

August 31, 2017

BRRTS: 03-53-001871

Mr. Jon Heberer  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road  
Madison, Wisconsin 53711

**Re: Groundwater Monitoring Update  
Cecil Parish Farm  
2366 Pleasant Hill Road  
Muscoda, Wisconsin**

Dear Mr. Heberer:

Seymour Environmental Services, Inc. recently completed the supplemental groundwater monitoring at the site as requested by Woody Myers, the previous WDNR project manager. Activities conducted included four rounds of quarterly monitoring of three wells (MW-2, MW-4 and MW-5) and water level measurement of the other two wells (MW-1 and MW-3). This work completes the activities included in the most recently approved PECFA budget. Unfortunately, we were unable to collect a sample from the water supply well during this monitoring. The house has been unoccupied and the power is disconnected. During the most recent round of groundwater monitoring the house was being remodeled and the plumbing was removed. A brief summary of previous findings are included in this letter.

## **SITE HISTORY**

In 1992 a former tenant of the property complained to the WDNR about the well water at this property. The property is an old farmstead located in southcentral Richland County and water for the site is supplied by a private water-supply well located near the home. Two rounds of water sampling were conducted. The sampling detected the presence of benzene in the well water above the NR140 preventative action level (PAL) but below the enforcement standard (ES).

In the summer of 1993 Site Excavation, Inc. removed 2 underground storage tanks at the property; a 300-gallon gasoline and a 300-gallon diesel tank. No sampling was conducted at the time of tank closure but the contractor returned to the site in October 1993 and collected soil samples from the former tank location. Analytical results from the samples collected at the location of the former tanks showed diesel range organics (DRO) were present at 3,820 milligram per kilogram and gasoline range organics (GRO) at 23,400 mg/kg. Both compounds were present above the cleanup standard of 100 mg/kg at that time.

Cecil Parish retained Seymour Environmental Services, Inc. (Seymour) to conduct an investigation in response to contamination that was discovered in groundwater from the onsite water supply well in 1992 and the soil in 1993 following the removal of underground storage tanks.

Investigation activities were initiated in 2012. Geoprobe borings were installed around the former tank area in June 2012. Soil samples from the borings identified high levels of petroleum-related contamination in the soils from approximately 7 to 23 feet below grade. In May 2013 three monitoring wells were installed to determine whether the release had adversely impacted the groundwater. Groundwater analytical data showed that gasoline related chemicals were present in the groundwater at the site. The results were submitted in a Site Investigation Report after two rounds of groundwater monitoring.

Seymour returned to the site in 2015 and installed 2 additional monitoring wells. The new wells, MW-4 and MW-5, were located south of monitoring well MW-2, which has exhibited MTBE above the enforcement standard (ES). Both of the new wells were constructed as water-table monitoring wells. Soil samples collected during the installation of the monitoring wells had no detectable analytes (Table 1). The estimated extent of the soil contamination is shown on Figure 2.

Groundwater monitoring was then conducted on May 22 and August 24, 2015. Water level data from the 2015 monitoring generally was consistent with historic information. The water-table was present at a depth of approximately 30 feet below grade. Water level data indicates that groundwater flow was toward the south-southeast. Water level and well construction data are summarized in Table 2.

Two analytes were present in the groundwater at levels exceeding the NR140 groundwater quality standards, benzene and MTBE. The highest contaminant levels were noted at MW-2, which is located near the machine shed. At MW-2 benzene and MTBE were both present above their ES. Groundwater at MW-5, which is located fairly close to MW-2, also contained contaminants at significant levels. At MW-5 benzene was present above the PAL (May 2015) and MTBE and benzene (August 2015) were present above their ESs. Low levels of MTBE, below any standards, were noted in the groundwater at MW-4, which is located downgradient of MW-2. Groundwater analytical data are summarized on Table 3.

### **Water Supply Sampling**

During the early portion of the site assessment groundwater samples were collected from the water-supply well on three occasions; September 2011, July 2012, and May 22, 2015. The initial sample was analyzed for PVOCs plus naphthalene and subsequent samples were analyzed for VOCs. One petroleum-related contaminant, MTBE, was identified in the water samples from the well. The MTBE level ranged from 5-17 ug/l. The only other compound identified was chloromethane which was detected below the limit of quantitation in the July 2012 sample. Historic sampling conducted by the WDNR in the early 1990s had identified benzene in the water supply at a concentration of approximately 1.5 ug/l. Data from the water-supply well is summarized in Table 4.

### **RECENT GROUNDWATER MONITORING ACTIVITIES**

Groundwater monitoring was conducted at the site four times between June 2016 and June 2107. Monitoring activities included groundwater level measurements at each of the five monitoring wells and sample collection from three of the wells (MW-2, MW4, and MW-5). Groundwater samples were analyzed for PVOCs+naphthalene. Data collected during the recent monitoring is included in Table 2 (water level) and Table 3 (analytical). Results from each of the monitoring events are discussed in the following section.

#### June 2016

The water-table at the site was present at an elevation of ~706.5 ft msl (~33 feet below grade). This is approximately 1 foot higher than in 2015 but within the historic range. Groundwater level from June 2016 indicates that groundwater flow in the former tank area is toward the south-southeast. Flow appears to be more northerly or easterly in the south part of the monitoring network but only one well (MW-4) is located in that area. Sample analysis showed that petroleum-related compounds were present above the NR140 ES in groundwater at MW-2 and MW-5; no analytes were detected in MW-4. The highest contaminant levels were present at MW-2; benzene (134 ug/l), and MTBE (5360 ug/l) exceeded the ES and toluene (347 ug/l) exceeded the NR140 PAL. Benzene and MTBE also were present in groundwater at MW-5 above the NR140 ES. Groundwater from MW-5 contained benzene at 12.6 ug/l and MTBE at 2560 ug/l. The concentrations detected in MW-2 and MW-5 during June 2016 were higher than any levels measured previously. Groundwater monitoring data from June 2016 is shown on Figure 3.

#### October 2016

In October 2016 the water table was present at an elevation of ~710 ft msl; this is approximately 3.5 feet higher than in June 2016 and also higher than any levels measured historically. Groundwater level contouring indicates that flow in the former tank area is toward the south-southeast but water levels rise further to the south (MW-4) so it appears that groundwater flows toward the water-supply well. This was not because of pumping of the well since it had not been used since 2015; it may indicate downward drainage through the well seal. Petroleum related contaminants were present above NR140 ESs in groundwater at MW-2 and MW-5 and no analytes were detected at MW-4. The contaminant levels declined from June 2016 values in groundwater at both MW-2 and MW-5. The concentration of benzene and MTBE levels in MW-2 dropped to the lowest in the sampling history. Contaminant levels in MW-5 showed a modest decline and were more consistent with previous results. The data from this groundwater sampling event is shown on Figure 4.

#### February 2017

The water table at the site continued to rise and was present at an elevation of ~711.2 feet msl (approximately 1 foot higher than in October 2016). Groundwater level contouring indicates that the groundwater flow across the monitoring network was the south-southeast (Figure 5). Groundwater samples from February 2017 show that contamination exceeding NR140 ESs remained at MW-2 and MW-5; no compounds were detected in groundwater at MW-4. The contaminant levels at MW-2 showed a marked increase from the previous sampling event. Benzene, MTBE, and toluene were present above the NR140 ES. The benzene concentration in MW-2 (651 ug/l) was the highest measured. The MTBE concentration in MW-2 rose from 420 ug/l in the previous sampling to 3,930 ug/l. The toluene level at MW-2 showed a similar large increase. In addition groundwater at MW-2 contained ethylbenzene, trimethylbenzenes, and xylenes above the PAL. This was the first sampling event where these compounds exceeded NR140 groundwater quality standards. In contrast to MW-2, contaminant levels in groundwater at MW-5 showed a substantial decrease from earlier values. At MW-5 benzene declined to 3.3 ug/l from an average of 11.5 ug/l in 2016. MTBE in groundwater at MW-2 showed a similar change from an average of 2,100 ug/l to 259 ug/l.

June 2017

The water table rose by about 2.5 feet and was present at the highest level measured during monitoring, ~714 ft msl. Because of the rise in the water table this was the first event where the screens at all of the monitoring wells were submerged. Contouring of the water level data indicates that groundwater flow is toward the southeast across the monitoring network. Petroleum-related contaminants were present in groundwater at MW-2 and MW-5 but not at MW-4. Contaminants present above NR140 ESs in the groundwater at MW-2 include benzene, MTBE, and toluene. Additionally, trimethylbenzenes and xylene were present above the PAL. The measured concentration of these compounds was similar to data from February 2017. Groundwater quality at MW-5 showed continued improvement. Benzene was not detected at MW-5 and the MTBE level declined below the ES to 20.3 ug/l. Groundwater data from this event is shown on Figure 6.

**DISCUSSION**

The exact location of the former USTs is not known. Cecil Parish was able to give us an idea of their general location, but does not remember the exact location. We believe that the tanks must have been close to B-5 since we detected relatively shallow (7') soil contamination in that area.

The majority of the contaminant mass identified in the soil at the site was located in a 900 square foot area around B-5. Soils in this area contained all of the PVOC compounds above groundwater pathway RCLs. This soil contamination extends from ~7 to 25 feet below grade. The identified contaminated soil volume in this area is ~500 cubic yard (700 tons). Additionally, soil containing MTBE above the groundwater pathway RCL was identified in deeper soils extending to the west of the area with high soil contaminant levels. The MTBE contaminated soil was identified as deep as 35 feet. The areal extent of the soil contamination is shown on Figure 2 and the vertical distribution is depicted in a cross section on Figure 7.

Increasing trends in the contaminant levels in groundwater at MW-2 indicate that the identified soil contamination continues to degrade groundwater quality at the site. This is a particular concern because of the nearby private water-supply well. The well currently is not in use and data from the most recent sampling, May 2015, shows the water does not contain any compounds above groundwater standards. However, the concentrations in the groundwater have increased since that time and we have not been able to sample the water supply well. The house has not been occupied but is currently being remodeled for occupancy.

It appears that some soil remedial activities may be required at the site to mitigate on-going impacts to the groundwater. Once you have had a chance to review this data I would like to discuss our options for bringing this site to closure. Please call me at 608-838-9120 if you have any questions or would like additional information.

Sincerely,  
**Seymour Environmental Services, Inc.**

*Robyn Seymour*

Robyn Seymour, P.G.  
Hydrogeologist

Attachments:

TABLES -     1 - Summary of Soil Analytical Data  
              2 - Summary of Well Construction and Water Level Data  
              3 - Summary of Groundwater Monitoring Data  
              4 - Summary of Water-Supply Analytical Data

FIGURES -    1 - Site Location  
              2 - Extent of Soil Contamination  
              3 - Groundwater Monitoring Data (June 2016)  
              4 - Groundwater Monitoring Data (October 2016)  
              5 - Groundwater Monitoring Data (February 2017)  
              6 - Groundwater Monitoring Data (June 2017)  
              7 - Cross-Section Showing Soil Contamination

LABORATORY REPORTS

TABLE 1  
SOIL SAMPLE RESULTS  
Cecil Parish Farm  
2366 Pleasant Hill Road - Muscoda, WI

Activity Date	SAMPLE	Depth (ft)	DRO	GRO	Benzene	Ethylbenzene	Methyl-tert-butyl ether	Toluene	1,3,5 Trimethylbenzene	1,2,4 Trimethylbenzene	Total Trimethylbenzenes	Total Xylenes	Naphthalene
Tank Sampling 10/11/93	Par-F	6	3820	23,400	na	na	na	na	na	na	na	na	na
Initial Assessment 07/26/12	B-1	12-16	na	na	<b>112</b>	52.5	<25.0	592	252	483	735	932	42.2
	B-2	13	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	B-4	18	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	B-5	7	na	na	<1250	<b>19400</b>	<1250	<b>79300</b>	160000	427000	<b>587000</b>	<b>806000</b>	<b>40300</b>
	B-5	21	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	B-6	17	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	B-7	19	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	B-8	10	na	na	<b>898</b>	<b>3460</b>	<500	<b>16400</b>	24200	43300	<b>67500</b>	<b>77000</b>	<b>29000</b>
	B-8	23	na	na	<b>5250</b>	826	<b>127</b>	<b>11200</b>	317	949	1266	<b>4030</b>	339
Well Installation 05/28/13	MW-1	38	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	MW-2	35	na	na	<27.5	<27.5	<b>1140</b>	<27.5	<27.5	<27.5	<55.0	<82.4	<27.5
	MW-3	38	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
Supplemental Wells 05/04/15	MW-4	28-30	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	MW-5	18-20	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
	MW-5	28-30	na	na	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	<75.0	<25.0
Groundwater Pathway RCL			ns	ns	5.5	2900	ns	1500	ns	ns	ns	4100	400
Non-Industrial Direct Contact RCL			ns	ns	1600	8020	63,800	818,000	182,000	219,000	ns	260,000	5520

- GRO and DRO results listed in mg/kg  
- PVOC values are in ug/kg  
- na = not analyzed

- Groundwater Pathway RCL is default value from R&R calculator (exceedances bold)  
- Non-industrial Direct Contact Hazard Level RCL from R&R Calculator  
- ns = no standard established

TABLE 2  
WELL DETAILS AND WATER LEVEL INFORMATION  
Cecil Parish Farm  
2366 Pleasant Hill Road - Muscoda, WI

WELL CONSTRUCTION DETAILS	
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WELL	Date Installed	TOC Elevation	Total Depth	Screen Length	Top of Screen Elevation	Base of Screen Elevation
MW-1	05/28/13	746.57	48.05	15	713.52	698.52
MW-2	05/28/13	742.02	45.80	15	711.22	696.22
MW-3	05/28/13	744.42	47.40	15	712.02	697.02
MW-4	05/04/15	743.35	49.70	15	708.65	693.65
MW-5	05/04/15	741.51	42.81	15	713.70	698.70

WATER LEVEL DATA									
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WELL	06/03/13		09/09/13		07/07/14		05/22/15		08/24/15	
	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
MW-1	40.88	705.69	38.81	707.76	38.81	707.76	40.90	705.67	40.82	705.75
MW-2	36.15	705.87	34.24	707.78	34.14	707.88	36.19	705.83	36.16	705.86
MW-3	38.38	706.04	36.43	707.99	36.46	707.96	38.53	705.89	38.50	705.92
MW-4	ni	ni	ni	ni	ni	ni	37.33	706.02	37.55	705.80
MW-5	ni	ni	ni	ni	ni	ni	35.79	705.72	35.79	705.72
WELL	6/4/2016		10/01/16		02/04/17		06/03/17			
	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation		
MW-1	39.93	706.64	36.62	709.95	35.34	711.23	32.80	713.77		
MW-2	35.32	706.70	31.79	710.23	30.65	711.37	27.91	714.11		
MW-3	37.59	706.83	34.08	710.34	32.97	711.45	30.40	714.02		
MW-4	36.68	706.67	33.18	710.17	32.15	711.20	29.78	713.57		
MW-5	34.93	706.58	31.57	709.94	30.24	711.27	27.68	713.83		

<ul style="list-style-type: none"> <li>- All data is listed in feet</li> <li>- Elevations surveyed to MSL ???</li> </ul>
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TABLE 3  
GROUNDWATER MONITORING WELL CHEMISTRY  
Cecil Parish Farm  
2366 Pleasant Hill Road - Muscoda, WI

Sample I.D.	Date	Benzene	1,2 Dichloroethane	Ethylbenzene	Methyl-tert-butyl ether	Toluene	Total Trimethylbenzenes	Total Xylenes	Naphthalene	Chloromethane
MW-1	06/03/13	<0.50	<0.48	<0.50	<0.49	<0.44	<3.07	<1.32	<2.5	<0.39
	09/09/13	<0.50	<0.48	<0.50	<0.49	<0.44	<1.00	<1.32	<2.5	<0.39
	07/07/14	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	05/22/15	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	08/24/15	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	06/04/16	na	na	na	na	na	na	na	na	na
	10/01/16	na	na	na	na	na	na	na	na	na
	02/04/17	na	na	na	na	na	na	na	na	na
	06/03/17	na	na	na	na	na	na	na	na	na
MW-2	06/03/13	<0.50	<0.48	<0.50	<b>37.2</b>	<0.44	<3.07	<1.32	<2.5	<0.39
	09/09/13	<5.0	<4.8	<5.0	<b>543</b>	<4.4	<10.0	<13.2	<25.0	<3.9
	07/07/14	<19.8	na	<19.6	<b>1750</b>	20.1	<41.7	<62.4	<21.2	na
	05/22/15	<b>12.0 J</b>	na	52.7	<b>3430</b>	18.0	10.8 J	26.8 J	<10.6	na
	08/24/15	<b>35.1</b>	na	37.7	<b>4570</b>	75.5	10.7 J	27.1 J	<8.5	na
	06/04/16	<b>134</b>	na	80.0	<b>5360</b>	<u>347.0</u>	21.4 J	27.1	<21.2	na
	10/01/16	<b>9.6</b>	na	4.3	<b>420</b>	14.8	2.2	12.1	<0.85	na
	02/04/17	<b>651</b>	na	<u>148</u>	<b>3930</b>	<b>1090</b>	<u>128.3</u>	<u>642</u>	<u>19.6 J</u>	na
	06/03/17	<b>615</b>	na	134	<b>3850</b>	<b>922</b>	<u>102.9</u>	<u>501</u>	<17.0	na
MW-3	06/03/13	<0.50	<0.48	<0.50	<0.49	2.3	<3.07	<1.32	<2.5	<0.39
	09/09/13	<0.50	<0.48	<0.50	<0.49	<0.44	<1.00	<1.32	<2.5	<0.39
	07/07/14	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	05/22/15	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	08/24/15	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	06/04/16	na	na	na	na	na	na	na	na	na
	10/01/16	na	na	na	na	na	na	na	na	na
	02/04/17	na	na	na	na	na	na	na	na	na
	06/03/17	na	na	na	na	na	na	na	na	na
MW-4	05/22/15	<0.50	<0.17	<0.50	5.7	<0.50	<1.00	<1.5	<2.5	<0.50
	08/24/15	<0.40	na	<0.39	1.1	<0.39	<0.84	<1.25	<0.42	na
	06/04/16	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	10/01/16	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	02/04/17	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
	06/03/17	<0.40	na	<0.39	<0.48	<0.39	<0.84	<1.25	<0.42	na
MW-5	05/22/15	<u>2.2 J</u>	<u>1.4 J</u>	<2.0	<b>618</b>	<2.0	<4.0	<6.0	<10.0	<2.0
	08/24/15	<b>10.2</b>	na	<3.9	<b>1190</b>	<3.9	<8.4	<12.5	<4.2	na
	06/04/16	<b>12.6</b>	na	18.4	<b>2560</b>	<3.9	<8.4	10.1 J	<4.2	na
	10/01/16	<b>10.4</b>	na	5.0 J	<b>1640</b>	<1.9	<4.2	<6.2	<2.1	na
	02/04/17	<u>3.3</u>	na	1.7	<b>259</b>	9.9	<0.84	1.99	<0.42	na
	06/03/17	<0.40	na	<0.39	<u>20.3</u>	<0.39	<0.84	<1.25	<0.42	na
NR140	ES	5	5	700	60	800	480	2000	100	30
	PAL	0.5	0.5	140	12	160	96	400	10	3

- All results are listed in ug/l

- na = not analyzed

J-Detected between limit of detection and quantitation

- NR140 PAL =Preventative Action Limit (exceedances underlined)

- NR140 ES = Enforcement Standard (exceedances bold)



TABLE 4  
GROUNDWATER ANALYTICAL DATA FROM WATER-SUPPLY WELL  
Cecil Parish Farm  
2366 Pleasant Hill Road - Muscoda, WI

Date:	11/19/1992	12/10/1992	7/22/1993	9/22/2011	7/27/12	5/22/15	NR140 ES	NR140 PAL
DRO	na	na	na	na	na	na	ns	ns
GRO	na	na	na	na	na	na	ns	ns
PVOCs								
Benzene	<u>1.8</u>	<u>1.4</u>	<u>1.6</u>	<0.39	<0.41	<0.50	5	0.5
1,2 Dichloroethane	<1.0	na	<1.0	na	<0.36	<0.17	5	0.5
Ethylbenzene	<1.0	<1.0	<1.0	<0.41	<0.54	<0.50	700	140
Methyl-tert-butyl ether	na	na	na	<u>17</u>	6.7	5.0	60	12
Toluene	<1.0	<1.0	<1.0	<0.42	<0.67	<0.50	800	160
1,3,5 Trimethylbenzene	na	na	na	<0.40	<0.83	<0.50	ns	ns
1,2,4 Trimethylbenzene	na	na	na	<0.43	<0.97	<0.50	ns	ns
Total Trimethylbenzenes	na	na	na	<0.83	<1.80	<1.00	480	96
Xylenes, -m, -p	--	--	--	<0.87	<1.8	<1.0	ns	ns
Xylene, -o	--	--	--	<0.38	<0.83	<0.50	ns	ns
Total Xylenes	<2.0	<2.0	<2.0	<1.25	<2.63	<1.5	2000	400
Naphthalene	na	na	na	<0.40	<0.89	<2.5	100	10
Chloromethane	na	na	na	na	0.32	<0.50	30	3

- All results are listed in ug/l  
- na = not analyzed  
- Samples from 1992 and 1993 collected by WDNR  
- Sample from Sept. 2011 analyzed for only PVOCs

- NR140 PAL =Preventative Action Limit (exceedances underlined)  
- NR140 ES = Enforcement Standard (exceedances bold)



0' 2000' 4000'

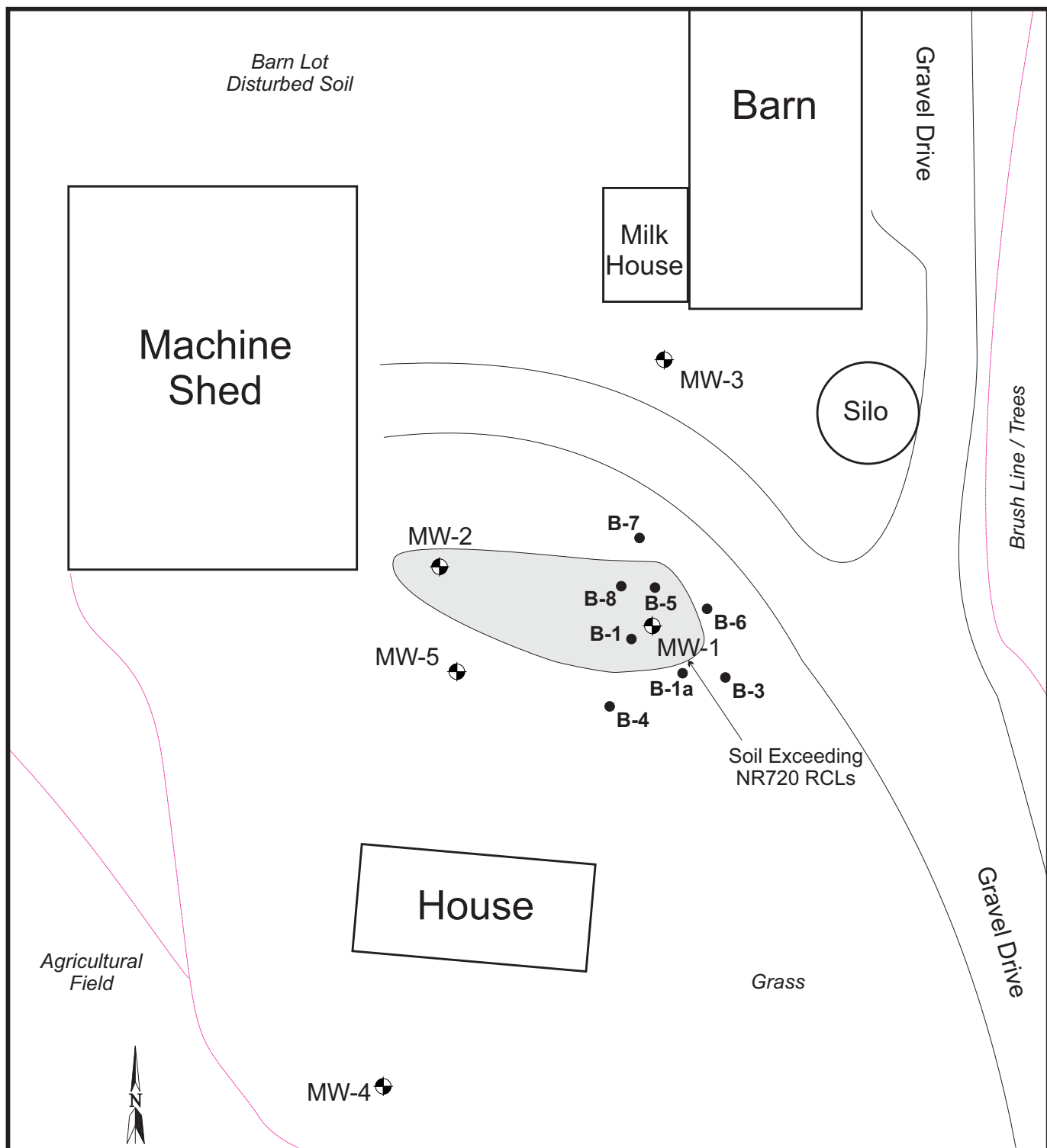
1 INCH = 2000 FEET  
SCALE IS APPROXIMATE

FILE/PATH: C:\PROJECTS\PARISH\Fig1-Location.cdr  
DATE: 08/08/2012  
PREPARED: MDF APPROVED:  
SOURCE:  
USGS Muscoda, WI 7.5' Quadrangle, 1983

SEYMOUR  
ENVIRONMENTAL  
SERVICES, INC.

SITE LOCATION MAP  
Cecil Parsh Farm  
2366 Pleasant Hill Road  
Muscoda, Wisconsin

FIGURE  
1



### LEGEND

- B-5  
 • - Geoprobe (July 2012)  
 MW-2  
 ⊕ - Monitoring Well

0' 30' 60'  
 1 INCH = 30 FEET  
 SCALE IS APPROXIMATE

FILE/PATH: C:\PROJECTS\IPARISH\Fig2-Layout.cdr

DATE: 08/08/2012

PREPARED: MDF APPROVED:

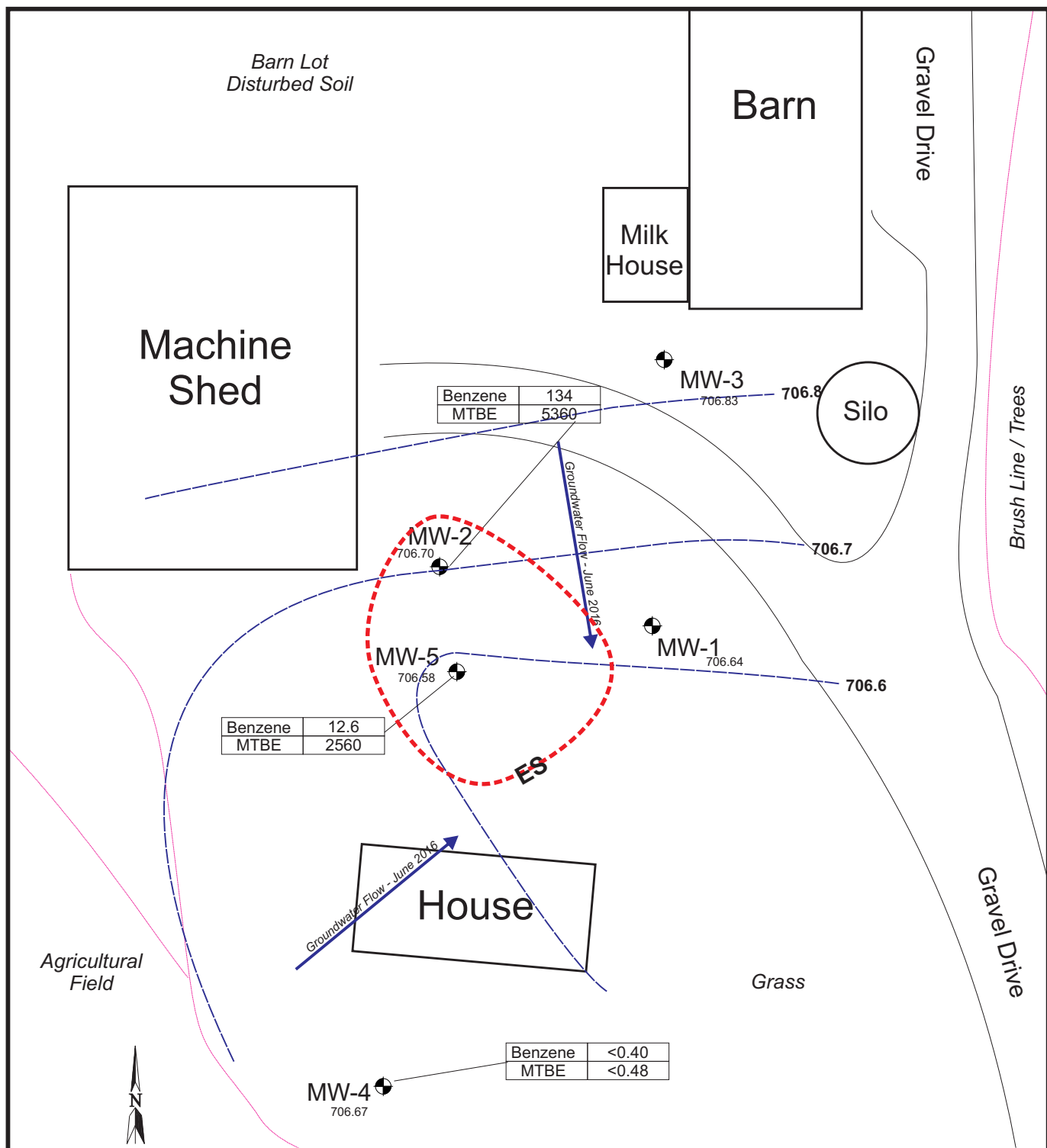
SOURCE:  
 FIELD MEASUREMENTS

SEYMOUR  
 ENVIRONMENTAL  
 SERVICES, INC.

SITE LAYOUT / SOIL CONTAMINATION EXTENT  
 Cecil Parish Farm  
 2366 Pleasant Hill Road  
 Muscoda, Wisconsin

FIGURE

2



### LEGEND

- B-5**
- - Geoprobe (July 2012)
  - MW-2
  - ⊕ - Monitoring Well

0' 30' 60'

1 INCH = 30 FEET  
SCALE IS APPROXIMATE

FILE/PATH: C:\PROJECTS\IPARISH\Fig2-Layout.cdr

DATE: 08/08/2012

PREPARED: MDF APPROVED:

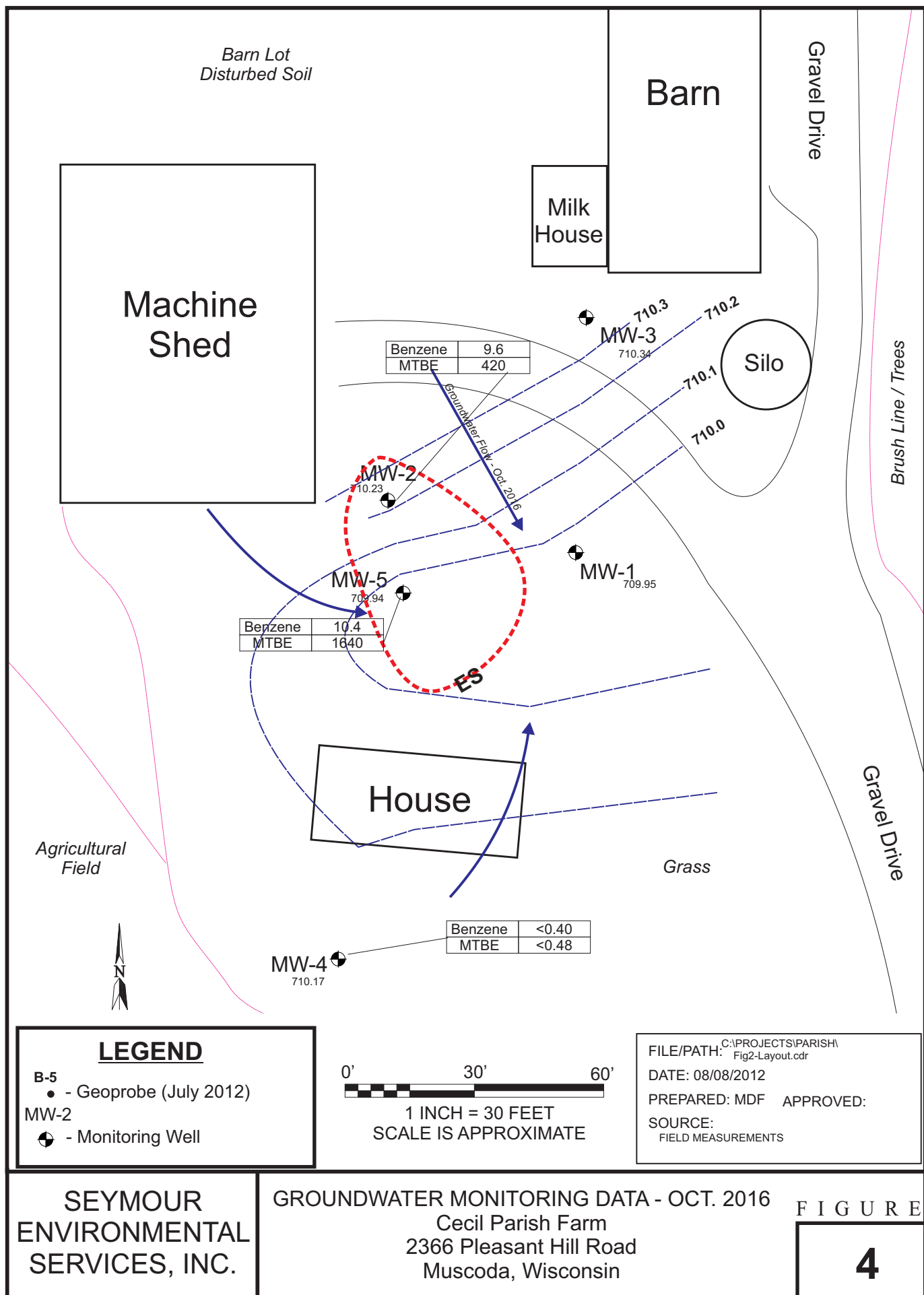
SOURCE:  
FIELD MEASUREMENTS

**SEYMOUR  
ENVIRONMENTAL  
SERVICES, INC.**

**GROUNDWATER MONITORING DATA - JUNE 2016**  
Cecil Parish Farm  
2366 Pleasant Hill Road  
Muscodia, Wisconsin

**FIGURE**

**3**

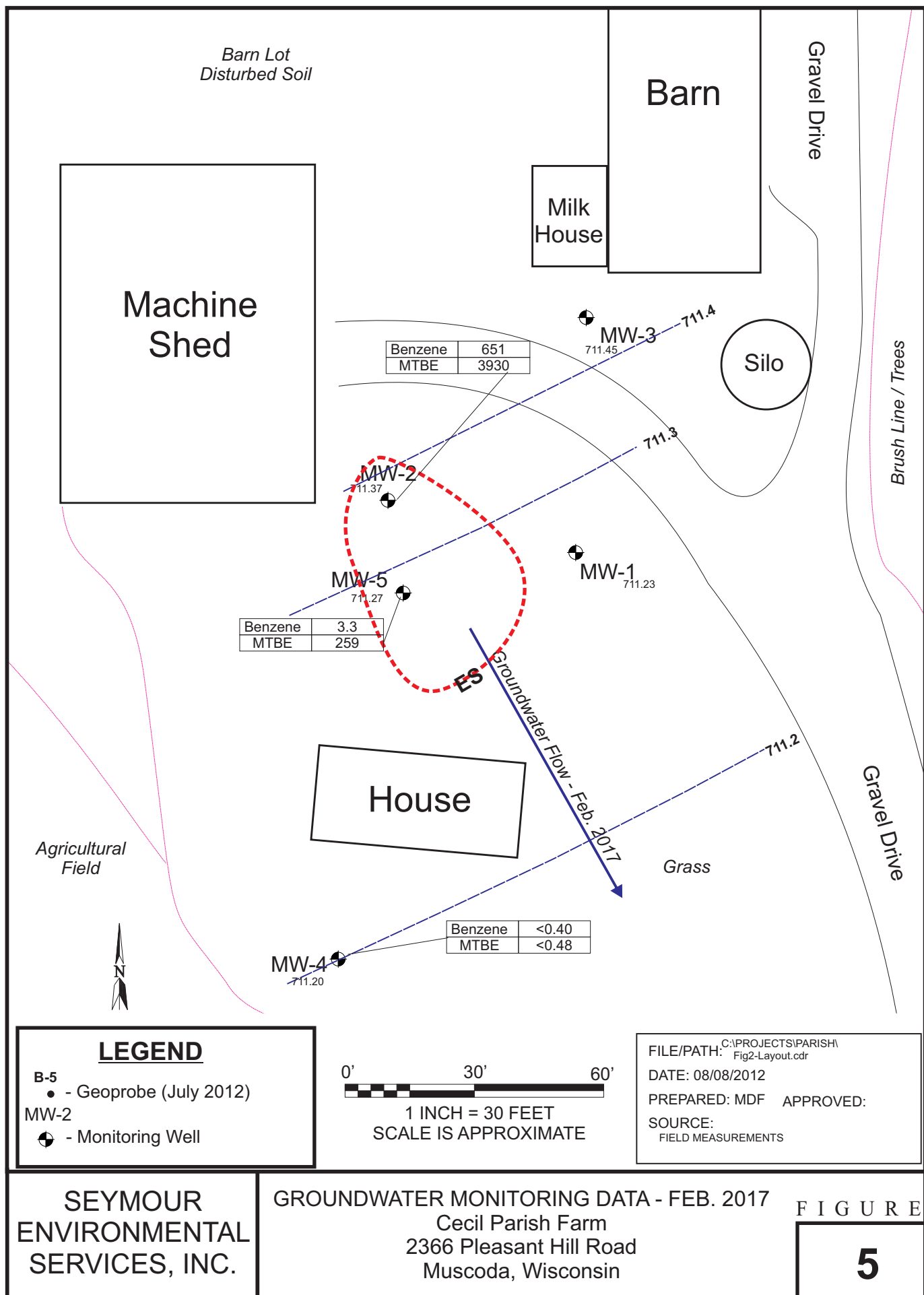


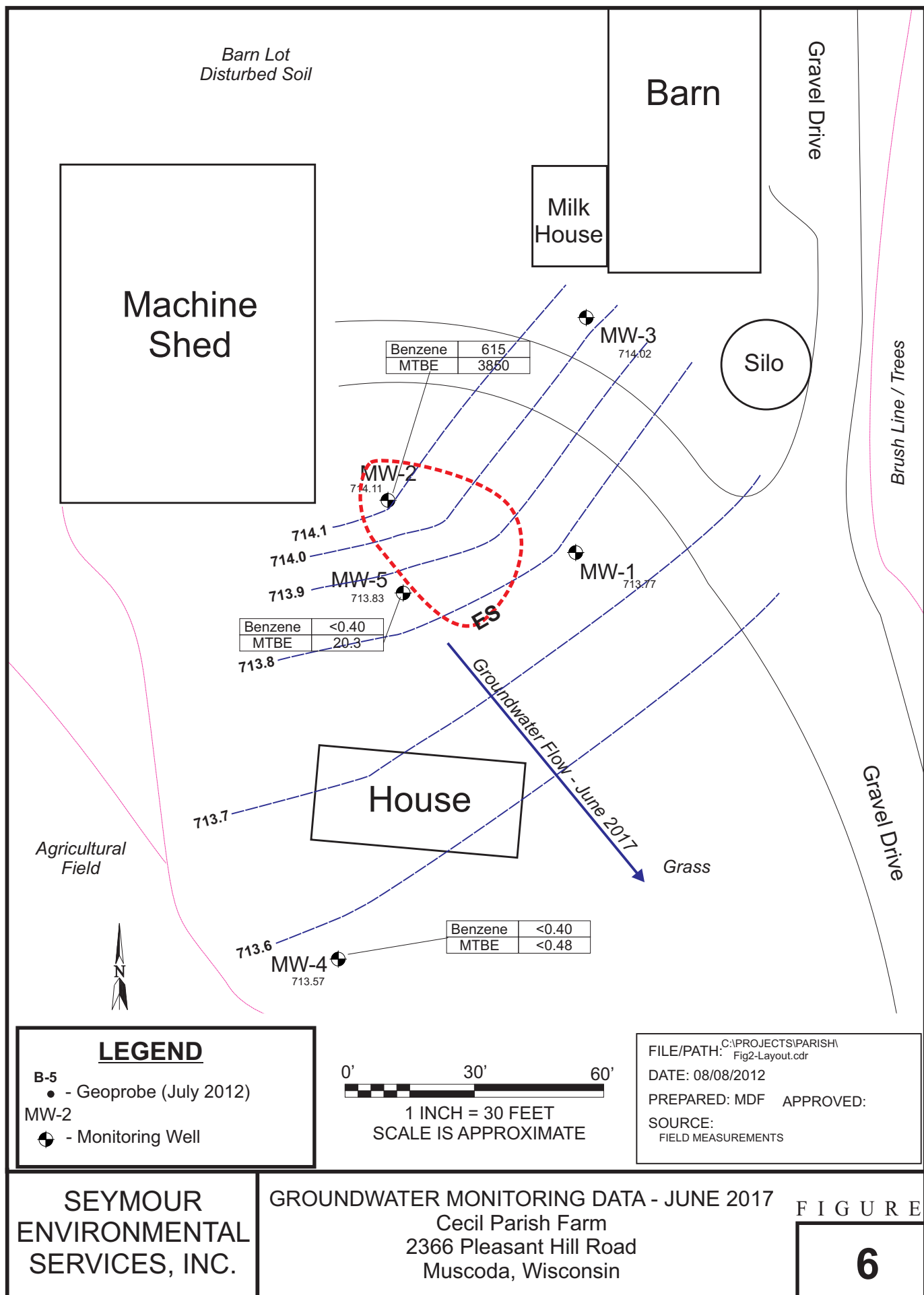
SEYMOUR  
ENVIRONMENTAL  
SERVICES, INC.

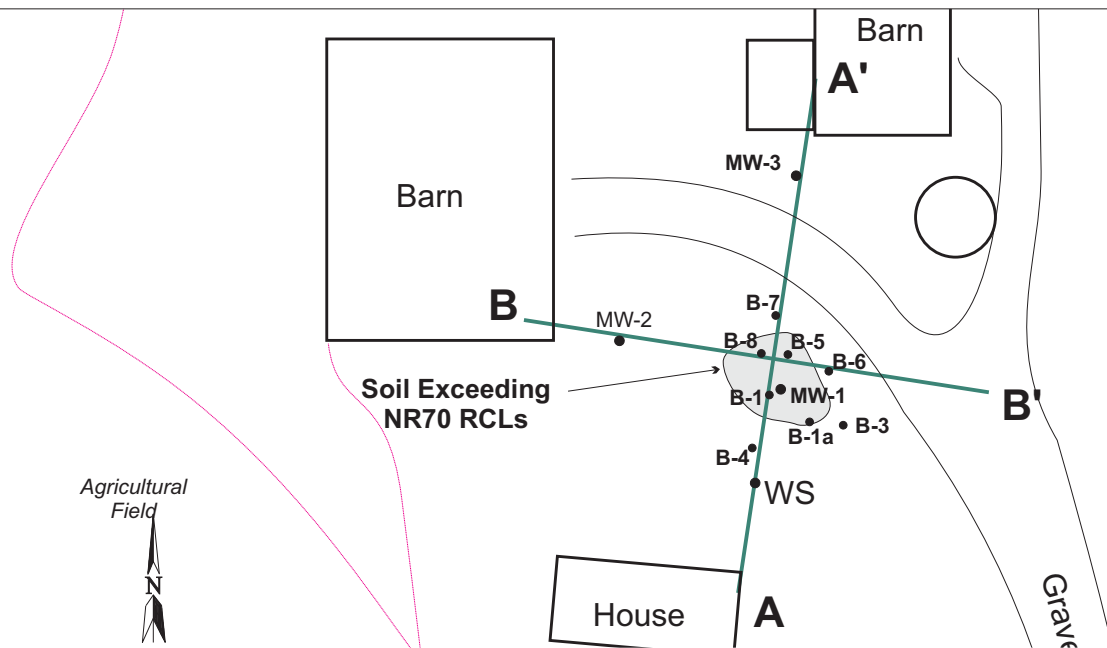
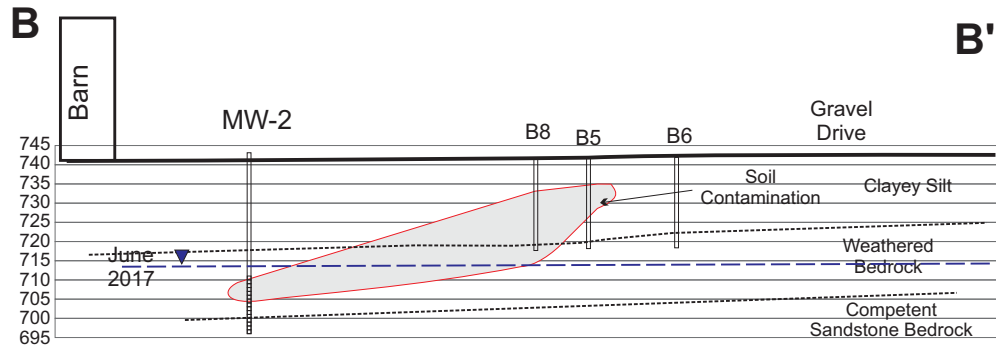
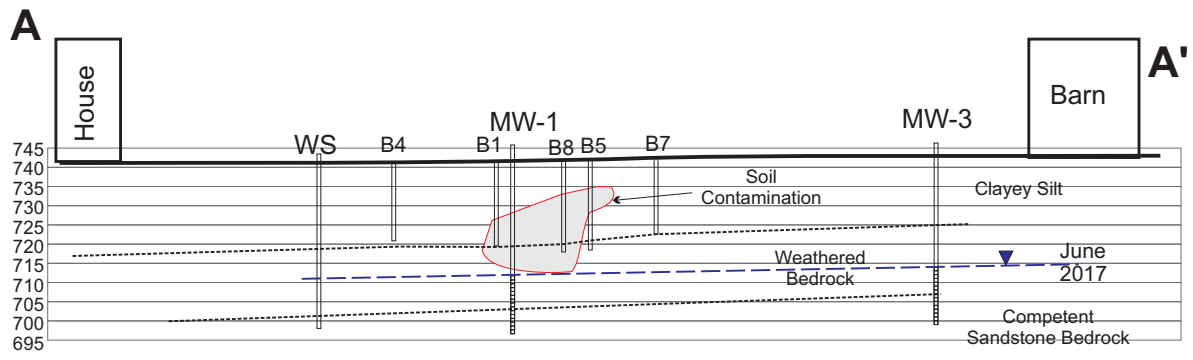
GROUNDWATER MONITORING DATA - OCT. 2016  
Cecil Parish Farm  
2366 Pleasant Hill Road  
Muscodia, Wisconsin

FIGURE  
4









### LEGEND

- B-5
- - Geoprobe (July 2012)

0' 50' 100'

1 INCH = 50 FEET  
SCALE IS APPROXIMATE

FILE/PATH: C:\PROJECTS\IPARRISH\  
Fig2-Layout.cdr

DATE: 08/08/2012

PREPARED: MDF APPROVED:

SOURCE:  
FIELD MEASUREMENTS

SEYMOUR  
ENVIRONMENTAL  
SERVICES, INC.

CROSS-SECTION / SOIL CONTAMINATION  
Cecil Parish Farm  
2366 Pleasant Hill Road  
Muscoda, Wisconsin

FIGURE

7



June 17, 2016

Robyn Seymour  
Seymour Environmental Services, INC.  
2531 Dyreson Road  
Mc Farland, WI 53558

RE: Project: 10585.00 PARISH FARM  
Pace Project No.: 40133554

Dear Robyn Seymour:

Enclosed are the analytical results for sample(s) received by the laboratory on June 09, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

Virginia VELAP ID: 460263

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

US Dept of Agriculture #: S-76505

Virginia VELAP Certification ID: 460263

Virginia VELAP ID: 460263

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40133554001	MW-2	Water	06/04/16 10:45	06/09/16 07:30
40133554002	MW-5	Water	06/04/16 10:30	06/09/16 07:30
40133554003	MW-4	Water	06/04/16 10:10	06/09/16 07:30

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40133554001	MW-2	WI MOD GRO	PMS	10	PASI-G
40133554002	MW-5	WI MOD GRO	PMS	10	PASI-G
40133554003	MW-4	WI MOD GRO	JSK	10	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40133554001</b>	<b>MW-2</b>					
WI MOD GRO	Benzene	134	ug/L	50.0	06/14/16 23:32	
WI MOD GRO	Ethylbenzene	80.0	ug/L	50.0	06/14/16 23:32	
WI MOD GRO	Methyl-tert-butyl ether	5360	ug/L	50.0	06/14/16 23:32	
WI MOD GRO	Toluene	347	ug/L	50.0	06/14/16 23:32	
WI MOD GRO	1,2,4-Trimethylbenzene	21.4J	ug/L	50.0	06/14/16 23:32	
WI MOD GRO	m&p-Xylene	84.7J	ug/L	100	06/14/16 23:32	
WI MOD GRO	o-Xylene	54.6	ug/L	50.0	06/14/16 23:32	
<b>40133554002</b>	<b>MW-5</b>					
WI MOD GRO	Benzene	12.6	ug/L	10.0	06/15/16 23:54	
WI MOD GRO	Ethylbenzene	18.4	ug/L	10.0	06/15/16 23:54	
WI MOD GRO	Methyl-tert-butyl ether	2560	ug/L	10.0	06/15/16 23:54	
WI MOD GRO	m&p-Xylene	10.1J	ug/L	20.0	06/15/16 23:54	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

Sample: MW-2 Lab ID: 40133554001 Collected: 06/04/16 10:45 Received: 06/09/16 07:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	134	ug/L	50.0	19.8	50		06/14/16 23:32	71-43-2	
Ethylbenzene	80.0	ug/L	50.0	19.6	50		06/14/16 23:32	100-41-4	
Methyl-tert-butyl ether	5360	ug/L	50.0	24.2	50		06/14/16 23:32	1634-04-4	
Naphthalene	<21.2	ug/L	50.0	21.2	50		06/14/16 23:32	91-20-3	
Toluene	347	ug/L	50.0	19.4	50		06/14/16 23:32	108-88-3	
1,2,4-Trimethylbenzene	21.4J	ug/L	50.0	20.9	50		06/14/16 23:32	95-63-6	
1,3,5-Trimethylbenzene	<20.8	ug/L	50.0	20.8	50		06/14/16 23:32	108-67-8	
m&p-Xylene	84.7J	ug/L	100	40.0	50		06/14/16 23:32	179601-23-1	
o-Xylene	54.6	ug/L	50.0	22.4	50		06/14/16 23:32	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	106	%	80-120		50		06/14/16 23:32	98-08-8	

Sample: MW-5 Lab ID: 40133554002 Collected: 06/04/16 10:30 Received: 06/09/16 07:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	12.6	ug/L	10.0	4.0	10		06/15/16 23:54	71-43-2	
Ethylbenzene	18.4	ug/L	10.0	3.9	10		06/15/16 23:54	100-41-4	
Methyl-tert-butyl ether	2560	ug/L	10.0	4.8	10		06/15/16 23:54	1634-04-4	
Naphthalene	<4.2	ug/L	10.0	4.2	10		06/15/16 23:54	91-20-3	
Toluene	<3.9	ug/L	10.0	3.9	10		06/15/16 23:54	108-88-3	
1,2,4-Trimethylbenzene	<4.2	ug/L	10.0	4.2	10		06/15/16 23:54	95-63-6	
1,3,5-Trimethylbenzene	<4.2	ug/L	10.0	4.2	10		06/15/16 23:54	108-67-8	
m&p-Xylene	10.1J	ug/L	20.0	8.0	10		06/15/16 23:54	179601-23-1	
o-Xylene	<4.5	ug/L	10.0	4.5	10		06/15/16 23:54	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	95	%	80-120		10		06/15/16 23:54	98-08-8	

Sample: MW-4 Lab ID: 40133554003 Collected: 06/04/16 10:10 Received: 06/09/16 07:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		06/13/16 15:01	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		06/13/16 15:01	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		06/13/16 15:01	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		06/13/16 15:01	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		06/13/16 15:01	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		06/13/16 15:01	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		06/13/16 15:01	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		06/13/16 15:01	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		06/13/16 15:01	95-47-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

<b>Sample: MW-4</b>		<b>Lab ID: 40133554003</b>		Collected: 06/04/16 10:10		Received: 06/09/16 07:30		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>		Analytical Method: WI MOD GRO							
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		06/13/16 15:01	98-08-8	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 10585.00 PARISH FARM  
Pace Project No.: 40133554

QC Batch: GCV/16139 Analysis Method: WI MOD GRO  
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water  
Associated Lab Samples: 40133554001, 40133554002, 40133554003

METHOD BLANK: 1349020 Matrix: Water  
Associated Lab Samples: 40133554001, 40133554002, 40133554003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	06/13/16 09:33	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	06/13/16 09:33	
Benzene	ug/L	<0.40	1.0	06/13/16 09:33	
Ethylbenzene	ug/L	<0.39	1.0	06/13/16 09:33	
m&p-Xylene	ug/L	<0.80	2.0	06/13/16 09:33	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	06/13/16 09:33	
Naphthalene	ug/L	<0.42	1.0	06/13/16 09:33	
o-Xylene	ug/L	<0.45	1.0	06/13/16 09:33	
Toluene	ug/L	<0.39	1.0	06/13/16 09:33	
a,a,a-Trifluorotoluene (S)	%	100	80-120	06/13/16 09:33	

LABORATORY CONTROL SAMPLE & LCSD: 1349021

LABORATORY CONTROL SAMPLE & LCSD: 1349021			1349022							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	23.1	22.9	115	114	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	23.0	22.9	115	114	80-120	1	20	
Benzene	ug/L	20	22.3	22.1	112	111	80-120	1	20	
Ethylbenzene	ug/L	20	22.9	22.6	114	113	80-120	1	20	
m&p-Xylene	ug/L	40	44.7	44.2	112	111	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	21.6	20.7	108	104	80-120	4	20	
Naphthalene	ug/L	20	21.1	20.3	105	102	80-120	4	20	
o-Xylene	ug/L	20	22.6	22.4	113	112	80-120	1	20	
Toluene	ug/L	20	22.2	22.0	111	110	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1349223

Parameter	Units	1349224									
		40133551005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD
1,2,4-Trimethylbenzene	ug/L	2190	400	400	2550	2280	89	21	48-177	11	20 M1
1,3,5-Trimethylbenzene	ug/L	549	400	400	881	666	83	29	73-145	28	20 M1,R1
Benzene	ug/L	334	400	400	651	461	79	32	74-139	34	20 M1,R1
Ethylbenzene	ug/L	2030	400	400	2370	2130	85	25	74-140	11	20 M1
m&p-Xylene	ug/L	7390	800	800	8160	7530	96	17	55-165	8	20 M1
Methyl-tert-butyl ether	ug/L	<9.7	400	400	301	121	75	30	80-120	85	20 M1,R1
Naphthalene	ug/L	690	400	400	990	788	75	25	73-133	23	20 M1,R1
o-Xylene	ug/L	3060	400	400	3430	3140	92	19	73-136	9	20 M1
Toluene	ug/L	185	400	400	504	309	80	31	80-128	48	20 M1,R1

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: 10585.00 PARISH FARM

Pace Project No.: 40133554

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
			1349223		1349224						
Parameter	Units	40133551005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						102	104	80-120		

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

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

---

### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 10585.00 PARISH FARM

Pace Project No.: 40133554

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40133554001	MW-2	WI MOD GRO	GCV/16139		
40133554002	MW-5	WI MOD GRO	GCV/16139		
40133554003	MW-4	WI MOD GRO	GCV/16139		

## REPORT OF LABORATORY ANALYSIS

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ORIGINAL

October 11, 2016

Robyn Seymour  
Seymour Environmental Services, INC.  
2531 Dyreson Road  
Mc Farland, WI 53558

RE: Project: 10585.00 PARISH FARM  
Pace Project No.: 40139598

Dear Robyn Seymour:

Enclosed are the analytical results for sample(s) received by the laboratory on October 06, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

Virginia VELAP ID: 460263

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

US Dept of Agriculture #: S-76505

Virginia VELAP Certification ID: 460263

Virginia VELAP ID: 460263

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40139598001	MW-2	Water	10/01/16 10:40	10/06/16 07:30
40139598002	MW-5	Water	10/01/16 10:50	10/06/16 07:30
40139598003	MW-4	Water	10/01/16 11:10	10/06/16 07:30

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40139598001	MW-2	WI MOD GRO	ALD	10	PASI-G
40139598002	MW-5	WI MOD GRO	ALD	10	PASI-G
40139598003	MW-4	WI MOD GRO	ALD	10	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40139598001</b>	<b>MW-2</b>					
WI MOD GRO	Benzene	9.6	ug/L	2.0	10/10/16 10:26	
WI MOD GRO	Ethylbenzene	4.3	ug/L	2.0	10/10/16 10:26	
WI MOD GRO	Methyl-tert-butyl ether	420	ug/L	2.0	10/10/16 10:26	
WI MOD GRO	Toluene	14.8	ug/L	2.0	10/10/16 10:26	
WI MOD GRO	1,2,4-Trimethylbenzene	2.2	ug/L	2.0	10/10/16 10:26	
WI MOD GRO	m&p-Xylene	7.5	ug/L	4.0	10/10/16 10:26	
WI MOD GRO	o-Xylene	4.6	ug/L	2.0	10/10/16 10:26	
<b>40139598002</b>	<b>MW-5</b>					
WI MOD GRO	Benzene	10.4	ug/L	5.0	10/10/16 10:51	
WI MOD GRO	Ethylbenzene	5.0J	ug/L	5.0	10/10/16 10:51	
WI MOD GRO	Methyl-tert-butyl ether	1640	ug/L	5.0	10/10/16 10:51	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

Sample: MW-2 Lab ID: 40139598001 Collected: 10/01/16 10:40 Received: 10/06/16 07:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	9.6	ug/L	2.0	0.79	2		10/10/16 10:26	71-43-2	
Ethylbenzene	4.3	ug/L	2.0	0.79	2		10/10/16 10:26	100-41-4	
Methyl-tert-butyl ether	420	ug/L	2.0	0.97	2		10/10/16 10:26	1634-04-4	
Naphthalene	<0.85	ug/L	2.0	0.85	2		10/10/16 10:26	91-20-3	
Toluene	14.8	ug/L	2.0	0.78	2		10/10/16 10:26	108-88-3	
1,2,4-Trimethylbenzene	2.2	ug/L	2.0	0.84	2		10/10/16 10:26	95-63-6	
1,3,5-Trimethylbenzene	<0.83	ug/L	2.0	0.83	2		10/10/16 10:26	108-67-8	
m&p-Xylene	7.5	ug/L	4.0	1.6	2		10/10/16 10:26	179601-23-1	
o-Xylene	4.6	ug/L	2.0	0.90	2		10/10/16 10:26	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	96	%	80-120		2		10/10/16 10:26	98-08-8	

Sample: MW-5 Lab ID: 40139598002 Collected: 10/01/16 10:50 Received: 10/06/16 07:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	10.4	ug/L	5.0	2.0	5		10/10/16 10:51	71-43-2	
Ethylbenzene	5.0J	ug/L	5.0	2.0	5		10/10/16 10:51	100-41-4	
Methyl-tert-butyl ether	1640	ug/L	5.0	2.4	5		10/10/16 10:51	1634-04-4	
Naphthalene	<2.1	ug/L	5.0	2.1	5		10/10/16 10:51	91-20-3	
Toluene	<1.9	ug/L	5.0	1.9	5		10/10/16 10:51	108-88-3	
1,2,4-Trimethylbenzene	<2.1	ug/L	5.0	2.1	5		10/10/16 10:51	95-63-6	
1,3,5-Trimethylbenzene	<2.1	ug/L	5.0	2.1	5		10/10/16 10:51	108-67-8	
m&p-Xylene	<4.0	ug/L	10.0	4.0	5		10/10/16 10:51	179601-23-1	
o-Xylene	<2.2	ug/L	5.0	2.2	5		10/10/16 10:51	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	100	%	80-120		5		10/10/16 10:51	98-08-8	

Sample: MW-4 Lab ID: 40139598003 Collected: 10/01/16 11:10 Received: 10/06/16 07:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		10/07/16 10:02	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		10/07/16 10:02	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		10/07/16 10:02	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		10/07/16 10:02	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		10/07/16 10:02	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/07/16 10:02	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		10/07/16 10:02	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		10/07/16 10:02	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		10/07/16 10:02	95-47-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

<b>Sample: MW-4</b>		<b>Lab ID: 40139598003</b>		Collected: 10/01/16 11:10		Received: 10/06/16 07:30		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>		Analytical Method: WI MOD GRO							
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		10/07/16 10:02	98-08-8	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 10585.00 PARISH FARM  
Pace Project No.: 40139598

QC Batch: 237417 Analysis Method: WI MOD GRO  
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water  
Associated Lab Samples: 40139598001, 40139598002, 40139598003

METHOD BLANK: 1407035 Matrix: Water  
Associated Lab Samples: 40139598001, 40139598002, 40139598003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	10/07/16 08:19	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	10/07/16 08:19	
Benzene	ug/L	<0.40	1.0	10/07/16 08:19	
Ethylbenzene	ug/L	<0.39	1.0	10/07/16 08:19	
m&p-Xylene	ug/L	<0.80	2.0	10/07/16 08:19	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	10/07/16 08:19	
Naphthalene	ug/L	<0.42	1.0	10/07/16 08:19	
o-Xylene	ug/L	<0.45	1.0	10/07/16 08:19	
Toluene	ug/L	<0.39	1.0	10/07/16 08:19	
a,a,a-Trifluorotoluene (S)	%	101	80-120	10/07/16 08:19	

LABORATORY CONTROL SAMPLE & LCSD: 1407036

LABORATORY CONTROL SAMPLE & LCSD: 1407036			1407037							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	20.0	100	100	80-120	0	20	
1,3,5-Trimethylbenzene	ug/L	20	19.8	19.5	99	98	80-120	1	20	
Benzene	ug/L	20	21.2	21.0	106	105	80-120	1	20	
Ethylbenzene	ug/L	20	20.4	20.3	102	101	80-120	1	20	
m&p-Xylene	ug/L	40	40.7	40.3	102	101	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	20.5	20.1	103	100	80-120	2	20	
Naphthalene	ug/L	20	19.3	19.2	96	96	80-120	1	20	
o-Xylene	ug/L	20	20.4	20.2	102	101	80-120	1	20	
Toluene	ug/L	20	20.8	20.3	104	102	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				100	100	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1407445

Parameter	Units	1407446									
		40139601002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD
1,2,4-Trimethylbenzene	ug/L	656	200	200	790	838	67	91	48-177	6	20
1,3,5-Trimethylbenzene	ug/L	193	200	200	344	370	75	88	73-145	7	20
Benzene	ug/L	<4.0	200	200	160	173	80	86	74-139	8	20
Ethylbenzene	ug/L	561	200	200	685	718	62	78	74-140	5	20 M1
m&p-Xylene	ug/L	836	400	400	1100	1160	67	82	55-165	5	20
Methyl-tert-butyl ether	ug/L	<4.8	200	200	149	159	75	79	80-120	6	20 M1
Naphthalene	ug/L	194	200	200	324	342	65	74	73-133	5	20 M1
o-Xylene	ug/L	478	200	200	605	637	64	79	73-136	5	20 M1
Toluene	ug/L	111	200	200	261	280	75	84	80-128	7	20 M1

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: 10585.00 PARISH FARM

Pace Project No.: 40139598

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1407445 1407446											
Parameter	Units	40139601002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						104	105	80-120		

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

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## QUALIFIERS

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 10585.00 PARISH FARM

Pace Project No.: 40139598

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40139598001	MW-2	WI MOD GRO	237417		
40139598002	MW-5	WI MOD GRO	237417		
40139598003	MW-4	WI MOD GRO	237417		

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Version 6.0 06/14/06



February 14, 2017

Robyn Seymour  
Seymour Environmental Services, INC.  
2531 Dyreson Road  
Mc Farland, WI 53558

RE: Project: 10585.00 PARISH FARM  
Pace Project No.: 40145509

Dear Robyn Seymour:

Enclosed are the analytical results for sample(s) received by the laboratory on February 10, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

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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: 10585.00 PARISH FARM

Pace Project No.: 40145509

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40145509001	MW-2	Water	02/04/17 10:45	02/10/17 09:35
40145509002	MW-5	Water	02/04/17 10:55	02/10/17 09:35
40145509003	MW-4	Water	02/04/17 11:10	02/10/17 09:35

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## SAMPLE ANALYTE COUNT

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40145509001	MW-2	WI MOD GRO	PMS	10	PASI-G
40145509002	MW-5	WI MOD GRO	PMS	10	PASI-G
40145509003	MW-4	WI MOD GRO	PMS	10	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40145509001</b>	<b>MW-2</b>					
WI MOD GRO	Benzene	651	ug/L	20.0	02/13/17 20:44	M1
WI MOD GRO	Ethylbenzene	148	ug/L	20.0	02/13/17 20:44	M1
WI MOD GRO	Methyl-tert-butyl ether	3930	ug/L	20.0	02/13/17 20:44	M1
WI MOD GRO	Naphthalene	19.6J	ug/L	20.0	02/13/17 20:44	M1
WI MOD GRO	Toluene	1090	ug/L	20.0	02/13/17 20:44	M1
WI MOD GRO	1,2,4-Trimethylbenzene	96.6	ug/L	20.0	02/13/17 20:44	
WI MOD GRO	1,3,5-Trimethylbenzene	31.7	ug/L	20.0	02/13/17 20:44	M1
WI MOD GRO	m&p-Xylene	394	ug/L	40.0	02/13/17 20:44	
WI MOD GRO	o-Xylene	248	ug/L	20.0	02/13/17 20:44	M1
<b>40145509002</b>	<b>MW-5</b>					
WI MOD GRO	Benzene	3.3	ug/L	1.0	02/13/17 19:28	
WI MOD GRO	Ethylbenzene	1.7	ug/L	1.0	02/13/17 19:28	
WI MOD GRO	Methyl-tert-butyl ether	259	ug/L	1.0	02/13/17 19:28	
WI MOD GRO	Toluene	9.9	ug/L	1.0	02/13/17 19:28	
WI MOD GRO	m&p-Xylene	0.89J	ug/L	2.0	02/13/17 19:28	
WI MOD GRO	o-Xylene	1.1	ug/L	1.0	02/13/17 19:28	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

Sample: MW-2 Lab ID: 40145509001 Collected: 02/04/17 10:45 Received: 02/10/17 09:35 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	651	ug/L	20.0	7.9	20		02/13/17 20:44	71-43-2	M1
Ethylbenzene	148	ug/L	20.0	7.9	20		02/13/17 20:44	100-41-4	M1
Methyl-tert-butyl ether	3930	ug/L	20.0	9.7	20		02/13/17 20:44	1634-04-4	M1
Naphthalene	19.6J	ug/L	20.0	8.5	20		02/13/17 20:44	91-20-3	M1
Toluene	1090	ug/L	20.0	7.8	20		02/13/17 20:44	108-88-3	M1
1,2,4-Trimethylbenzene	96.6	ug/L	20.0	8.4	20		02/13/17 20:44	95-63-6	
1,3,5-Trimethylbenzene	31.7	ug/L	20.0	8.3	20		02/13/17 20:44	108-67-8	M1
m&p-Xylene	394	ug/L	40.0	16.0	20		02/13/17 20:44	179601-23-1	
o-Xylene	248	ug/L	20.0	9.0	20		02/13/17 20:44	95-47-6	M1
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	112	%	80-120		20		02/13/17 20:44	98-08-8	

Sample: MW-5 Lab ID: 40145509002 Collected: 02/04/17 10:55 Received: 02/10/17 09:35 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	3.3	ug/L	1.0	0.40	1		02/13/17 19:28	71-43-2	
Ethylbenzene	1.7	ug/L	1.0	0.39	1		02/13/17 19:28	100-41-4	
Methyl-tert-butyl ether	259	ug/L	1.0	0.48	1		02/13/17 19:28	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/13/17 19:28	91-20-3	
Toluene	9.9	ug/L	1.0	0.39	1		02/13/17 19:28	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/13/17 19:28	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/13/17 19:28	108-67-8	
m&p-Xylene	0.89J	ug/L	2.0	0.80	1		02/13/17 19:28	179601-23-1	
o-Xylene	1.1	ug/L	1.0	0.45	1		02/13/17 19:28	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	87	%	80-120		1		02/13/17 19:28	98-08-8	

Sample: MW-4 Lab ID: 40145509003 Collected: 02/04/17 11:10 Received: 02/10/17 09:35 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		02/13/17 16:29	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		02/13/17 16:29	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		02/13/17 16:29	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		02/13/17 16:29	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		02/13/17 16:29	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/13/17 16:29	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		02/13/17 16:29	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		02/13/17 16:29	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		02/13/17 16:29	95-47-6	

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

**Sample: MW-4**      **Lab ID: 40145509003**      Collected: 02/04/17 11:10      Received: 02/10/17 09:35      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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### WIGRO GCV

Analytical Method: WI MOD GRO

#### Surrogates

a,a,a-Trifluorotoluene (S)	100	%	80-120		1		02/13/17 16:29	98-08-8	
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## QUALITY CONTROL DATA

Project: 10585.00 PARISH FARM  
Pace Project No.: 40145509

QC Batch: 248129 Analysis Method: WI MOD GRO  
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water  
Associated Lab Samples: 40145509001, 40145509002, 40145509003

METHOD BLANK: 1466885 Matrix: Water  
Associated Lab Samples: 40145509001, 40145509002, 40145509003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	02/13/17 14:21	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	02/13/17 14:21	
Benzene	ug/L	<0.40	1.0	02/13/17 14:21	
Ethylbenzene	ug/L	<0.39	1.0	02/13/17 14:21	
m&p-Xylene	ug/L	<0.80	2.0	02/13/17 14:21	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	02/13/17 14:21	
Naphthalene	ug/L	<0.42	1.0	02/13/17 14:21	
o-Xylene	ug/L	<0.45	1.0	02/13/17 14:21	
Toluene	ug/L	<0.39	1.0	02/13/17 14:21	
a,a,a-Trifluorotoluene (S)	%	100	80-120	02/13/17 14:21	

LABORATORY CONTROL SAMPLE & LCSD: 1466886

LABORATORY CONTROL SAMPLE & LCSD: 1466886			1466887							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	17.5	17.8	88	89	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	17.1	17.3	85	87	80-120	2	20	
Benzene	ug/L	20	19.3	19.4	96	97	80-120	1	20	
Ethylbenzene	ug/L	20	18.1	18.3	90	92	80-120	1	20	
m&p-Xylene	ug/L	40	35.8	36.2	89	91	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	19.6	19.9	98	99	80-120	1	20	
Naphthalene	ug/L	20	18.2	18.8	91	94	80-120	3	20	
o-Xylene	ug/L	20	18.2	18.4	91	92	80-120	1	20	
Toluene	ug/L	20	18.7	18.8	93	94	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1466971

Parameter	Units	1466972									
		40145509001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD
1,2,4-Trimethylbenzene	ug/L	96.6	400	400	377	367	70	68	48-177	3	20
1,3,5-Trimethylbenzene	ug/L	31.7	400	400	310	303	70	68	73-145	3	20 M1
Benzene	ug/L	651	400	400	934	948	71	74	74-139	1	20 M1
Ethylbenzene	ug/L	148	400	400	446	441	75	73	74-140	1	20 M1
m&p-Xylene	ug/L	394	800	800	966	957	72	70	55-165	1	20
Methyl-tert-butyl ether	ug/L	3930	400	400	4230	4210	76	71	80-120	0	20 M1
Naphthalene	ug/L	19.6J	400	400	302	286	71	67	73-133	5	20 M1
o-Xylene	ug/L	248	400	400	533	525	71	69	73-136	1	20 M1
Toluene	ug/L	1090	400	400	1390	1390	73	75	80-128	1	20 M1

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: 10585.00 PARISH FARM

Pace Project No.: 40145509

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1466971 1466972											
Parameter	Units	40145509001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						112	110	80-120		

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

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

---

### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 10585.00 PARISH FARM

Pace Project No.: 40145509

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40145509001	MW-2	WI MOD GRO	248129		
40145509002	MW-5	WI MOD GRO	248129		
40145509003	MW-4	WI MOD GRO	248129		

## REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

UPPER MIDWEST REGION

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

Page 1 of 1



## CHAIN OF CUSTODY

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)

PICK  
Letter

ANALYSES REQUESTED

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June 16, 2017

Robyn Seymour  
Seymour Environmental Services, INC.  
2531 Dyreson Road  
Mc Farland, WI 53558

RE: Project: 10585.00 PARISH FARM  
Pace Project No.: 40151435

Dear Robyn Seymour:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

---

### 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: 10585.00 PARISH FARM

Pace Project No.: 40151435

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151435001	MW-2	Water	06/03/17 10:00	06/10/17 08:00
40151435002	MW-5	Water	06/03/17 10:15	06/10/17 08:00
40151435003	MW-4	Water	06/03/17 10:35	06/10/17 08:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40151435001	MW-2	WI MOD GRO	ALD	10	PASI-G
40151435002	MW-5	WI MOD GRO	ALD	10	PASI-G
40151435003	MW-4	WI MOD GRO	ALD	10	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40151435001</b>	<b>MW-2</b>					
WI MOD GRO	Benzene	615	ug/L	40.0	06/15/17 14:23	
WI MOD GRO	Ethylbenzene	134	ug/L	40.0	06/15/17 14:23	
WI MOD GRO	Methyl-tert-butyl ether	3850	ug/L	40.0	06/15/17 14:23	
WI MOD GRO	Toluene	922	ug/L	40.0	06/15/17 14:23	
WI MOD GRO	1,2,4-Trimethylbenzene	78.2	ug/L	40.0	06/15/17 14:23	
WI MOD GRO	1,3,5-Trimethylbenzene	24.7J	ug/L	40.0	06/15/17 14:23	
WI MOD GRO	m&p-Xylene	310	ug/L	80.0	06/15/17 14:23	
WI MOD GRO	o-Xylene	191	ug/L	40.0	06/15/17 14:23	
<b>40151435002</b>	<b>MW-5</b>					
WI MOD GRO	Methyl-tert-butyl ether	20.3	ug/L	1.0	06/15/17 16:31	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

Sample: MW-2 Lab ID: 40151435001 Collected: 06/03/17 10:00 Received: 06/10/17 08:00 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b> Analytical Method: WI MOD GRO									
Benzene	615	ug/L	40.0	15.8	40		06/15/17 14:23	71-43-2	
Ethylbenzene	134	ug/L	40.0	15.7	40		06/15/17 14:23	100-41-4	
Methyl-tert-butyl ether	3850	ug/L	40.0	19.4	40		06/15/17 14:23	1634-04-4	
Naphthalene	<17.0	ug/L	40.0	17.0	40		06/15/17 14:23	91-20-3	
Toluene	922	ug/L	40.0	15.5	40		06/15/17 14:23	108-88-3	
1,2,4-Trimethylbenzene	78.2	ug/L	40.0	16.7	40		06/15/17 14:23	95-63-6	
1,3,5-Trimethylbenzene	24.7J	ug/L	40.0	16.6	40		06/15/17 14:23	108-67-8	
m&p-Xylene	310	ug/L	80.0	32.0	40		06/15/17 14:23	179601-23-1	
o-Xylene	191	ug/L	40.0	18.0	40		06/15/17 14:23	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	100	%	80-120		40		06/15/17 14:23	98-08-8	HS

Sample: MW-5 Lab ID: 40151435002 Collected: 06/03/17 10:15 Received: 06/10/17 08:00 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b> Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		06/15/17 16:31	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		06/15/17 16:31	100-41-4	
Methyl-tert-butyl ether	20.3	ug/L	1.0	0.48	1		06/15/17 16:31	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		06/15/17 16:31	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		06/15/17 16:31	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		06/15/17 16:31	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		06/15/17 16:31	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		06/15/17 16:31	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		06/15/17 16:31	95-47-6	
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		06/15/17 16:31	98-08-8	

Sample: MW-4 Lab ID: 40151435003 Collected: 06/03/17 10:35 Received: 06/10/17 08:00 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b> Analytical Method: WI MOD GRO									
Benzene	<0.40	ug/L	1.0	0.40	1		06/15/17 10:58	71-43-2	
Ethylbenzene	<0.39	ug/L	1.0	0.39	1		06/15/17 10:58	100-41-4	
Methyl-tert-butyl ether	<0.48	ug/L	1.0	0.48	1		06/15/17 10:58	1634-04-4	
Naphthalene	<0.42	ug/L	1.0	0.42	1		06/15/17 10:58	91-20-3	
Toluene	<0.39	ug/L	1.0	0.39	1		06/15/17 10:58	108-88-3	
1,2,4-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		06/15/17 10:58	95-63-6	
1,3,5-Trimethylbenzene	<0.42	ug/L	1.0	0.42	1		06/15/17 10:58	108-67-8	
m&p-Xylene	<0.80	ug/L	2.0	0.80	1		06/15/17 10:58	179601-23-1	
o-Xylene	<0.45	ug/L	1.0	0.45	1		06/15/17 10:58	95-47-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

<b>Sample: MW-4</b>		<b>Lab ID: 40151435003</b>		Collected: 06/03/17 10:35		Received: 06/10/17 08:00		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>WIGRO GCV</b>		Analytical Method: WI MOD GRO							
<b>Surrogates</b>									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		06/15/17 10:58	98-08-8	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 10585.00 PARISH FARM  
Pace Project No.: 40151435

QC Batch: 258622 Analysis Method: WI MOD GRO  
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water  
Associated Lab Samples: 40151435001, 40151435002, 40151435003

METHOD BLANK: 1523790 Matrix: Water  
Associated Lab Samples: 40151435001, 40151435002, 40151435003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	06/15/17 08:40	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	06/15/17 08:40	
Benzene	ug/L	<0.40	1.0	06/15/17 08:40	
Ethylbenzene	ug/L	<0.39	1.0	06/15/17 08:40	
m&p-Xylene	ug/L	<0.80	2.0	06/15/17 08:40	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	06/15/17 08:40	
Naphthalene	ug/L	<0.42	1.0	06/15/17 08:40	
o-Xylene	ug/L	<0.45	1.0	06/15/17 08:40	
Toluene	ug/L	<0.39	1.0	06/15/17 08:40	
a,a,a-Trifluorotoluene (S)	%	100	80-120	06/15/17 08:40	

LABORATORY CONTROL SAMPLE & LCSD: 1523791

LABORATORY CONTROL SAMPLE & LCSD: 1523791			1523792							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.8	19.7	99	99	80-120	0	20	
1,3,5-Trimethylbenzene	ug/L	20	19.1	19.0	96	95	80-120	0	20	
Benzene	ug/L	20	19.8	19.8	99	99	80-120	0	20	
Ethylbenzene	ug/L	20	19.5	19.3	97	96	80-120	1	20	
m&p-Xylene	ug/L	40	38.5	38.3	96	96	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	19.8	19.8	99	99	80-120	0	20	
Naphthalene	ug/L	20	19.6	19.7	98	98	80-120	1	20	
o-Xylene	ug/L	20	19.4	19.4	97	97	80-120	0	20	
Toluene	ug/L	20	19.6	19.5	98	97	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%				100	100	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1524129

Parameter	Units	1524130									
		40151470001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD
1,2,4-Trimethylbenzene	ug/L	706	200	200	1030	1090	162	192	11-200	6	20
1,3,5-Trimethylbenzene	ug/L	7.4J	200	200	213	213	103	103	54-142	0	20
Benzene	ug/L	22.5	200	200	218	220	98	99	66-140	1	20
Ethylbenzene	ug/L	486	200	200	724	768	119	141	66-143	6	20
m&p-Xylene	ug/L	670	400	400	1120	1180	113	128	60-141	5	20
Methyl-tert-butyl ether	ug/L	<4.8	200	200	202	196	101	98	70-129	3	20
Naphthalene	ug/L	126	200	200	343	343	109	109	64-129	0	20
o-Xylene	ug/L	68.5	200	200	269	274	100	103	68-132	2	20
Toluene	ug/L	6.0J	200	200	204	207	99	101	76-130	2	20

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1524129 1524130											
Parameter	Units	40151470001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
a,a,a-Trifluorotoluene (S)	%						107	107	80-120		

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

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 10585.00 PARISH FARM

Pace Project No.: 40151435

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### 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: 10585.00 PARISH FARM

Pace Project No.: 40151435

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151435001	MW-2	WI MOD GRO	258622		
40151435002	MW-5	WI MOD GRO	258622		
40151435003	MW-4	WI MOD GRO	258622		

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