Screen Elevation (ft)		96.75
Bottom of Screen Elevation (ft)		82.73	Bottom of Screen Elevation (ft)		86.75
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
11/5/2015	4.42	93.31			
3/30/2016	3.78	93.95			
6/14/2016 (1 inch LNAPL)	3.1	94.63			
10/31/16 Abandoned due to remedial excavation			5/24/2017	0.74	100.92
			8/29/2017	2.48	99.18
			11/13/2017	2.58	99.08
			Resurvey 5/7/18		101.44
			5/7/2018	1.08	100.36
			10/25/2018	2.11	99.33
			5/16/2019	2.1	99.34
			Resurvey 8/27/2019		101.4
			8/27/2019	1.53	99.87
			11/20/2019	1.98	99.42

MW-2A (installed 4/24/17)			MW-2B (installed 4/24/17)		
Surface Elevation (ft)		100.25	Surface Elevation (ft)		100.25
Top of Casing elevation (ft)		100	Top of Casing elevation (ft)		99.96
Top of Screen Elevation (ft)		95.25	Top of Screen Elevation (ft)		70.25
Bottom of Screen Elevation (ft)		85.25	Bottom of Screen Elevation (ft)		65.25
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
5/24/2017	0.82	99.18	5/24/2017	1.71	98.25
8/29/2017	2.46	97.54	8/29/2017	3.95	96.01
11/13/2017	2.55	97.45	11/13/2017	3.3	96.66
Resurvey 5/7/18		100	Resurvey 5/7/18		99.99
5/7/2018	1.23	98.77	5/7/2018	2.7	97.29
Resurvey 10/25/18		100	Resurvey 10/25/18		100
10/25/2018	1.71	98.29	10/25/2018	2.87	97.13
5/16/2019	1.22	98.78	5/16/2019	2.62	97.38
Resurvey 8/27/2019		100	Resurvey 8/27/2019		100.04
8/27/2019	2.02	97.98	8/27/2019	3.49	96.55
11/20/2019	2.48	97.52	11/20/2019	3.5	96.54

MW-3A (installed 4/25/17)			MW-3B (installed 4/25/17)		
Surface Elevation (ft)		100.5	Surface Elevation (ft)		100.5
Top of Casing elevation (ft)		100.22	Top of Casing elevation (ft)		99.02
Top of Screen Elevation (ft)		95.5	Top of Screen Elevation (ft)		70.5
Bottom of Screen Elevation (ft)		85.5	Bottom of Screen Elevation (ft)		65.5
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
5/24/2017	1.52	98.7	5/24/2017	1.74	97.28
8/29/2017	3.37	96.85	8/29/2017	3.88	95.14
11/13/2017	3.17	97.05	11/13/2017	3.3	95.72
Resurvey 5/7/18		100.19	Resurvey 5/7/18		100.17
5/7/2018	2.01	98.18	5/7/2018	2.54	97.63
10/25/2018	2.51	97.68	10/25/2018	2.75	97.42
5/16/2019	2.15	98.04	5/16/2019	2.51	97.66
Resurvey 8/27/2019		100.25	Resurvey 8/27/2019		100.28
8/27/2019	2.82	97.43	8/27/2019	3.39	96.89
11/20/2019	3.17	97.08	11/20/2019	3.45	96.83

MW-4 (installed 4/26/17)			MW-5 (installed 4/26/17)		
Surface Elevation (ft)		101.25	Surface Elevation (ft)		100.75
Top of Casing elevation (ft)		100.94	Top of Casing elevation (ft)		100.46
Top of Screen Elevation (ft)		96.25	Top of Screen Elevation (ft)		95.75
Bottom of Screen Elevation (ft)		86.25	Bottom of Screen Elevation (ft)		85.75
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
5/24/2017	1.69	99.25	5/24/2017	0.48	99.98
8/29/2017	5.35	95.59	8/29/2017	1.42	99.04
11/13/2017	2.72	98.22	11/13/2017	1.6	98.86
Resurvey 5/7/18		100.85	Resurvey 5/7/18		100.27
5/7/2018	2.54	98.31	5/7/2018	1.53	98.74
10/25/2018	2.12	98.73	10/25/2018	1.38	98.89
5/16/2019	1.6	99.25	5/16/2019	1.45	98.82
Resurvey 8/27/2019		100.91	Resurvey 8/27/2019		100.33
8/27/2019	2.21	98.7	8/27/2019	1.1	99.23
11/20/2019	2.9	98.01	11/20/2019	1.6	98.73

**Table 2: Ground Water Elevations**

Olson Goodman/Stetsonville

MW-7 (installed Feb. 20, 2008)(transferred from adjacent site - Ed's Service)			MW-7P (installed Jan. 22, 2010)(transferred from adjacent site - Ed's Service)		
Surface Elevation (ft)		102.75	Surface Elevation (ft)		unsurveyed
Top of Casing elevation (ft)		102.47	Top of Casing elevation (ft)		
Top of Screen Elevation (ft)		97.75	Top of Screen Elevation (ft)		
Bottom of Screen Elevation (ft)		82.75	Bottom of Screen Elevation (ft)		
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
5/24/2017	1.06	101.41	5/24/2017	0.58	-0.58
8/29/2017	2.6	99.87	8/29/2017		
11/13/2017	2.54	99.93	11/13/2017		inaccessible
Resurvey 5/7/18		102.52	Resurvey 5/7/18		101.58
5/7/2018	1.6	100.92	5/7/2018	0.76	100.82
10/25/2018	2.07	100.45	10/25/2018		vehicle over well
5/16/2019	1.25	101.27	5/16/2019	0.54	101.04
Resurvey 8/27/2019		102.39	Resurvey 8/27/2019		101.55
8/27/2019	2.05	100.34	8/27/2019	1.39	100.16
11/20/2019	2.6	99.79	12/7/2019	10.25	91.3

MW-9 (installed Jan. 22, 2010)(transferred from adjacent site - Ed's Service)			MW-9P (installed Jan. 22, 2010)(transferred from adjacent site - Ed's Service)		
Surface Elevation (ft)		101	Surface Elevation (ft)		101
Top of Casing elevation (ft)		100.58	Top of Casing elevation (ft)		100.51
Top of Screen Elevation (ft)		96	Top of Screen Elevation (ft)		71
Bottom of Screen Elevation (ft)		81	Bottom of Screen Elevation (ft)		66
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
5/24/2017	1.81	98.77	5/24/2017	2.3	98.21
8/29/2017	3.96	96.62	8/29/2017	4.73	95.78
11/13/2017	3.23	97.35	11/13/2017	3.91	96.6
Resurvey 5/7/18		100.38	Resurvey 5/7/18		100.32
5/7/2018	2.41	97.97	5/7/2018	3.09	97.23
Resurvey 5/7/18		100.38	Resurvey 5/7/18		100.32
10/25/2018	2.66	97.72	10/25/2018	3.24	97.08
5/16/2019	2.29	98.09	5/16/2019	2.85	97.47
Resurvey 8/27/2019		100.3	Resurvey 8/27/2019		100.22
8/27/2019	3.05	97.25	8/27/2019	3.74	96.48
11/20/2019	3.11	97.19	11/20/2019	3.74	96.48

MW-10A (installed 10/8/18)			MW-10b (installed 10/8/18)		
Surface Elevation (ft)		99.5	Surface Elevation (ft)		99.5
Top of Casing elevation (ft)		99.37	Top of Casing elevation (ft)		99.42
Top of Screen Elevation (ft)		94.5	Top of Screen Elevation (ft)		70.5
Bottom of Screen Elevation (ft)		84.5	Bottom of Screen Elevation (ft)		65.5
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
10/25/2018	2.06	97.31	10/25/2018	2.57	96.85
5/16/2019	0.96	98.41	5/16/2019	2.22	97.2
Resurvey 8/27/2019		99.49	Resurvey 8/27/2019		99.44
8/27/2019	1.71	97.78	8/27/2019	3.1	96.34
11/20/2019	2.21	97.28	11/20/2019	3.08	96.36

MW-11A (installed 10/9/18)			MW-11B (installed 10/9/18)		
Surface Elevation (ft)		99.5	Surface Elevation (ft)		99.25
Top of Casing elevation (ft)		99.37	Top of Casing elevation (ft)		99.17
Top of Screen Elevation (ft)		94.5	Top of Screen Elevation (ft)		69
Bottom of Screen Elevation (ft)		84.5	Bottom of Screen Elevation (ft)		64
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
10/25/2018	1.22	98.15	10/25/2018	2.25	96.92
5/16/2019	1.1	98.27	5/16/2019	2.25	96.92
Resurvey 8/27/2019		99.48	Resurvey 8/27/2019		99.21
8/27/2019	1.77	97.71	8/27/2019	2.83	96.38
11/20/2019	1.61	97.87	11/20/2019	2.77	96.44

**Table 3: Natural Attenuation Field Measurement**

Olson Goodman/Stetsonville

Well	Date	DO	pH	Temp	Conductivity	ORP
		mg/l		°C	uS	
<b>MW-1R</b>						
	5/24/2017	4	7.4	9.5	1214	-40
	8/29/2017	<<1	7.09	16.2	1188	-56
	11/13/2017	<<1	6.72	10.7	928	-66
	5/7/2018	1	7.45	10.7	1837	-77
	10/25/2018	<1	7.53	12.3	1362	12
	5/16/2019	1	7.28	10.9	902	-79
	8/27/2019	1	7.6	14.6	692	39
	11/20/2019	<1	6.69	9.3	670	24
<b>MW-2A</b>						
	5/24/2017	<1	7.79	10.6	898	-22
	8/29/2017	<<1	7.13	18.8	805	-54
	11/13/2017	1	7.28	11.1	848	-77
	5/7/2018	<1	7.8	8	972	-127
	10/25/2018	1	7.3	13.2	839	18
	5/16/2019	2	7.71	10.3	827	-98
	8/27/2019	<1	7.7	20	750	5
	11/20/2019	1	5.91	8.2	800	75
<b>MW-2B</b>						
	5/24/2017	<<1	7.55	10.9	681	-37
	8/29/2017	1	7.21	12.5	724	-49
	11/13/2017	1	7.37	10.2	694	-90
	5/7/2018	1	7.63	12	686	-107
	10/25/2018	1	7.41	10.8	706	59
	5/16/2019	4	7.68	12.3	689	-111
	8/27/2019	0	7.65	13.1	725	-20
	11/20/2019	3	5.95	8.9	679	9
<b>MW-3A</b>						
	5/24/2017	2	7.58	10.9	584	-37
	8/29/2017	<<1	7.27	18.5	598	-56
	11/13/2017	<1	7.43	11.5	598	-68
	5/7/2018	1	8.2	11.4	621	-100
	10/25/2018	1	7.55	14.1	646	-52
	5/16/2019	<1	7.63	11	677	-92
	8/27/2019	0	7.61	20.1	560	-16
	11/20/2019	8	6.5	10.2	592	-4
<b>MW-3B</b>						
	5/24/2017	<<1	7.46	10.5	808	-33
	8/29/2017	1	7.25	13.7	834	-42
	11/13/2017	0	6.92	11.3	776	-128
	5/7/2018	1	7.67	13	784	-25
	10/25/2018	2	7.43	11.2	788	-45
	5/16/2019	1	7.61	12.5	815	-82
	8/27/2019	0	7.7	14.1	733	-25
	11/20/2019	1	6.4	11.1	735	-3
<b>MW-4</b>						
	5/24/2017	4	7.9	10.9	337	-33
	8/29/2017	0	7.41	17.8	419	-52
	11/13/2017	<<1	7.41	11.8	428	-133
	5/7/2018	1	8.13	10.8	382	-108
	10/25/2018	<1	7.42	13.1	453	62
	5/16/2019	<1	7.73	11.8	445	-84
	8/27/2019	2	7.6	18.8	403	35
	11/20/2019	0	6.47	9.5	427	-16
<b>MW-5</b>						
	5/24/2017	2	8.81	10.6	450	-66
	8/29/2017	2	6.82	20.2	523	-45
	11/13/2017	<<1	7.44	12.7	532	-132
	5/7/2018	2	7.77	9.7	528	-170
	10/25/2018	<1	7.63	12.4	543	-134
	5/16/2019	0	7.46	10.6	462	-114
	8/27/2019	3	7.7	18.9	371	37
	11/20/2019	1	6.42	9.8	411	5

**Table 3: Natural Attenuation Field Measurement**

Olson Goodman/Stetsonville

Well	Date	DO	pH	Temp	Conductivity	ORP
		mg/l		°C	uS	
<b>MW-7</b>						
	5/24/2017	<<1	7.17	11.3	1034	-29
	8/29/2017	1	6.77	18.2	1025	-31
	11/13/2017	<1	6.48	11.9	1108	-57
	5/7/2018	1	7.53	9.9	1097	-104
	10/25/2018	1	7.49	12.8	1039	-71
	5/16/2019	<1	7.29	8.8	1061	-122
	8/27/2019	0	7.4	17.4	976	64
	11/20/2019	0	6.67	9.6	1011	64
<b>MW-7P</b>						
	5/24/2017	0	7.19	9.8	663	-49
	8/29/2017	vehicle parked over well				
	11/13/2017	vehicle parked over well				
	5/7/2018	1	7.87	11.4	1620	-135
	10/25/2018	vehicle over well				
	5/16/2019	2	7.82	13.3	764	-210
	8/27/2019	0	7.58	13.3	915	-5
	11/20/2019	0	5.83	8.9	918	129
<b>MW-9</b>						
	5/24/2017	2	8.22	10.2	468	-38
	8/29/2017	<1	7.52	15.9	503	-84
	11/13/2017	<1	7.46	11.4	438	-95
	5/7/2018	2	7.91	10.7	494	-123
	10/25/2018	3	7.19	12.7	373	76
	5/16/2019	0	7.72	10.1	410	-99
	8/27/2019	1	7.7	16	333	44
	11/20/2019	1	6.69	9.5	357	-6
<b>MW-9P</b>						
	5/24/2017	1	7.51	9.7	763	-7
	8/29/2017	<<1	7.44	13.8	774	-50
	11/13/2017	2	6.85	10.1	730	-54
	5/7/2018	1	7.93	13.3	732	-123
	10/25/2018	3	7.3	10.2	754	20
	5/16/2019	0	7.63	13	402	-89
	8/27/2019	0	7.3	13.2	616	90
	11/20/2019	2	6.65	9.6	664	13
<b>MW-10A</b>						
	10/25/2018	3	7.47	13	568	-122
	5/16/2019	2	7.64	10.6	574	-42
	8/27/2019	2	7.6	17.5	546	47
	11/20/2019	0	6.71	9.4	548	9
<b>MW-10B</b>						
	10/25/2018	2	7.6	10.6	769	37
	5/16/2019	1	7.31	15.2	764	-103
	8/27/2019	5	7.56	13	730	16
	11/20/2019	2	6.7	9.8	737	27
<b>MW-11A</b>						
	10/25/2018	1	7.56	12.3	514	33
	5/16/2019	1	8.04	10.7	553	-112
	8/27/2019	1	7.7	16.8	498	25
	11/20/2019	0	6.69	8.7	494	5
<b>MW-11B</b>						
	10/25/2018	<1	7.44	10.3	332	-125
	5/16/2019	1	7.82	12.4	325	-92
	8/27/2019	2	7.57	12.8	302	-3
	11/20/2019	1	6.67	9.6	298	14

**Table 4: Soil Analytical Results**

Olson Goodman Inc  
Stetsonville, WI  
Meridian No. 05F807

**BOLD** - concentration exceeds Standards

Sample*	Sat/UnSat	PID	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	Total TMBs	1,2,4-TMB	1,3,5-TMB	Xylene (Total)	m&p-Xylene	o-Xylene
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Soil Standards</b>													
NTEDC			1.6	8.02	63.8	5.52	818		219	182	260		
RCL (soil to GW)			0.005	1.57	0.027	0.659	1.107	1.3787			3.96		
<b>October 16, 2015 Geoprobe Borings (see Figure for location)</b>													
1: 3-4	unsaturated	70	<1	<b>53.1</b>	<1	<b>37.1</b>	<b>12.6</b>	<b>308</b>	<b>227</b>	80.5	<b>223</b>	144	79
1: 7-8	saturated	40	<b>0.353</b>	<b>5.15</b>	<b>0.118</b>	2.11	0.546	<b>18.6</b>	13	5.62	<b>14.3</b>	12.7	1.57
1: 11-12	saturated	20	<b>0.505</b>	0.0571	<.025	0.09	<.025	<.05	<.025	<.025	<.075	<.05	<.025
1: 15-16	saturated	10	<b>1.57</b>	0.435	<b>0.03</b>	0.14	<.025	<.05	0.0585	<.025	<.075	<.05	<.025
1:18-19	saturated	2	<b>0.0569</b>	<.025	<b>0.112</b>	<.025	<.025	0.161	0.116	0.0452	<.075	0.0576	<.025
2:3-4	unsaturated	100	<b>13</b>	<b>52.6</b>	<2.5	<b>116</b>	<b>243</b>	<b>965</b>	<b>712</b>	253	<b>899</b>	598	302
2:7-8	saturated	160	<b>2.46</b>	<b>1.41</b>	<.025	<b>0.767</b>	<b>7.05</b>	<b>4.56</b>	3.42	1.14	<b>7.86</b>	5.66	2.2
2:11-12	saturated	30	<b>2.85</b>	0.701	<b>0.0425</b>	0.423	<b>1.28</b>	1.32	0.962	0.356	2.02	1.65	0.366
2:15-16	saturated	120	<b>14.5</b>	<b>25.3</b>	<b>0.826</b>	<b>9.57</b>	<b>65.5</b>	<b>78.2</b>	57.9	20.3	<b>120</b>	91.2	28.9
3: 3-4	unsaturated	12	<b>1.9</b>	<b>2.57</b>	<.025	<b>2.89</b>	0.243	<b>9.55</b>	7.19	2.34	<b>11.2</b>	8.34	2.91
3: 7-8	saturated	1	<b>0.0597</b>	0.0868	<.025	0.0402	<.025	<.05	0.479	<.025	<.075	<.05	<.025
3:11-12	saturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
4: 3-4	unsaturated	50	<b>2.88</b>	0.584	<.025	0.0947	0.198	0.974	0.724	0.251	2.51	1.74	0.766
4: 7-8	saturated	150	<b>23.2</b>	<b>40.6</b>	1	<b>14.7</b>	<b>133</b>	<b>119</b>	89.1	30.3	<b>208</b>	153	55.2
4: 11-12	saturated	25	<.025	<.025	<b>0.0628</b>	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
5: 3-4	unsaturated	100	<b>3.28</b>	<b>19.4</b>	<.625	<b>35.1</b>	<b>86.6</b>	<b>341</b>	<b>251</b>	90.1	<b>399</b>	238	161
5: 7-8	saturated	170	<b>4.35</b>	<b>13.8</b>	<b>0.406</b>	5.57	<b>43.1</b>	<b>493</b>	36.6	12.7	<b>69.9</b>	49.2	20.7
5: 11-12	saturated	100	<b>4.23</b>	0.79	<b>0.318</b>	0.345	<b>2.25</b>	<b>1.49</b>	1.11	0.383	3.55	2.7	0.849
6: 3-4	unsaturated	0	<.025	0.055	<.025	<.025	0.17	0.138	0.0973	0.0404	0.295	0.223	0.0727
6: 7-8	saturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
6: 11-12	saturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
7: 3-4	unsaturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
7: 7-8	saturated	25	<.05	<b>2.88</b>	<b>0.353</b>	<b>1.86</b>	0.108	<b>9.97</b>	5.87	4.1	3.13	3.05	0.0812
7: 11-12	saturated	50	<.05	<b>2.56</b>	<b>0.409</b>	<b>1.36</b>	0.209	<b>8.13</b>	3.96	4.17	3.28	3.07	0.211
8: 3-4	unsaturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
8: 7-8	saturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025
9: 3-4	unsaturated	0	<.0255	<.0255	<.025	<.025	<.025	<.051	<.0255	<.0255	<.0765	<.051	<.0255
9: 7-8	saturated	0	<.025	<.025	<.025	<.025	<.025	<.05	0.0331	<.025	<.075	<.05	<.025
9: 11-12	saturated	0	<.025	<.025	<.025	<.025	<.025	<.05	<.025	<.025	<.075	<.05	<.025

\* 5: 3-4 refers to soil boring GP-5; depth interval 3-4 ft below grade

**Excavation Confirmation Samples (11/1/16) (see Figure for location)**

		Depth												
NE	unsaturated	3	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
NW	unsaturated	3	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
WN	unsaturated	3	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
WS	unsaturated	3	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
SW	unsaturated	3	<500	<b>5.37</b>	<500	<b>10.2</b>	<b>2.5</b>	68.5	49.6	18.9	<b>23.3</b>	15.2	8.1	
SE	unsaturated	3	<b>.1211</b>	0.872	<.0625	<b>3.28</b>	0.642	31.1	19.2	12	<b>9.94</b>	5.68	4.26	
EN	unsaturated	3	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
ES	unsaturated	3	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
FLOOR	unsaturated	12	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025

**Monitoring Well Borings (April 2017)**

2:2-4	unsaturated	2-4	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
2:6-8	saturated	6-8	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
2:10-12	saturated	10-12	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
2:15-17	saturated	15-17	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
2:20-22	saturated	20-22	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
3:2-4	unsaturated	2-4	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
3:6-8	saturated	6-8	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
3:10-12	saturated	10-12	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
3:15-17	saturated	15-17	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
3:20-22	saturated	20-22	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
4:2-4	unsaturated	2-4	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
4:6-8	saturated	6-8	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
4:10-12	saturated	10-12	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025
5:2-4	unsaturated	2-4	<.025	0.131	<.025	0.518	<.025	0.926	0.752	0.175	0.223	0.146	0.0768	
5:6-8	saturated	6-8	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025	
5:13-15	saturated	13-15	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.075	<.05	<.025	

**Table 5: Subslab Vapor Samples**

Olson Goodman Inc  
 Stetsonville, WI  
 Meridian No. 05F807

**Vapor Probe - collected next to MW-1 (October 2015)**

Parameter	Result*	Units
Benzene	<3.4	ug/m <sup>3</sup>
Ethylbenzene	<11.8	ug/m <sup>3</sup>
MTBE	<8.4	ug/m <sup>3</sup>
Toluene	<4.3	ug/m <sup>3</sup>
1,2,4-TMB	<3.5	ug/m <sup>3</sup>
1,3,5-TMB	<5.1	ug/m <sup>3</sup>
m&p-Xylene	<21.9	ug/m <sup>3</sup>
o-Xylene	<9.8	ug/m <sup>3</sup>

\* Soils very wet caused water to enter probe/tubing. Sample may not be representative of soil vapor

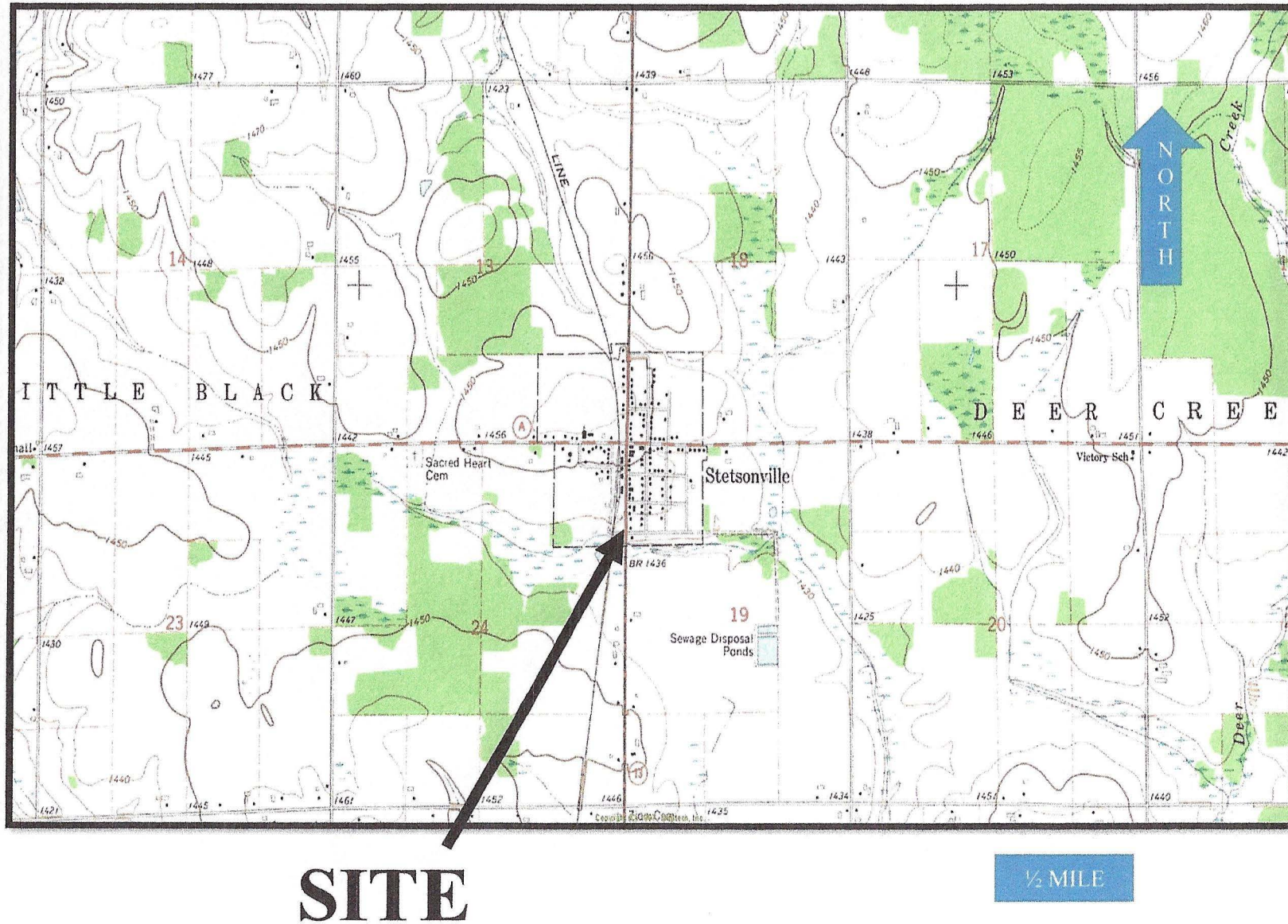
**Cox-Colvin Vapor Port samples (subslab samples from 108 Mink Ave)**

Boring	LEL	Oxygen	PID	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	m&p-Xylene	o-Xylene	1,2-DCA	EDB
Units		%		ug/m3	ug/m3	ug/m3		ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Vapor Risk Screening Levels**														
Residential Indoor Air				3.6	11	110	0.83	5200	63	63	100	100	1.1	
Residential - Subslab				120	370	3700	28	170000	2100	2100	3300	3300	37	
Small Commerical - Subslab				530	1600	16000	120	730000	8700	8700	15000	15000	160	
<b>VP-1</b>														
11/14/2017	0	20.9	0	<.24	2.4	<1.1	<.96	2.5	3.2	1.6J	9.5	2.8	<.32	<.54
3/9/2018	0	20.9	0	<.25	2.4	<1.1	<.98	<.26	7	<.68	13	2.2	<.32	<.55
<b>VP-2</b>														
11/14/2017	0	20.9	0	<.23	<.27	<1	<.93	1.1J	.91J	<.64	3	2.9	<.31	<.52
3/9/2018	0	20.9	0	<.32	1.1J	<1.4	<1.3	<.34	1.8J	<.87	6	<.79	<.42	<.71

\*\* Vapor Risk Screening Levels based on June 2017 US EPA Regional Screening Level Tables.

# FIGURES

**Figure 1: Topographic Map**  
Olson Goodman/Stetsonville







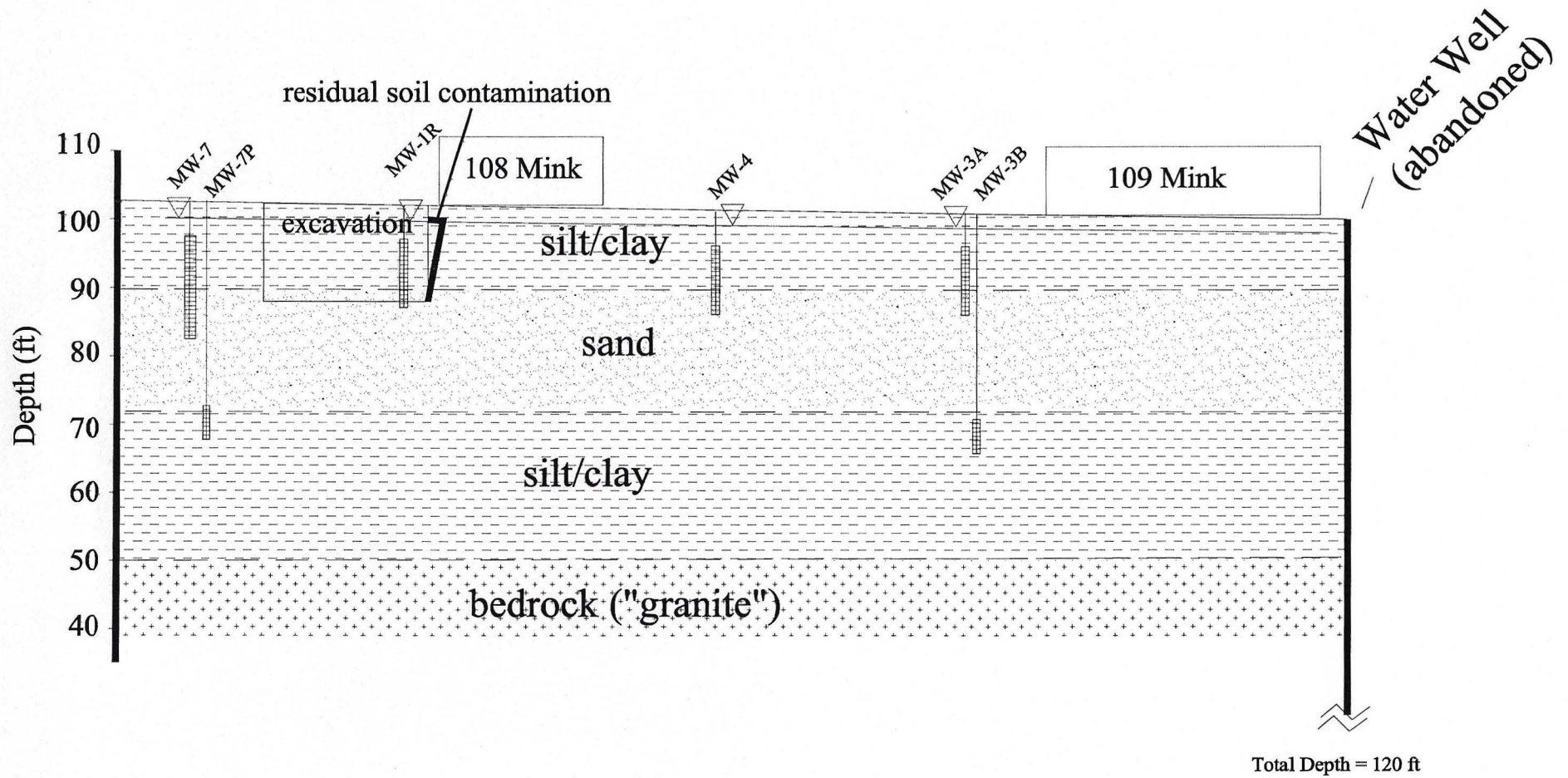


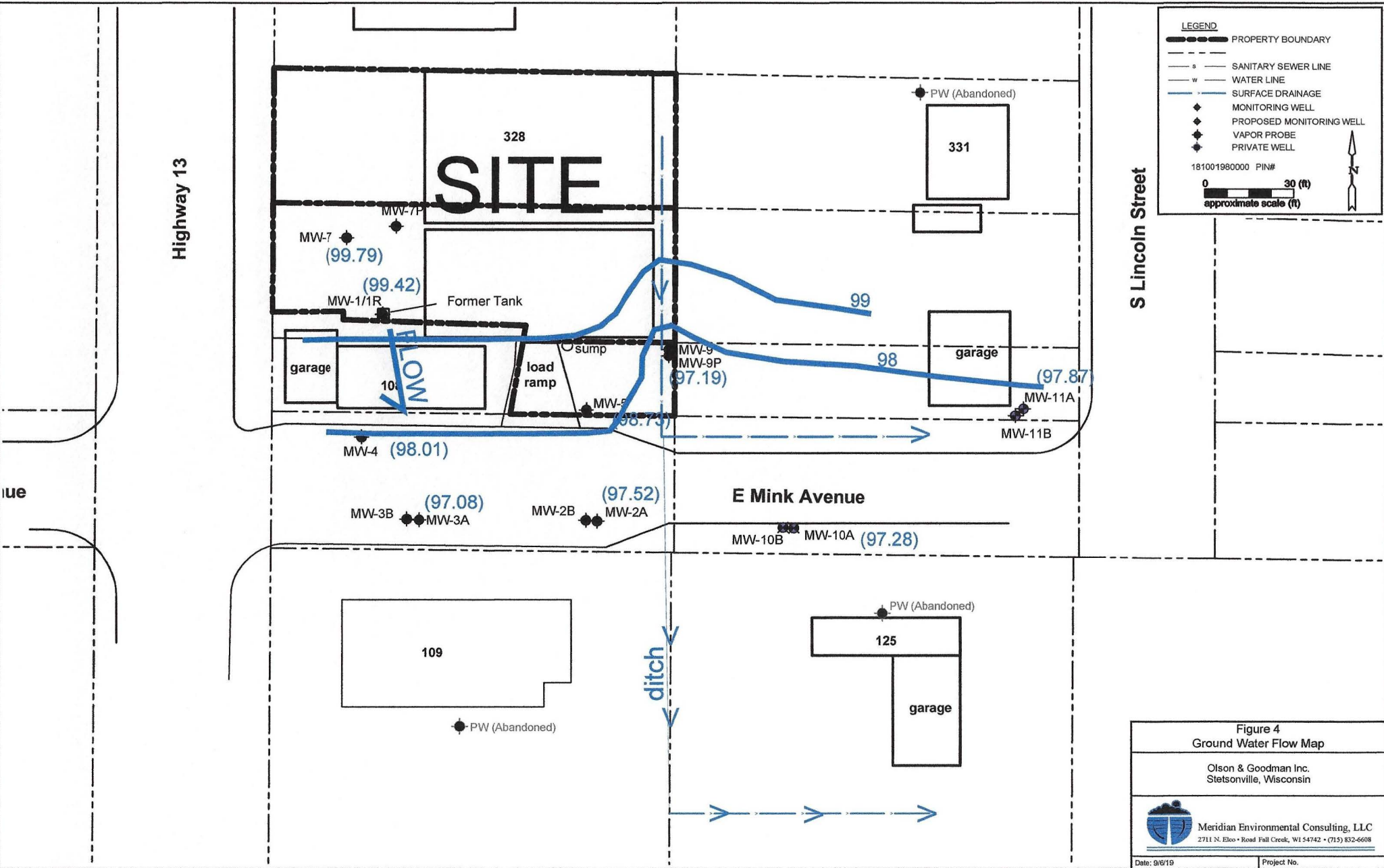
Figure 3  
 Cross-Section  
 Olson Goodman  
 Stetsonville, WI



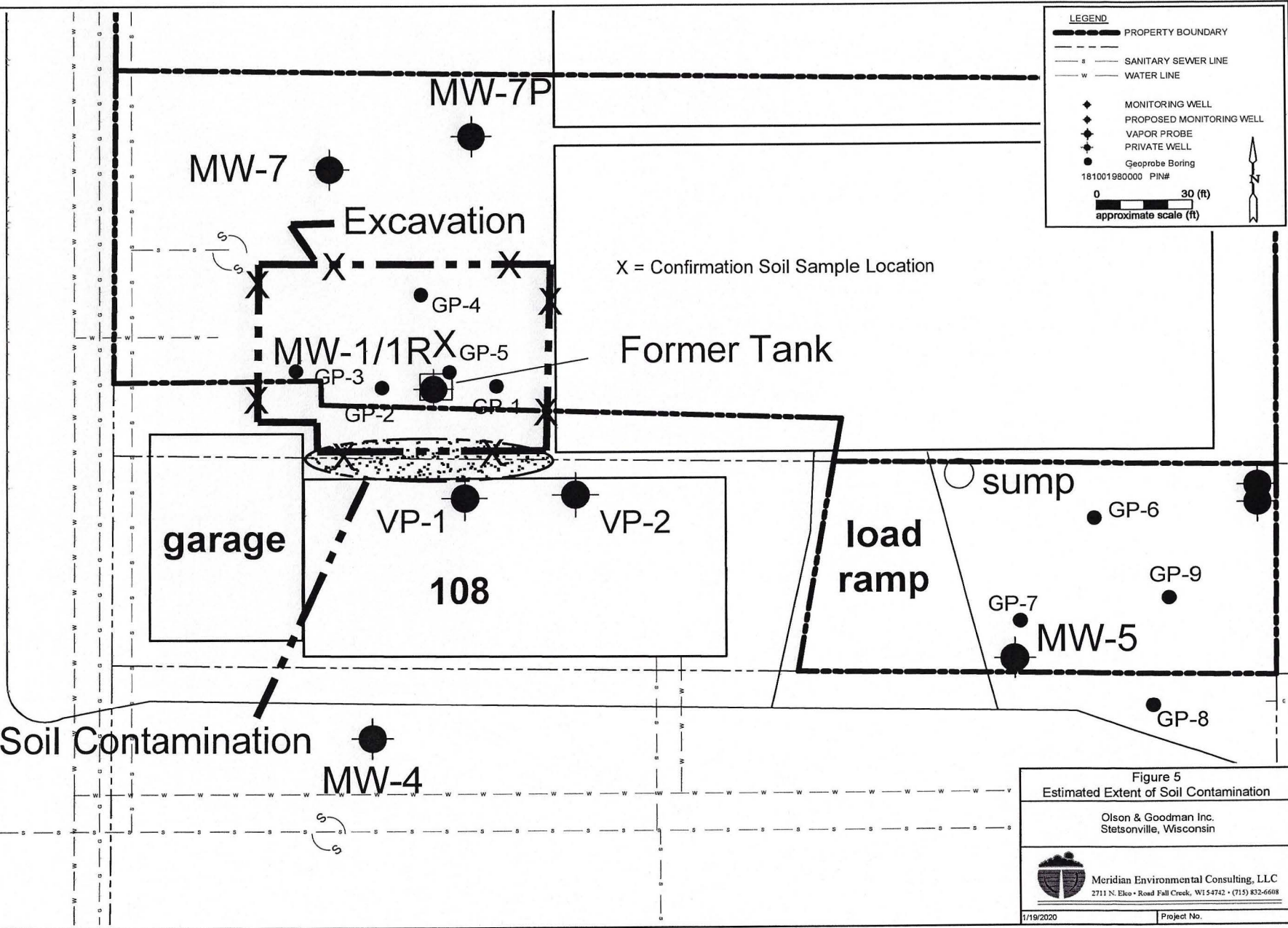
PROJECT NO.  
 05F807

DATE  
 1/20/20





Highway



# **APPENDIX A**

## **Ground Water Sampling Laboratory Reports**

September 04, 2019

Kenneth Shimko  
Meridian Environmental Consulting, LLC  
2711 North Elco Rd  
Fall Creek, WI 54742

RE: Project: OLSON GOODMAN  
Pace Project No.: 40193941

Dear Kenneth Shimko:

Enclosed are the analytical results for sample(s) received by the laboratory on August 29, 2019. 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: OLSON GOODMAN

Pace Project No.: 40193941

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### 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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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: OLSON GOODMAN

Pace Project No.: 40193941

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40193941001	MW-1R	Water	08/27/19 00:00	08/29/19 09:30
40193941002	MW-2A	Water	08/27/19 00:00	08/29/19 09:30
40193941003	MW-2B	Water	08/27/19 00:00	08/29/19 09:30
40193941004	MW-3A	Water	08/27/19 00:00	08/29/19 09:30
40193941005	MW-3B	Water	08/27/19 00:00	08/29/19 09:30
40193941006	MW-4	Water	08/27/19 00:00	08/29/19 09:30
40193941007	MW-5	Water	08/27/19 00:00	08/29/19 09:30
40193941008	MW-7	Water	08/27/19 00:00	08/29/19 09:30
40193941009	MW-7P	Water	08/27/19 00:00	08/29/19 09:30
40193941010	MW-9	Water	08/27/19 00:00	08/29/19 09:30
40193941011	MW-9P	Water	08/27/19 00:00	08/29/19 09:30
40193941012	MW-10A	Water	08/27/19 00:00	08/29/19 09:30
40193941013	MW-10B	Water	08/27/19 00:00	08/29/19 09:30
40193941014	MW-11A	Water	08/27/19 00:00	08/29/19 09:30
40193941015	MW-11B	Water	08/27/19 00:00	08/29/19 09:30
40193941016	TRIP BLANK	Water	08/27/19 00:00	08/29/19 09:30

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### SAMPLE ANALYTE COUNT

Project: OLSON GOODMAN  
Pace Project No.: 40193941

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40193941001	MW-1R	EPA 8260	LAP	12	PASI-G
40193941002	MW-2A	EPA 8260	SMT	12	PASI-G
40193941003	MW-2B	EPA 8260	SMT	12	PASI-G
40193941004	MW-3A	EPA 8260	SMT	12	PASI-G
40193941005	MW-3B	EPA 8260	SMT	12	PASI-G
40193941006	MW-4	EPA 8260	SMT	12	PASI-G
40193941007	MW-5	EPA 8260	SMT	12	PASI-G
40193941008	MW-7	EPA 8260	SMT	12	PASI-G
40193941009	MW-7P	EPA 8260	SMT	12	PASI-G
40193941010	MW-9	EPA 8260	SMT	12	PASI-G
40193941011	MW-9P	EPA 8260	SMT	12	PASI-G
40193941012	MW-10A	EPA 8260	SMT	12	PASI-G
40193941013	MW-10B	EPA 8260	LAP	12	PASI-G
40193941014	MW-11A	EPA 8260	LAP	12	PASI-G
40193941015	MW-11B	EPA 8260	LAP	12	PASI-G
40193941016	TRIP BLANK	EPA 8260	LAP	12	PASI-G

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## PROJECT NARRATIVE

Project: OLSON GOODMAN  
Pace Project No.: 40193941

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**Method:** EPA 8260  
**Description:** 8260 MSV UST  
**Client:** Meridian Environmental Consulting, LLC  
**Date:** September 04, 2019

**General Information:**

16 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40193941

Sample: MW-1R Lab ID: 40193941001 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	0.29J	ug/L	1.0	0.25	1		09/03/19 15:12	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		09/03/19 15:12	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		09/03/19 15:12	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		09/03/19 15:12	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		09/03/19 15:12	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		09/03/19 15:12	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		09/03/19 15:12	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		09/03/19 15:12	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		09/03/19 15:12	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	108	%	70-130		1		09/03/19 15:12	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		09/03/19 15:12	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		09/03/19 15:12	460-00-4	

Sample: MW-2A Lab ID: 40193941002 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	1.1	ug/L	1.0	0.25	1		08/30/19 17:12	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 17:12	100-41-4	
Methyl-tert-butyl ether	2.8J	ug/L	4.2	1.2	1		08/30/19 17:12	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 17:12	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 17:12	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 17:12	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 17:12	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 17:12	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 17:12	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	106	%	70-130		1		08/30/19 17:12	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		08/30/19 17:12	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130		1		08/30/19 17:12	460-00-4	

Sample: MW-2B Lab ID: 40193941003 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 17:34	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 17:34	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 17:34	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 17:34	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 17:34	108-88-3	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40193941

**Sample: MW-2B**      **Lab ID: 40193941003**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 17:34	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 17:34	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 17:34	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 17:34	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	106	%	70-130		1		08/30/19 17:34	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		08/30/19 17:34	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		08/30/19 17:34	460-00-4	

**Sample: MW-3A**      **Lab ID: 40193941004**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 17:55	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 17:55	100-41-4	
Methyl-tert-butyl ether	5.8	ug/L	4.2	1.2	1		08/30/19 17:55	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 17:55	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 17:55	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 17:55	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 17:55	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 17:55	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 17:55	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	108	%	70-130		1		08/30/19 17:55	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		08/30/19 17:55	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/30/19 17:55	460-00-4	

**Sample: MW-3B**      **Lab ID: 40193941005**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 18:17	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 18:17	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 18:17	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 18:17	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 18:17	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 18:17	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 18:17	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 18:17	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 18:17	95-47-6	

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## ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40193941

**Sample: MW-3B**      **Lab ID: 40193941005**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
<i>Surrogates</i>									
Dibromofluoromethane (S)	107	%	70-130		1		08/30/19 18:17	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		08/30/19 18:17	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		08/30/19 18:17	460-00-4	

**Sample: MW-4**      **Lab ID: 40193941006**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 13:59	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 13:59	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 13:59	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 13:59	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 13:59	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 13:59	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 13:59	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 13:59	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 13:59	95-47-6	
<i>Surrogates</i>									
Dibromofluoromethane (S)	109	%	70-130		1		08/30/19 13:59	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		08/30/19 13:59	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/30/19 13:59	460-00-4	

**Sample: MW-5**      **Lab ID: 40193941007**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 18:38	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 18:38	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 18:38	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 18:38	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 18:38	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 18:38	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 18:38	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 18:38	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 18:38	95-47-6	
<i>Surrogates</i>									
Dibromofluoromethane (S)	109	%	70-130		1		08/30/19 18:38	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		08/30/19 18:38	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		1		08/30/19 18:38	460-00-4	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40193941

Sample: MW-7 Lab ID: 40193941008 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 19:00	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 19:00	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 19:00	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 19:00	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 19:00	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 19:00	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 19:00	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 19:00	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 19:00	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	106	%	70-130		1		08/30/19 19:00	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		08/30/19 19:00	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/30/19 19:00	460-00-4	

Sample: MW-7P Lab ID: 40193941009 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	6.8	ug/L	1.0	0.25	1		08/30/19 19:21	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 19:21	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 19:21	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 19:21	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 19:21	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 19:21	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 19:21	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 19:21	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 19:21	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	70-130		1		08/30/19 19:21	1868-53-7	HS
Toluene-d8 (S)	95	%	70-130		1		08/30/19 19:21	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/30/19 19:21	460-00-4	

Sample: MW-9 Lab ID: 40193941010 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 19:43	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 19:43	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 19:43	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 19:43	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 19:43	108-88-3	

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## ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40193941

**Sample: MW-9**      **Lab ID: 40193941010**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 19:43	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 19:43	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 19:43	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 19:43	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	70-130		1		08/30/19 19:43	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		08/30/19 19:43	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		1		08/30/19 19:43	460-00-4	

**Sample: MW-9P**      **Lab ID: 40193941011**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 20:04	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 20:04	100-41-4	
Methyl-tert-butyl ether	10.3	ug/L	4.2	1.2	1		08/30/19 20:04	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 20:04	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 20:04	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 20:04	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 20:04	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 20:04	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 20:04	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	70-130		1		08/30/19 20:04	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		08/30/19 20:04	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		08/30/19 20:04	460-00-4	

**Sample: MW-10A**      **Lab ID: 40193941012**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		08/30/19 20:26	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		08/30/19 20:26	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/30/19 20:26	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		08/30/19 20:26	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		08/30/19 20:26	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/30/19 20:26	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/30/19 20:26	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		08/30/19 20:26	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		08/30/19 20:26	95-47-6	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN

Pace Project No.: 40193941

Sample: MW-10A Lab ID: 40193941012 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
<i>Surrogates</i>									
Dibromofluoromethane (S)	109	%	70-130		1		08/30/19 20:26	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		08/30/19 20:26	2037-26-5	
4-Bromofluorobenzene (S)	91	%	70-130		1		08/30/19 20:26	460-00-4	

Sample: MW-10B Lab ID: 40193941013 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		09/03/19 15:34	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		09/03/19 15:34	100-41-4	
Methyl-tert-butyl ether	1.9J	ug/L	4.2	1.2	1		09/03/19 15:34	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		09/03/19 15:34	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		09/03/19 15:34	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		09/03/19 15:34	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		09/03/19 15:34	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		09/03/19 15:34	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		09/03/19 15:34	95-47-6	
<i>Surrogates</i>									
Dibromofluoromethane (S)	106	%	70-130		1		09/03/19 15:34	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		09/03/19 15:34	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		09/03/19 15:34	460-00-4	

Sample: MW-11A Lab ID: 40193941014 Collected: 08/27/19 00:00 Received: 08/29/19 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		09/03/19 15:55	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		09/03/19 15:55	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		09/03/19 15:55	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		09/03/19 15:55	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		09/03/19 15:55	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		09/03/19 15:55	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		09/03/19 15:55	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		09/03/19 15:55	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		09/03/19 15:55	95-47-6	
<i>Surrogates</i>									
Dibromofluoromethane (S)	109	%	70-130		1		09/03/19 15:55	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		09/03/19 15:55	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		09/03/19 15:55	460-00-4	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40193941

**Sample: MW-11B**      **Lab ID: 40193941015**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		09/03/19 18:26	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		09/03/19 18:26	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		09/03/19 18:26	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		09/03/19 18:26	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		09/03/19 18:26	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		09/03/19 18:26	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		09/03/19 18:26	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		09/03/19 18:26	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		09/03/19 18:26	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	70-130		1		09/03/19 18:26	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		09/03/19 18:26	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		09/03/19 18:26	460-00-4	

**Sample: TRIP BLANK**      **Lab ID: 40193941016**      Collected: 08/27/19 00:00      Received: 08/29/19 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		09/03/19 14:08	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		09/03/19 14:08	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		09/03/19 14:08	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		09/03/19 14:08	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		09/03/19 14:08	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		09/03/19 14:08	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		09/03/19 14:08	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		09/03/19 14:08	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		09/03/19 14:08	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	107	%	70-130		1		09/03/19 14:08	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		09/03/19 14:08	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130		1		09/03/19 14:08	460-00-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: OLSON GOODMAN  
Pace Project No.: 40193941

QC Batch: 332327 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 40193941002, 40193941003, 40193941004, 40193941005, 40193941006, 40193941007, 40193941008, 40193941009, 40193941010, 40193941011, 40193941012

METHOD BLANK: 1928490 Matrix: Water  
Associated Lab Samples: 40193941002, 40193941003, 40193941004, 40193941005, 40193941006, 40193941007, 40193941008, 40193941009, 40193941010, 40193941011, 40193941012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	08/30/19 11:07	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	08/30/19 11:07	
Benzene	ug/L	<0.25	1.0	08/30/19 11:07	
Ethylbenzene	ug/L	<0.22	1.0	08/30/19 11:07	
m&p-Xylene	ug/L	<0.47	2.0	08/30/19 11:07	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	08/30/19 11:07	
Naphthalene	ug/L	<1.2	5.0	08/30/19 11:07	
o-Xylene	ug/L	<0.26	1.0	08/30/19 11:07	
Toluene	ug/L	<0.17	5.0	08/30/19 11:07	
4-Bromofluorobenzene (S)	%	92	70-130	08/30/19 11:07	
Dibromofluoromethane (S)	%	108	70-130	08/30/19 11:07	
Toluene-d8 (S)	%	95	70-130	08/30/19 11:07	

LABORATORY CONTROL SAMPLE: 1928491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.5	105	70-130	
Ethylbenzene	ug/L	50	52.4	105	80-124	
m&p-Xylene	ug/L	100	103	103	70-130	
Methyl-tert-butyl ether	ug/L	50	42.4	85	54-137	
o-Xylene	ug/L	50	50.9	102	70-130	
Toluene	ug/L	50	51.3	103	80-126	
4-Bromofluorobenzene (S)	%			97	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1928812 1928813

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40193941006 Result	Spike Conc.	Spike Conc.	Result							
Benzene	ug/L	<0.25	50	50	52.1	54.5	104	109	70-130	4	20	
Ethylbenzene	ug/L	<0.22	50	50	51.8	52.9	104	106	80-125	2	20	
m&p-Xylene	ug/L	<0.47	100	100	102	104	102	104	70-130	2	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	42.2	44.0	84	88	51-145	4	20	
o-Xylene	ug/L	<0.26	50	50	49.9	51.6	100	103	70-130	3	20	
Toluene	ug/L	<0.17	50	50	51.2	52.0	102	104	80-131	2	20	
4-Bromofluorobenzene (S)	%						98	97	70-130			

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

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### QUALITY CONTROL DATA

Project: OLSON GOODMAN

Pace Project No.: 40193941

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1928812												1928813	
Parameter	Units	40193941006 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Dibromofluoromethane (S)	%						104	107	70-130				
Toluene-d8 (S)	%						96	95	70-130				

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### QUALITY CONTROL DATA

Project: OLSON GOODMAN  
Pace Project No.: 40193941

QC Batch: 332517 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 40193941001, 40193941013, 40193941014, 40193941015, 40193941016

METHOD BLANK: 1929916 Matrix: Water  
Associated Lab Samples: 40193941001, 40193941013, 40193941014, 40193941015, 40193941016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	09/03/19 11:37	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	09/03/19 11:37	
Benzene	ug/L	<0.25	1.0	09/03/19 11:37	
Ethylbenzene	ug/L	<0.22	1.0	09/03/19 11:37	
m&p-Xylene	ug/L	<0.47	2.0	09/03/19 11:37	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	09/03/19 11:37	
Naphthalene	ug/L	<1.2	5.0	09/03/19 11:37	
o-Xylene	ug/L	<0.26	1.0	09/03/19 11:37	
Toluene	ug/L	<0.17	5.0	09/03/19 11:37	
4-Bromofluorobenzene (S)	%	92	70-130	09/03/19 11:37	
Dibromofluoromethane (S)	%	108	70-130	09/03/19 11:37	
Toluene-d8 (S)	%	94	70-130	09/03/19 11:37	

LABORATORY CONTROL SAMPLE: 1929917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	55.6	111	70-130	
Ethylbenzene	ug/L	50	54.0	108	80-124	
m&p-Xylene	ug/L	100	108	108	70-130	
Methyl-tert-butyl ether	ug/L	50	40.5	81	54-137	
o-Xylene	ug/L	50	53.0	106	70-130	
Toluene	ug/L	50	52.5	105	80-126	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			108	70-130	
Toluene-d8 (S)	%			95	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1930290 1930291

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40194150010 Result	Spike Conc.	Spike Conc.	Result							Result
Benzene	ug/L	<0.25	50	50	53.3	54.9	107	110	70-130	3	20	
Ethylbenzene	ug/L	<0.22	50	50	53.2	53.7	106	107	80-125	1	20	
m&p-Xylene	ug/L	<0.47	100	100	106	107	106	107	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	39.3	40.8	79	82	51-145	4	20	
o-Xylene	ug/L	<0.26	50	50	52.0	52.6	104	105	70-130	1	20	
Toluene	ug/L	<0.17	50	50	52.2	52.5	104	105	80-131	0	20	
4-Bromofluorobenzene (S)	%						104	103	70-130			
Dibromofluoromethane (S)	%						106	107	70-130			HS

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

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### QUALITY CONTROL DATA

Project: OLSON GOODMAN

Pace Project No.: 40193941

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1930290												1930291	
Parameter	Units	40194150010 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Toluene-d8 (S)	%						96	95	70-130				

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## QUALIFIERS

Project: OLSON GOODMAN

Pace Project No.: 40193941

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### 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: OLSON GOODMAN

Pace Project No.: 40193941

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40193941001	MW-1R	EPA 8260	332517		
40193941002	MW-2A	EPA 8260	332327		
40193941003	MW-2B	EPA 8260	332327		
40193941004	MW-3A	EPA 8260	332327		
40193941005	MW-3B	EPA 8260	332327		
40193941006	MW-4	EPA 8260	332327		
40193941007	MW-5	EPA 8260	332327		
40193941008	MW-7	EPA 8260	332327		
40193941009	MW-7P	EPA 8260	332327		
40193941010	MW-9	EPA 8260	332327		
40193941011	MW-9P	EPA 8260	332327		
40193941012	MW-10A	EPA 8260	332327		
40193941013	MW-10B	EPA 8260	332517		
40193941014	MW-11A	EPA 8260	332517		
40193941015	MW-11B	EPA 8260	332517		
40193941016	TRIP BLANK	EPA 8260	332517		

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# Sample Preservation Receipt Form

Pace Analytical Services, LLC  
1241 Bellevue Street, Suite 202  
Green Bay, WI 54302

Client Name: Meridian

Project # 4093941

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 ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤	pH after adjusted	Volume (mL)		
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T								ZPLC	GN
001																	3																2.5 / 5 / 10
002																	3																2.5 / 5 / 10
003																	3																2.5 / 5 / 10
004																	3																2.5 / 5 / 10
005																	3																2.5 / 5 / 10
006																	3																2.5 / 5 / 10
007																	3																2.5 / 5 / 10
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																	3																2.5 / 5 / 10
013																	3																2.5 / 5 / 10
014																	3																2.5 / 5 / 10
015																	3																2.5 / 5 / 10
016																	2																2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

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

AG1U 1 liter amber glass	BP1U 1 liter plastic unpres	DG9A 40 mL amber ascorbic	JGFU 4 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP2N 500 mL plastic HNO3	DG9T 40 mL amber Na Thio	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP2Z 500 mL plastic NaOH, Znact	VG9U 40 mL clear vial unpres	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3U 250 mL plastic unpres	VG9H 40 mL clear vial HCL	
AG5U 100 mL amber glass unpres	BP3B 250 mL plastic NaOH	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG2S 500 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9D 40 mL clear vial DI	ZPLC ziploc bag
BG3U 250 mL clear glass unpres	BP3S 250 mL plastic H2SO4		GN:



November 27, 2019

Kenneth Shimko  
Meridian Environmental Consulting, LLC  
2711 North Elco Rd  
Fall Creek, WI 54742

RE: Project: OLSON GOODMAN  
Pace Project No.: 40199783

Dear Kenneth Shimko:

Enclosed are the analytical results for sample(s) received by the laboratory on November 22, 2019. 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: OLSON GOODMAN

Pace Project No.: 40199783

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### **Pace Analytical Services Green Bay**

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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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: OLSON GOODMAN  
Pace Project No.: 40199783

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199783001	MW-1R	Water	11/20/19 00:00	11/22/19 09:50
40199783002	MW-2A	Water	11/20/19 00:00	11/22/19 09:50
40199783003	MW-2B	Water	11/20/19 00:00	11/22/19 09:50
40199783004	MW-3A	Water	11/20/19 00:00	11/22/19 09:50
40199783005	MW-3B	Water	11/20/19 00:00	11/22/19 09:50
40199783006	MW-4	Water	11/20/19 00:00	11/22/19 09:50
40199783007	MW-5	Water	11/20/19 00:00	11/22/19 09:50
40199783008	MW-7	Water	11/20/19 00:00	11/22/19 09:50
40199783009	MW-9	Water	11/20/19 00:00	11/22/19 09:50
40199783010	MW-9P	Water	11/20/19 00:00	11/22/19 09:50
40199783011	MW-10A	Water	11/20/19 00:00	11/22/19 09:50
40199783012	MW-10B	Water	11/20/19 00:00	11/22/19 09:50
40199783013	MW-11A	Water	11/20/19 00:00	11/22/19 09:50
40199783014	MW-11B	Water	11/20/19 00:00	11/22/19 09:50
40199783015	TRIP BLANK	Water	11/20/19 00:00	11/22/19 09:50

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### SAMPLE ANALYTE COUNT

Project: OLSON GOODMAN  
Pace Project No.: 40199783

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199783001	MW-1R	EPA 8260	LAP	12	PASI-G
40199783002	MW-2A	EPA 8260	LAP	12	PASI-G
40199783003	MW-2B	EPA 8260	LAP	12	PASI-G
40199783004	MW-3A	EPA 8260	LAP	12	PASI-G
40199783005	MW-3B	EPA 8260	LAP	12	PASI-G
40199783006	MW-4	EPA 8260	LAP	12	PASI-G
40199783007	MW-5	EPA 8260	LAP	12	PASI-G
40199783008	MW-7	EPA 8260	LAP	12	PASI-G
40199783009	MW-9	EPA 8260	LAP	12	PASI-G
40199783010	MW-9P	EPA 8260	LAP	12	PASI-G
40199783011	MW-10A	EPA 8260	LAP	12	PASI-G
40199783012	MW-10B	EPA 8260	LAP	12	PASI-G
40199783013	MW-11A	EPA 8260	LAP	12	PASI-G
40199783014	MW-11B	EPA 8260	LAP	12	PASI-G
40199783015	TRIP BLANK	EPA 8260	LAP	12	PASI-G

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## PROJECT NARRATIVE

Project: OLSON GOODMAN

Pace Project No.: 40199783

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**Method:** EPA 8260

**Description:** 8260 MSV UST

**Client:** Meridian Environmental Consulting, LLC

**Date:** November 27, 2019

**General Information:**

15 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN

Pace Project No.: 40199783

**Sample: MW-1R**      **Lab ID: 40199783001**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 16:30	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 16:30	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 16:30	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 16:30	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 16:30	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 16:30	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 16:30	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 16:30	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 16:30	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	82	%	70-130		1		11/25/19 16:30	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/25/19 16:30	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		11/25/19 16:30	460-00-4	

**Sample: MW-2A**      **Lab ID: 40199783002**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	0.54J	ug/L	1.0	0.25	1		11/25/19 16:53	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 16:53	100-41-4	
Methyl-tert-butyl ether	3.8J	ug/L	4.2	1.2	1		11/25/19 16:53	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 16:53	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 16:53	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 16:53	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 16:53	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 16:53	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 16:53	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	88	%	70-130		1		11/25/19 16:53	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 16:53	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		11/25/19 16:53	460-00-4	

**Sample: MW-2B**      **Lab ID: 40199783003**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 17:17	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 17:17	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 17:17	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 17:17	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 17:17	108-88-3	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN

Pace Project No.: 40199783

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-2B</b> <b>Lab ID: 40199783003</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<b>&lt;0.84</b>	ug/L	2.8	0.84	1		11/25/19 17:17	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.87</b>	ug/L	2.9	0.87	1		11/25/19 17:17	108-67-8	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		11/25/19 17:17	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		11/25/19 17:17	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	83	%	70-130		1		11/25/19 17:17	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/25/19 17:17	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		11/25/19 17:17	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-3A</b> <b>Lab ID: 40199783004</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		11/26/19 07:49	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		11/26/19 07:49	100-41-4	
Methyl-tert-butyl ether	<b>4.1J</b>	ug/L	4.2	1.2	1		11/26/19 07:49	1634-04-4	
Naphthalene	<b>&lt;1.2</b>	ug/L	5.0	1.2	1		11/26/19 07:49	91-20-3	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		11/26/19 07:49	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.84</b>	ug/L	2.8	0.84	1		11/26/19 07:49	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.87</b>	ug/L	2.9	0.87	1		11/26/19 07:49	108-67-8	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		11/26/19 07:49	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		11/26/19 07:49	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	86	%	70-130		1		11/26/19 07:49	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/26/19 07:49	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		11/26/19 07:49	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-3B</b> <b>Lab ID: 40199783005</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		11/25/19 17:41	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		11/25/19 17:41	100-41-4	
Methyl-tert-butyl ether	<b>&lt;1.2</b>	ug/L	4.2	1.2	1		11/25/19 17:41	1634-04-4	
Naphthalene	<b>&lt;1.2</b>	ug/L	5.0	1.2	1		11/25/19 17:41	91-20-3	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		11/25/19 17:41	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.84</b>	ug/L	2.8	0.84	1		11/25/19 17:41	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.87</b>	ug/L	2.9	0.87	1		11/25/19 17:41	108-67-8	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		11/25/19 17:41	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		11/25/19 17:41	95-47-6	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40199783

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-3B</b> <b>Lab ID: 40199783005</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
<i><b>Surrogates</b></i>									
Dibromofluoromethane (S)	83	%	70-130		1		11/25/19 17:41	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/25/19 17:41	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130		1		11/25/19 17:41	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-4</b> <b>Lab ID: 40199783006</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
<i><b>Surrogates</b></i>									
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		11/25/19 18:04	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		11/25/19 18:04	100-41-4	
Methyl-tert-butyl ether	<b>&lt;1.2</b>	ug/L	4.2	1.2	1		11/25/19 18:04	1634-04-4	
Naphthalene	<b>&lt;1.2</b>	ug/L	5.0	1.2	1		11/25/19 18:04	91-20-3	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		11/25/19 18:04	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.84</b>	ug/L	2.8	0.84	1		11/25/19 18:04	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.87</b>	ug/L	2.9	0.87	1		11/25/19 18:04	108-67-8	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		11/25/19 18:04	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		11/25/19 18:04	95-47-6	
<i><b>Surrogates</b></i>									
Dibromofluoromethane (S)	85	%	70-130		1		11/25/19 18:04	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/25/19 18:04	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		11/25/19 18:04	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-5</b> <b>Lab ID: 40199783007</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
<i><b>Surrogates</b></i>									
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		11/25/19 18:28	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		11/25/19 18:28	100-41-4	
Methyl-tert-butyl ether	<b>&lt;1.2</b>	ug/L	4.2	1.2	1		11/25/19 18:28	1634-04-4	
Naphthalene	<b>&lt;1.2</b>	ug/L	5.0	1.2	1		11/25/19 18:28	91-20-3	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		11/25/19 18:28	108-88-3	
1,2,4-Trimethylbenzene	<b>&lt;0.84</b>	ug/L	2.8	0.84	1		11/25/19 18:28	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;0.87</b>	ug/L	2.9	0.87	1		11/25/19 18:28	108-67-8	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		11/25/19 18:28	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		11/25/19 18:28	95-47-6	
<i><b>Surrogates</b></i>									
Dibromofluoromethane (S)	86	%	70-130		1		11/25/19 18:28	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/25/19 18:28	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		1		11/25/19 18:28	460-00-4	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40199783

**Sample: MW-7**      **Lab ID: 40199783008**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 18:51	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 18:51	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 18:51	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 18:51	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 18:51	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 18:51	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 18:51	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 18:51	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 18:51	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	89	%	70-130		1		11/25/19 18:51	1868-53-7	
Toluene-d8 (S)	105	%	70-130		1		11/25/19 18:51	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		11/25/19 18:51	460-00-4	

**Sample: MW-9**      **Lab ID: 40199783009**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 19:15	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 19:15	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 19:15	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 19:15	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 19:15	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 19:15	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 19:15	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 19:15	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 19:15	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	89	%	70-130		1		11/25/19 19:15	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 19:15	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		11/25/19 19:15	460-00-4	

**Sample: MW-9P**      **Lab ID: 40199783010**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 19:39	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 19:39	100-41-4	
Methyl-tert-butyl ether	7.3	ug/L	4.2	1.2	1		11/25/19 19:39	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 19:39	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 19:39	108-88-3	

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40199783

Sample: MW-9P      Lab ID: 40199783010      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 19:39	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 19:39	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 19:39	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 19:39	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	89	%	70-130		1		11/25/19 19:39	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		11/25/19 19:39	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		11/25/19 19:39	460-00-4	

Sample: MW-10A      Lab ID: 40199783011      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 20:02	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 20:02	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 20:02	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 20:02	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 20:02	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 20:02	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 20:02	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 20:02	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 20:02	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	85	%	70-130		1		11/25/19 20:02	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 20:02	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		11/25/19 20:02	460-00-4	

Sample: MW-10B      Lab ID: 40199783012      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 20:26	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 20:26	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 20:26	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 20:26	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 20:26	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 20:26	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 20:26	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 20:26	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 20:26	95-47-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40199783

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-10B</b> <b>Lab ID: 40199783012</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
<b>Surrogates</b>									
Dibromofluoromethane (S)	89	%	70-130		1		11/25/19 20:26	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		11/25/19 20:26	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		1		11/25/19 20:26	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-11A</b> <b>Lab ID: 40199783013</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
<b>Surrogates</b>									
Benzene	<0.25	ug/L	1.0	0.25	1		11/26/19 07:06	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/26/19 07:06	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/26/19 07:06	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/26/19 07:06	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/26/19 07:06	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/26/19 07:06	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/26/19 07:06	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/26/19 07:06	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/26/19 07:06	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	90	%	70-130		1		11/26/19 07:06	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		11/26/19 07:06	2037-26-5	
4-Bromofluorobenzene (S)	109	%	70-130		1		11/26/19 07:06	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-11B</b> <b>Lab ID: 40199783014</b> Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water									
Analytical Method: EPA 8260									
<b>Surrogates</b>									
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 16:06	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 16:06	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 16:06	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 16:06	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 16:06	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 16:06	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 16:06	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 16:06	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 16:06	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	84	%	70-130		1		11/25/19 16:06	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 16:06	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		11/25/19 16:06	460-00-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40199783

**Sample: TRIP BLANK**      **Lab ID: 40199783015**      Collected: 11/20/19 00:00      Received: 11/22/19 09:50      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>		Analytical Method: EPA 8260							
Benzene	<0.25	ug/L	1.0	0.25	1		11/25/19 15:42	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/25/19 15:42	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/25/19 15:42	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		11/25/19 15:42	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		11/25/19 15:42	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/25/19 15:42	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/25/19 15:42	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/25/19 15:42	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/25/19 15:42	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	88	%	70-130		1		11/25/19 15:42	1868-53-7	HS
Toluene-d8 (S)	101	%	70-130		1		11/25/19 15:42	2037-26-5	
4-Bromofluorobenzene (S)	111	%	70-130		1		11/25/19 15:42	460-00-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: OLSON GOODMAN  
Pace Project No.: 40199783

QC Batch: 341667 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 40199783001, 40199783002, 40199783003, 40199783004, 40199783005, 40199783006, 40199783007, 40199783008, 40199783009, 40199783010, 40199783011, 40199783012, 40199783013, 40199783014, 40199783015

METHOD BLANK: 1984960 Matrix: Water  
Associated Lab Samples: 40199783001, 40199783002, 40199783003, 40199783004, 40199783005, 40199783006, 40199783007, 40199783008, 40199783009, 40199783010, 40199783011, 40199783012, 40199783013, 40199783014, 40199783015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	11/25/19 13:41	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	11/25/19 13:41	
Benzene	ug/L	<0.25	1.0	11/25/19 13:41	
Ethylbenzene	ug/L	<0.22	1.0	11/25/19 13:41	
m&p-Xylene	ug/L	<0.47	2.0	11/25/19 13:41	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	11/25/19 13:41	
Naphthalene	ug/L	<1.2	5.0	11/25/19 13:41	
o-Xylene	ug/L	<0.26	1.0	11/25/19 13:41	
Toluene	ug/L	<0.17	5.0	11/25/19 13:41	
4-Bromofluorobenzene (S)	%	114	70-130	11/25/19 13:41	
Dibromofluoromethane (S)	%	83	70-130	11/25/19 13:41	
Toluene-d8 (S)	%	100	70-130	11/25/19 13:41	

LABORATORY CONTROL SAMPLE: 1984961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	42.0	84	70-130	
Ethylbenzene	ug/L	50	59.7	119	80-124	
m&p-Xylene	ug/L	100	115	115	70-130	
Methyl-tert-butyl ether	ug/L	50	33.1	66	54-137	
o-Xylene	ug/L	50	56.9	114	70-130	
Toluene	ug/L	50	54.7	109	80-126	
4-Bromofluorobenzene (S)	%			119	70-130	
Dibromofluoromethane (S)	%			83	70-130	
Toluene-d8 (S)	%			104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985914 1985915

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199783014 Result	Spike Conc.	Spike Conc.	Conc.								
Benzene	ug/L	<0.25	50	50	50	42.5	42.6	85	85	70-130	0	20	
Ethylbenzene	ug/L	<0.22	50	50	50	59.9	59.4	120	119	80-125	1	20	
m&p-Xylene	ug/L	<0.47	100	100	100	114	112	114	112	70-130	2	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	50	33.7	34.4	67	69	51-145	2	20	
o-Xylene	ug/L	<0.26	50	50	50	56.6	55.7	113	111	70-130	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: OLSON GOODMAN

Pace Project No.: 40199783

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985914		1985915		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40199783014 Result	MS Spike Conc.	MSD Spike Conc.									
Toluene	ug/L	<0.17	50	50	55.8	56.5	112	113	80-131	1	20		
4-Bromofluorobenzene (S)	%						117	117	70-130				
Dibromofluoromethane (S)	%						83	82	70-130				
Toluene-d8 (S)	%						105	102	70-130				

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: OLSON GOODMAN

Pace Project No.: 40199783

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### 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: OLSON GOODMAN

Pace Project No.: 40199783

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199783001	MW-1R	EPA 8260	341667		
40199783002	MW-2A	EPA 8260	341667		
40199783003	MW-2B	EPA 8260	341667		
40199783004	MW-3A	EPA 8260	341667		
40199783005	MW-3B	EPA 8260	341667		
40199783006	MW-4	EPA 8260	341667		
40199783007	MW-5	EPA 8260	341667		
40199783008	MW-7	EPA 8260	341667		
40199783009	MW-9	EPA 8260	341667		
40199783010	MW-9P	EPA 8260	341667		
40199783011	MW-10A	EPA 8260	341667		
40199783012	MW-10B	EPA 8260	341667		
40199783013	MW-11A	EPA 8260	341667		
40199783014	MW-11B	EPA 8260	341667		
40199783015	TRIP BLANK	EPA 8260	341667		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: *Mendota Env. Co. Inc.*  
 Branch/Location:  
 Project Contact: *Ken Shimko*  
 Phone: *715 832 6608*  
 Project Number:  
 Project Name: *Olson Goodway*  
 Project State: *WI*  
 Sampled By (Print): *Ken Shimko*  
 Sampled By (Sign): *[Signature]*  
 PO #:  
 Regulatory Program:



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

40199783

Page 17 of 21

# CHAIN OF CUSTODY

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

Filtered? (YES/NO)	Y/N	Pick Letter	Analyses Requested
			X PVEL + Wash

Quote #: *40199783*  
 Mail To Contact: *Ken Shimko*  
 Mail To Company: *Mendota Env. Co. Inc.*  
 Mail To Address: *2711 N. Elcoral Fall Creek WI*  
 Invoice To Contact: *54742*  
 Invoice To Company:  
 Invoice To Address:  
 Invoice To Phone:

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	MW-1R	11/20		W
002	-2A			
003	-2B			
004	-3A			
005	-3B			
006	-4			
007	-5			
008	-7			
009	-9			
010	-9P			
<i>L -&gt; see page TWO -&gt;</i>				

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <i>[Signature]</i> Date/Time: <i>11/21/19</i>	Received By: <i>Fed Ex</i> Date/Time: <i>11/21/19</i>	PACE Project No. <i>40199783</i> Receipt Temp = <i>2.0</i> °C Sample Receipt pH OK / Adjusted Cooler Custody Seal Present / Not Present Intact / Not Intact
Transmit Prelim Rush Results by (complete what you want):	Relinquished By: <i>Fed Ex</i> Date/Time: <i>11/22/19 09:50</i>	Received By: <i>Quinn Ryan Pace</i> Date/Time: <i>11/21/19 09:50</i>	
Email #1:	Relinquished By:	Received By:	
Email #2:	Relinquished By:	Received By:	
Telephone:	Relinquished By:	Received By:	
Fax:	Relinquished By:	Received By:	
Samples on HOLD are subject to special pricing and release of liability	Relinquished By:	Received By:	

(Please Print Clearly)

UPPER MIDWEST REGION

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

40199783



# CHAIN OF CUSTODY

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

Company Name: *Meridian Env Sols*  
 Branch/Location:  
 Project Contact: *Ken Shimko*  
 Phone: *715832 6608*  
 Project Number:  
 Project Name: *Olson Goodman*  
 Project State: *WI*  
 Sampled By (Print): *Ken Shimko*  
 Sampled By (Sign): *[Signature]*  
 PO #:  
 Regulatory Program:

Data Package Options (billable)	MS/MSD	Matrix Codes
<input type="checkbox"/> EPA Level III <input type="checkbox"/> EPA Level IV	<input type="checkbox"/> On your sample (billable) <input type="checkbox"/> NOT needed on your sample	A = Air B = Biota C = Charcoal O = Oil S = Soil Sl = Sludge W = Water DW = Drinking Water GW = Ground Water SW = Surface Water WW = Waste Water WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Analyses Requested
		DATE	TIME		
<i>012</i>	<i>MW-10A</i>	<i>11/20</i>		<i>W</i>	<i>X PUEL + Negn</i>
<i>013</i>	<i>-10B</i>				
<i>014</i>	<i>-11A</i>				
<i>015</i>	<i>-11B</i>				
	<i>① Trip Blank</i> <i>① In shipment Lab add Trip Blank</i>				

Quote #:		
Mail To Contact:	<i>Ken Shimko</i>	
Mail To Company:	<i>Meridian Env Sols</i>	
Mail To Address:	<i>271 N. Felcor Rd Fall Creek WI</i>	
Invoice To Contact:		
Invoice To Company:	<i>54712</i>	
Invoice To Address:		
Invoice To Phone:		
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	<i>011</i>	
	<i>012</i>	
	<i>013</i>	
	<i>014</i>	
	<i>015</i>	

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <i>[Signature]</i> Date/Time: <i>11/21/19</i>	Received By: <i>Fed Ex</i> Date/Time: <i>11/21/19</i>
Transmit Prelim Rush Results by (complete what you want):	Relinquished By: <i>Fed Ex</i> Date/Time: <i>11/21/19 0950</i>	Received By: <i>Armin Rapaport</i> Date/Time: <i>11/21/19 0950</i>
Email #1:	Relinquished By:	Received By:
Email #2:	Relinquished By:	Received By:
Telephone:	Relinquished By:	Received By:
Fax:	Relinquished By:	Received By:

PACE Project No. *40199783*

Receipt Temp = *2.0* °C

Sample Receipt pH  
OK / Adjusted

Cooler Custody Seal  
Present / Not Present  
Intact / Not Intact

Pace Container Order #555993

40199783

Order By :	Ship To :	Return To:
Company Meridian Environmental	Company Meridian Environmental	Company Pace Analytical Green Bay
Contact Shimko, Kenneth	Contact Shimko, Kenneth	Contact Basten, Brian
Email kshimko.meridianenv@gmail.com	Email kshimko.meridianenv@gmail.com	Email brian.basten@pacelabs.com
Address 2711 North Elco Rd	Address 2711 North Elco Rd	Address 1241 Bellevue Street
Address 2	Address 2	Address 2 Suite 9
City Fall Creek	City Fall Creek	City Green Bay
State WI Zip 54742	State WI Zip 54742	State WI Zip 54302
Phone 715-579-0723	Phone 715-579-0723	Phone (920)469-2436

**Info**

Project Name Olson Goodman Due Date 10/23/2019 Profile \_\_\_\_\_ Quote \_\_\_\_\_

Project Basten, Brian Return \_\_\_\_\_ Carrier Most Economical Locatio WI

<b>Trip Blanks</b> <input checked="" type="checkbox"/> Include Trip Blanks	<b>Bottle Labels</b> <input checked="" type="checkbox"/> Blank <input type="checkbox"/> Pre-Printed No Sample IDs <input type="checkbox"/> Pre-Printed With Sample IDs	<b>Bottles</b> <input type="checkbox"/> Boxed Cases <input type="checkbox"/> Individually Wrapped <input type="checkbox"/> Grouped By Sample
<b>Return Shipping Labels</b> <input type="checkbox"/> No Shipper <input type="checkbox"/> With Shipper	<b>Misc</b> <input checked="" type="checkbox"/> Sampling Instructions <input checked="" type="checkbox"/> Custody Seal <input type="checkbox"/> Temp. Blanks <input checked="" type="checkbox"/> Coolers _____ <input type="checkbox"/> Syringes _____	
<b>COC Options</b> <input checked="" type="checkbox"/> Number of Blanks <u>2</u> <input type="checkbox"/> Pre-Printed _____	<input type="checkbox"/> Extra Bubble Wrap <input type="checkbox"/> Short Hold/Rush <input type="checkbox"/> DI <u>          </u> Liter(s) <input type="checkbox"/> USDA Regulated Soils	

# of Samples	Matrix	Test	Container	Total	# of	Lot #	Notes
16	WT	PVOC	3-40mL glass vial w/ HCl	48	0	B-9-257-01VB	
1	WT	Trip BLANK	2-40mL HCL w/custody seal	2	0	B-9-098-01VB	

**Hazard Shipping Placard In Place : NA**

\*Sample receiving hours are Monday through Friday 8:00 am to 6:00 pm and Saturday from 9:00 am to 12:00 pm unless special arrangements are made with your project manager.

\*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

\*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample

\*Payment term are net 30 days.

\*Please include the proposal number on the chain of custody to insure proper billing.

**LAB USE:**

Ship Date : 10/22/2019

Prepared By: Mai Yer Her

Verified By: \_\_\_\_\_

**Sample**

**CLIENT USE (Optional):**

\_\_\_\_\_

Date Rec'd: \_\_\_\_\_

Received By: \_\_\_\_\_

Verified By: \_\_\_\_\_

# Sample Preservation Receipt Form

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

Client Name: Meredith Enviro Assoc Project # 4099783

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 ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤	pH after adjusted	Volume (mL)	
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU								WPFU
001																	3													2.5 / 5 / 10
002																	3													2.5 / 5 / 10
003																	3													2.5 / 5 / 10
004																	3													2.5 / 5 / 10
005																	3													2.5 / 5 / 10
006																	3													2.5 / 5 / 10
007																	3													2.5 / 5 / 10
008																	3													2.5 / 5 / 10
009																	3													2.5 / 5 / 10
010																	3													2.5 / 5 / 10
011																	3													2.5 / 5 / 10
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013																	3													2.5 / 5 / 10
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015																	2													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, WIDRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm) :  Yes  No  N/A \*If yes look in headspace column

AG1U 1 liter amber glass	BP1U 1 liter plastic unpres	DG9A 40 mL amber ascorbic	JGFU 4 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP2N 500 mL plastic HNO3	DG9T 40 mL amber Na Thio	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP2Z 500 mL plastic NaOH, Znact	VG9U 40 mL clear vial unpres	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3U 250 mL plastic unpres	VG9H 40 mL clear vial HCL	
AG5U 100 mL amber glass unpres	BP3B 250 mL plastic NaOH	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG2S 500 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9D 40 mL clear vial DI	ZPLC ziploc bag
BG3U 250 mL clear glass unpres	BP3S 250 mL plastic H2SO4		GN:



Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-GB-C-031-Rev.07**

Document Revised: 25Apr2018  
 Issuing Authority:  
 Pace Green Bay Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Project #: \_\_\_\_\_

Client Name: Meridian Liner Assoc

**WO#: 40199783**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_



Tracking #: 2782 0445 9916

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-12 Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1.5 / Corr: 2.0

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

Person examining contents:  
 Date: 11/22/19  
 Initials: GR

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>No time or date on labels GR 11/22/19</u>
-Includes date/time/ID/Analysis Matrix: _____		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>433</u>		

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

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

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

Project Manager Review: \_\_\_\_\_

Date: 11/24/19



December 13, 2019

Kenneth Shimko  
Meridian Environmental Consulting, LLC  
2711 North Elco Rd  
Fall Creek, WI 54742

RE: Project: OLSON GOODMAN  
Pace Project No.: 40200645

Dear Kenneth Shimko:

Enclosed are the analytical results for sample(s) received by the laboratory on December 11, 2019. 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

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: OLSON GOODMAN

Pace Project No.: 40200645

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### **Pace Analytical Services Green Bay**

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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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: OLSON GOODMAN

Pace Project No.: 40200645

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40200645001	7P	Water	12/07/19 00:00	12/11/19 09:20
40200645002	TRIP BLANK	Water	12/07/19 00:00	12/11/19 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: OLSON GOODMAN

Pace Project No.: 40200645

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40200645001	7P	EPA 8260	MDS	12	PASI-G
40200645002	TRIP BLANK	EPA 8260	MDS	12	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: OLSON GOODMAN

Pace Project No.: 40200645

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**Method:** EPA 8260

**Description:** 8260 MSV UST

**Client:** Meridian Environmental Consulting, LLC

**Date:** December 13, 2019

**General Information:**

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: OLSON GOODMAN  
Pace Project No.: 40200645

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: 7P</b> <b>Lab ID: 40200645001</b> Collected: 12/07/19 00:00      Received: 12/11/19 09:20      Matrix: Water									
Analytical Method: EPA 8260									
Benzene	1.4	ug/L	1.0	0.25	1		12/12/19 14:02	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		12/12/19 14:02	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		12/12/19 14:02	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		12/12/19 14:02	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		12/12/19 14:02	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		12/12/19 14:02	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		12/12/19 14:02	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		12/12/19 14:02	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		12/12/19 14:02	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	70-130		1		12/12/19 14:02	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		12/12/19 14:02	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		12/12/19 14:02	460-00-4	

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: TRIP BLANK</b> <b>Lab ID: 40200645002</b> Collected: 12/07/19 00:00      Received: 12/11/19 09:20      Matrix: Water									
Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		12/12/19 13:38	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		12/12/19 13:38	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		12/12/19 13:38	1634-04-4	
Naphthalene	<1.2	ug/L	5.0	1.2	1		12/12/19 13:38	91-20-3	
Toluene	<0.17	ug/L	5.0	0.17	1		12/12/19 13:38	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		12/12/19 13:38	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		12/12/19 13:38	108-67-8	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		12/12/19 13:38	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		12/12/19 13:38	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	70-130		1		12/12/19 13:38	1868-53-7	HS
Toluene-d8 (S)	102	%	70-130		1		12/12/19 13:38	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		12/12/19 13:38	460-00-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: OLSON GOODMAN  
Pace Project No.: 40200645

QC Batch: 343216 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 40200645001, 40200645002

METHOD BLANK: 1992772 Matrix: Water  
Associated Lab Samples: 40200645001, 40200645002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	12/12/19 10:52	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	12/12/19 10:52	
Benzene	ug/L	<0.25	1.0	12/12/19 10:52	
Ethylbenzene	ug/L	<0.22	1.0	12/12/19 10:52	
m&p-Xylene	ug/L	<0.47	2.0	12/12/19 10:52	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	12/12/19 10:52	
Naphthalene	ug/L	<1.2	5.0	12/12/19 10:52	
o-Xylene	ug/L	<0.26	1.0	12/12/19 10:52	
Toluene	ug/L	<0.17	5.0	12/12/19 10:52	
4-Bromofluorobenzene (S)	%	92	70-130	12/12/19 10:52	
Dibromofluoromethane (S)	%	106	70-130	12/12/19 10:52	
Toluene-d8 (S)	%	97	70-130	12/12/19 10:52	

LABORATORY CONTROL SAMPLE: 1992773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	50.8	102	70-130	
Ethylbenzene	ug/L	50	53.7	107	80-124	
m&p-Xylene	ug/L	100	109	109	70-130	
Methyl-tert-butyl ether	ug/L	50	42.2	84	54-137	
o-Xylene	ug/L	50	54.0	108	70-130	
Toluene	ug/L	50	51.0	102	80-126	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1992774 1992775

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40200647001 Result	Spike Conc.	Spike Conc.	Result						
Benzene	ug/L	<0.25	50	50	49.5	52.7	99	105	70-130	6	20
Ethylbenzene	ug/L	<0.22	50	50	53.6	52.8	107	106	80-125	2	20
m&p-Xylene	ug/L	<0.47	100	100	110	109	110	109	70-130	1	20
Methyl-tert-butyl ether	ug/L	<1.2	50	50	44.0	44.6	88	89	51-145	1	20
o-Xylene	ug/L	<0.26	50	50	54.1	55.1	108	110	70-130	2	20
Toluene	ug/L	<0.17	50	50	57.2	57.3	114	115	80-131	0	20
4-Bromofluorobenzene (S)	%						109	104	70-130		
Dibromofluoromethane (S)	%						98	102	70-130		

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: OLSON GOODMAN

Pace Project No.: 40200645

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1992774												1992775	
Parameter	Units	40200647001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Toluene-d8 (S)	%						107	106	70-130				

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: OLSON GOODMAN

Pace Project No.: 40200645

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### 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: OLSON GOODMAN  
Pace Project No.: 40200645

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40200645001	7P	EPA 8260	343216		
40200645002	TRIP BLANK	EPA 8260	343216		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Mendota Park OH  
 Branch/Location:  
 Project Contact: Ken Shimko  
 Phone: 715 832 6605  
 Project Number:  
 Project Name: Olsen Goodman  
 Project State: WI  
 Sampled By (Print): Ken Shimko  
 Sampled By (Sign): [Signature]  
 PO #:  
 Regulatory Program:



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

40200645

### CHAIN OF CUSTODY

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

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

Y/N	Pick Letter	Analysis Requested
		PVOC + naph
		X

Quote #:  
 Mail To Contact: Ken Shimko  
 Mail To Company: Mendota Park OH  
 Mail To Address: 2711 N. Belco Rd  
Fall Creek WI  
 Invoice To Contact: 54742  
 Invoice To Company:  
 Invoice To Address: [Signature]  
 Invoice To Phone:

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	7P	12/7		W
02	TB - receipt - added to cal big lab 12/11/19			

CLIENT COMMENTS  
 LAB COMMENTS (Lab Use Only)  
 Profile #

Rush Turnaround Time Requested - Prelims  
 (Rush TAT subject to approval/surcharge)  
 Date Needed:  
 Transmit Prelim Rush Results by (complete what you want):  
 Email #1:  
 Email #2:  
 Telephone:  
 Fax:  
 Samples on HOLD are subject to special pricing and release of liability

Relinquished By: [Signature] Date/Time: 12/10/19  
 Relinquished By: Fedex Date/Time: 12/11/19 0900  
 Relinquished By:  
 Relinquished By:  
 Relinquished By:

Received By: Fed Ex Date/Time: 12/10/19  
 Received By: [Signature] Date/Time: 12/11/19 0920  
 Received By:  
 Received By:  
 Received By:

PACE Project No. 40200645  
 Receipt Temp = 12.8 °C  
 Sample Receipt pH  
 OK / Adjusted  
 Cooler Custody Seal  
 Present / Not Present  
 Intact / Not Intact

# Sample Preservation Receipt Form

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

Client Name: Meridian

Project # 40200645

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 ≤	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤	pH after adjusted	Volume (mL)				
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T	ZPLC	GN	
001																	3																	2.5 / 5 / 10
002																	2																	2.5 / 5 / 10
003																																		2.5 / 5 / 10
004																																		2.5 / 5 / 10
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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, WIDRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U 1 liter amber glass	BP1U 1 liter plastic unpres	DG9A 40 mL amber ascorbic	JGFU 4 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP2N 500 mL plastic HNO3	DG9T 40 mL amber Na Thio	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP2Z 500 mL plastic NaOH, Znact	VG9U 40 mL clear vial unpres	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3U 250 mL plastic unpres	VG9H 40 mL clear vial HCL	
AG5U 100 mL amber glass unpres	BP3B 250 mL plastic NaOH	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG2S 500 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9D 40 mL clear vial DI	ZPLC ziploc bag
BG3U 250 mL clear glass unpres	BP3S 250 mL plastic H2SO4		GN:



Document Name: Sample Condition Upon Receipt (SCUR)  
Document No.: F-GB-C-031-Rev.07

Document Revised: 25Apr2018  
Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project # **WO# : 40200645**

Client Name: Meredian

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_

Tracking #: 7787 7648 2947

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: NO / Corr: \_\_\_\_\_

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

Person examining contents:  
Date: 12/11/19  
Initials: [Signature]

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>ID only</u>
-Includes date/time/ID/Analysis Matrix: <u>W</u>		<u>12/11/19</u>
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>433</u>		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments   
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 12-11-19