Meridian Environmental Consulting, LLC

September 15, 2014

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

Subject: **Results of Recent Work and Change Order**
- **Excavation**
- **Install Monitoring Wells MW-8A/B, -9A/B**
- **Ground Water Sampling**

Jim and Cindy's Bar
W14764 Highway 73
Jump River, Wisconsin
PECFA No. 54433-9769-64
DNR BRRTS No. 03-61-000116
Meridian No. 05F781

Dear Carrie:

Enclosed are the results of work completed at this site during the past year.

The work included:
- Excavate 938 tons of contaminated soil from the source area
- Install 4 monitoring wells (MW-8A, MW-8B, MW-9A, MW-9B)
- Survey monitoring well elevation and location
- Sample monitoring well network (December 2013 and April 2014)
- Private Well Sampling

The excavation removed most of the source soils. Some residual soil impacts remain at the water table ("smear zone"). No further action is recommended with respect to impacted soil.

The ground water sampling documented impacted ground water to the south and southeast. We recommend a monitoring well nest followed by 3 more sampling events to document the ground water plume is stable. If the results are favorable, the site should be submitted for Closure with GIS Notification for Soil and Ground Water.

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BACKGROUND INFORMATION

The reader is referred to the project file for a more thorough description of the site history. A brief summary is provided below.

The site is a small tavern located in Jump River, Wisconsin (Figure 1). Gasoline was sold at the site until the tanks were removed in 1993. Petroleum impacts were measured in the soil when the tanks were removed. No site investigation work was completed until 2011. Soil borings and monitoring wells (MW-1 thru MW-7) were installed and sampled. The results indicated the soil and ground water was significantly impacted with petroleum. Due to the presence of private wells across the road from the property (within 100 feet), removal of the source soils was recommended. Additional monitoring wells to further define the extent of impacted ground water was recommended. The remainder of this letter presents the results of this recent work as well as our recommendations to achieve Closure.

RECENT WORK

Soil Excavation

In October 2013, approximately 938 tons of petroleum impacted soil were excavated from the former pump and tank area (Figure 2). The soils were disposed at the Seven Mile Creek landfill near Eau Claire.

The excavation extended to about 20 feet depth. Confirmation samples were collected from the perimeter of the excavation. The analytical report is provided in Appendix A and summarized in Table 1.

The excavation removed accessible impacted soils from the surface to the water table (about 20 feet). Residual petroleum impacts remain around the perimeter of the excavation at the "smear zone".

MW-4 was abandoned prior to the excavation. The abandonment form is provided in Appendix B.

Install Monitoring Wells

Monitoring wells MW-8A, MW-8B, MW-9A, MW-9B were installed in late October in the locations shown in Figure 2. The boring logs and well forms are provided in Appendix B.

The monitoring wells' elevations and locations were surveyed relative to local datum.

Ground Water Sampling

Ground water samples were collected from the monitoring wells twice (December 2013 and April 2014). The analytical reports are provided in Appendix A and summarized in Table 2. The ground water levels are summarized in Table 3.

Private Well Sampling

Area residents rely on private wells for their water supply. Figure 3 is a map showing the location of residences near the site with private wells.

The private wells at the following properties were sampled.

Site Well ("Bar")
W14789 Hwy. 73 (rental property)
W14767 Hwy. 73 (Lyne residence)
N8910 Elm Street (Mason residence)
Community Center
W14778 River Street (Malam residence)
N8890 Bridge Road (McVicker residence)
N8887 Bridge Road (rental)
N8891 Bridge Street (new convenience store)

The analytical report is provided in Appendix A and summarized in Table 2.

DATA EVALUATION

Regional Geology

The site is located in the Jump River valley. The Jump River flows westerly about 800 feet south of the site (Figure 1). The elevation of the site is approximately 20 feet higher than the normal water level of the river.

The surrounding area is relatively flat with some hills south of Jump River. Swamps are common in the region indicative of low permeability soils and poor drainage.

Residents in the area rely on private wells for their water supply. The well logs indicate the area is underlain by approximately 50 feet of "hardpan" (heterogeneous silt/sand/clay matrix with gravel and rocks) overlying a sand and gravel aquifer. Bedrock is typically about 100 feet below grade in the region.

Potable wells in the area are typically 50 to 75 feet deep. The potable wells draw from the sand and gravel aquifer.

Site Hydrogeology

Figure 4 is a cross-section illustrating the soils at the site. The soil borings encountered fine-grained soils (silt with clay) to about 10 feet depth. Beneath these fine-grained soils is a layer of coarse sand with gravel and cobbles to about 25 feet below grade. Below this coarse sediment layer are fine-grained soils described locally as "hardpan" which is a poorly sorted soil layer of silty sand with clay and gravel. Another layer of sand and gravel is found about 50 to 60 feet below grade. The private wells are typically screened in this deeper coarse sediment layer.

Ground water is found about 17 feet below grade which is about the same elevation as the Jump River. Various factors (e.g., seasonal fluctuations (Figure 5), Jump River stage, downward

vertical gradient (Table 3)) compounded with a relatively small horizontal gradient make it difficult to interpret the ground water flow direction. However, based on field measurements and ground water chemistry, we interpret ground water flow is southerly toward the Jump River. More ground water level measurements are needed to confirm ground water flow direction.

Extent of Impacted Soil

The excavation removed accessible impacted soil. Confirmation samples were collected from the perimeter of the excavation about 3 feet below grade. The sidewall samples were clean with the exception of a sample from the northeast corner of the excavation which had residual concentrations.

The "smear zone" is impacted with petroleum away from the excavation.

No further investigation is recommended with respect to defining or remediating the extent of impacted soil.

Extent of Impacted Ground Water

NR140 Enforcement Standard exceedances were measured in MW-1, -2, -3, -5, -6, and MW-7. Based on the sampling results, there appears to be a contaminant plume extending southerly from the site (Figure 6).

We recommend a downgradient well nest be installed as shown on Figure 6. The well nest should consist of a water table well screened 15 to 25 feet below grade and a piezometer screened 35 to 40 feet below grade.

The data from the private wells will continue to be used to define the extent of petroleum impacts in the sand and gravel aquifer.

Private Well Sampling

MTBE has been measured (below PAL) in several private wells including 8910 Elm Street (once), 14789 Hwy. 73, 8887 Bridge St (once), 8890 Bridge St, and the new well at 8891 Bridge St.

Benzene has also been measured in 14789 Hwy. 73, 8890 Bridge St (once), and 8891 Bridge St. (once).

The source of the private well impacts is not entirely clear. In addition to the former tanks at the site, underground tanks were located across the road at 14767 Hwy. 73 as well as the property west of the site (14789 Hwy. 73).

The well at 14789 Hwy. 73 appears to be a sand point and may be impacted from the former tanks located on that property. This conclusion is supported by the clean samples from MW-8A and MW-8B.

The former tanks at 14789 Hwy. 73 may have also impacted the other private wells (e.g., 8887 Bridge St., 8890 Bridge St, 8891 Bridge St, and 14778 River Street). However, it is also possible the Jim's Bar tanks impacted the sand and gravel aquifer.

In summary, there may be multiple sources of impacts to the sand and gravel aquifer. Fortunately, the impacts appear to be within NR140 PALs. Additional sampling should be conducted to confirm these results.

Vapor Intrusion

Petroleum impacted soil and ground water can produce vapors which may enter subsurface structures (e.g., basements, sewers). The site building (bar/home) has a basement which extends an estimated 8 feet below grade. The silty clay layer and the proximity of the house to the impacted soil and ground water may allow petroleum vapors to migrate to the basement area. The basement was inspected and no petroleum odors were detected.

Removal of the source soils will help remove potential vapor intrusion sources.

SUMMARY

- Approximately 938 tons of impacted source soil were removed. No further work is recommended with respect to soil contamination.

- Petroleum impacted ground water was measured in the ground water. The extent appears to extend to the south and east. We recommend a monitoring well nest to confirm downgradient extent especially with respect to downgradient private water supply wells.

- Additional ground water sampling and water level measurements are needed to confirm the recent results.

RECOMMENDATIONS

Based on the results of the work completed to date, we recommend the following work:

- A downgradient monitoring well nest should be installed in the location shown in Figure 6.

- All of the monitoring wells should be sampled three times (quarterly) for PVOC+naphthalene.

- The onsite and adjacent private wells should be sampled three times (quarterly) for PVOC+naphthalene.

- A report will be prepared which will document the work completed. The report will include updated site maps and tables, updated ground water flow maps, and our recommendations regarding work needed to achieve Closure with GIS Registry for Soil and Ground Water.

A Change Order for the proposed Scope of Work is included with this Letter Report.

Sincerely,
MERIDIAN ENVIRONMENTAL CONSULTING, LLC

Kenneth Shimko, PG
Project Manager

TABLES

Table 1: Soil Analytical Data

Jim and Cindy's Bar
Jump River, Wisconsin
Meridian No. 05F781

Sample	Depth	PID	1,2,4-TMB	1,3,5-TMB	Benzene	Ethylbenzene	m&p-Xylene	o-Xylene	Total Xylenes	MTBE	Naphthalene	Toluene	GRO
Units	*ft*	*iu*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
Tank Closure Soil Sampling (August 18, 1993)													
T1	12	"pegged"	**22**	**7.2**	**3.7**	1.5	--	--	**22**	<.5	--	**7.9**	**340**
T2	9	"pegged"	**39**	**22**	**10**	**21**	--	--	**77**	4.6	--	**34**	**1500**
Geoprobe Borings (October 3, 2011)													
GP-1: 3-4	3-4	50	**495**	**161**	**73.2**	**179**	**928**	**328**	**1256**	<5.07	**81.1**	**728**	**8610**
GP-1: 7-8	7-8	70	**42.8**	**16**	**13.2**	**21.1**	**90.6**	**30.3**	**120.9**	**2.78**	**7.81**	**90.5**	--
GP-2: 3-4	3-4	60	**18.9**	**7.21**	**0.648**	**1.88**	**14.8**	**6.09**	**20.89**	<.24	**4.15**	**4.36**	--
GP-2: 7-8	7-8	110	**189**	**67.4**	**4.91**	**23.1**	**159**	**68**	**227**	<.514	**31.6**	**50**	--
GP-3: 3-4	3-4	3	**0.141**	**0.079**	**0.197**	**0.172**	**0.593**	**0.204**	**0.797**	<.025	<.019	**0.882**	--
GP-3: 7-8	7-8	1	**0.1**	**0.062**	**0.202**	**0.143**	**0.47**	**0.157**	**0.627**	<.026	<.019	**0.87**	--
GP-4: 3-4	3-4	1	<.013	<.018	**0.109**	**0.067**	**0.182**	**0.08**	**0.262**	<.024	<.018	**0.224**	--
GP-4: 7-8	7-8	0	**0.072**	<.019	**0.18**	**0.1**	**0.246**	**0.129**	**0.375**	<.025	<.019	**0.464**	--
GP-5: 3-4	3-4	1	**0.13**	**0.066**	**0.105**	**0.124**	**0.448**	**0.163**	**0.611**	<.024	<.018	**0.477**	--
GP-5: 7-8	7-8	1	<.013	<.018	**0.095**	**0.074**	**0.163**	**0.07**	**0.233**	<.024	<.018	**0.24**	--
GP-6: 3-4	3-4	0	**0.124**	<.018	**0.076**	**0.092**	**0.321**	**0.121**	**0.442**	<.024	<.018	**0.267**	--
GP-6: 7-8	7-8	3	**2.68**	**1.15**	**0.782**	**1.04**	**4.18**	**1.39**	**5.57**	<.13	**0.681**	**1.98**	--
GP-7: 3-4	3-4	50	**413**	**141**	**46.1**	**138**	**721**	**255**	**976**	<5.11	**65.3**	**558**	--
GP-7: 7-8	7-8	100	**58.6**	**20.2**	**5.42**	**20.2**	**94.3**	**36.4**	**130.7**	<.24	**9.14**	**60.4**	--
Excavation Confirmation Samples (10/24/13)													
N E	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
N W	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
E N	3		**0.2**	**0.149**	**0.0764**	**0.249**	**0.776**	**0.121**	**0.896**	<.0253	<.0253	**0.0403**	
E S	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
S E	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
S W	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
W N	3		**0.0324**	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
W S	3		**0.0318**	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
Regulatory Standards													
NR720					0.0055	2.9			4.1			1.5	100
NR746 Table 1			83	11	8.5	4.6			42		2.7	38	
NR746 Table 2					1.1								

10 Concentration exceeds regulatory standard

For soils need Resty's Table: RCL Spread Sheet (macro-enabled)

COPY

Table 1: Soil Analytical Data

Jim and Cindy's Bar
Jump River, Wisconsin
Meridian No. 05F781

Total TMBs NC RCL = 871.8 D.C. = 871.8

NC RCL = 111 D.C. = 1.49

NC RCL = 4000 D.C. = 2.47

NC RCL = 890 D.C. = 258

NC RCL = 23,800 D.C. = 59.4

NC RCL = 188 D.C. = 5.15

NC RCL = 5300 D.C. = 818

COPY

Sample	Depth	PID	1,2,4-TMB	1,3,5-TMB	Benzene	Ethylbenzene	m&p-Xylene	o-Xylene	Total Xylenes	MTBE	Naphthalene	Toluene	GRO
Units	*ft*	*iu*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*	*mg/kg*
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GP-4: 3-4	3-4	1	<.013	<.018	0.109	0.067	0.182	0.08	0.262	<.024	<.018	0.224	--
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N W	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
E N	3		0.2	0.149	0.0764	0.249	0.776	0.121	0.896	<.0253	<.0253	0.0403	
E S	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
S E	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
S W	3		<.025	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
W N	3		0.0324	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
W S	3		0.0318	<.025	<.025	<.025	<.05	<.025	<.075	<.025	<.025	<.025	
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NR746 Table 2					1.1								

10 Concentration exceeds regulatory standard

For soils used Resty's Table: RCL Spread Sheet (Macro-enabled). I used Non-Industrial standards

RCL Spreadsheet – Non Industrial Soil Standards

Residential setting. Not-To-Exceed D-C RCLs from web-calculator at: *http://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search* (Chicago as climatic zone).
Exceed D-C RCL defaults to 100,000 mg/kg if web-calculator result or Csat exceeds 10% by weight (the ceiling limit concentration defined in EPA RSL Users Guide).
Basis: **ca** = cancer; **nc** = non-cancer; **Csat** = soil saturation concentration; **ceiling** = 10%.

Background threshold values are non-outlier trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/5202*.

1. ***Enter data in yellow cells.*** Numeric-only values under "INPUT Site Data." For ND, use detection limit. Do not type '-', 'NA' nor 'space bar.' Leave purple cells "as is."
2. ***After completing data entry, click "Get Summary" in Row 872.***

(Contaminants not in the provided list can be added starting at Row 860.)

Find ... Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	Background Threshold Value (mg/kg)	INPUT Site Data (mg/kg)	Comparison / Hazard Index / C: Flag E = Individual Exceedance!	Comparison / Hazard Index / C: Hazard Quotient (HQ) from Data
Benzene	71-43-2	111.	1.49	1.49	ca				
Ethylbenzene	100-41-4	4,220.	7.47	7.47	ca				
Toluene	108-88-3	5,300.	-	818.	Csat				
Xylenes	1330-20-7	890.	-	258.	Csat				
Methyl tert-Butyl Ether (MTBE)	1634-04-4	23,800.	59.4	59.4	ca				
Dichloroethane, 1,2-	107-06-2	46.7	0.608	0.608	ca				
Dibromoethane, 1,2-	106-93-4	107.	0.047	0.047	ca				
Trichloroethylene	79-01-6	6.05	1.26	1.26	ca				
Tetrachloroethylene	127-18-4	115.	30.7	30.7	ca				
Vinyl Chloride	75-01-4	93.3	0.067	0.067	ca				
Dichloroethylene, 1,1-	75-35-4	342.	-	342.	nc				
Dichloroethylene, 1,2-trans-	156-60-5	1,560.	-	1,560.	nc				
Dichloroethylene, 1,2-cis-	156-59-2	156.	-	156.	nc				
Trichloroethane, 1,1,1-	71-55-6	12,300.	-	640.	Csat				
Carbon Tetrachloride	56-23-5	137.	0.854	0.854	ca				
Trimethylbenzene, 1,2,4-	95-63-6	89.8	-	89.8	nc				
Trimethylbenzene, 1,3,5-	108-67-8	782.	-	182.	Csat				
Naphthalene	91-20-3	188.	5.15	5.15	ca				
Benzo[a]pyrene	50-32-8	-	0.015	0.015	ca				
Acenaphthene	83-32-9	3,440.	-	3,440.	nc				
Acenaphthylene	208-96-8	-	-						
Anthracene	120-12-7	17,200.	-	17,200.	nc				
Benz[a]anthracene	56-55-3	-	0.148	0.148	ca				
Benzo(j)fluoranthene	205-82-3	-	0.377	0.377	ca				
Benzo[b]fluoranthene	205-99-2	-	0.148	0.148	ca				
Benzo[g,h,i]perylene	191-24-2	-	-						

Table 2: Ground Water Analytical Data

Jim and Cindy's Bar
Jump River, Wisconsin
Meridian No. 05F781

Well	Date	1,2,4-TMB	1,3,5-TMB	Total TMB	Benzene	Ethylbenzene	m&p-xylene	o-xylene	Total Xylenes	MTBE	Naphthalene	Toluene
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
NR140 Enforcement Standard				480	5	700			2000	60	100	800
Monitoring Well Sampling Results												
MW-1	installed 10/11/11											
	10/14/2011	2670	850	3520	1250	2080	4660	1900	6560	182	553	7110
	6/23/2012	1230	388	1618	682	619			3870	17.2J	157	2590
	5/14/2013	1480	436	1916	348	880			3850	14.3J	311	1650
	12/3/2013	382	66.2	448.2	278	367			608	8.7	62.6	476
	4/15/2014	648	145	793	219	439			1440	11.2	101	842
MW-2	installed 10/11/11											
	10/14/2011	1810	619	2429	94.5	680	2350	251	2601	87.4	292	278
	6/23/2012	634	153	787	5.4	164			497	15.5	79.9	44.6
	5/14/2013	733	273	1006	39.3	234			753	11.9	114	95.8
	12/3/2013	203	60.2	263.2	68.3	127			276	12.7	53.6	75.8
	4/15/2014	617	194	811	72.3	295			750	16.4	119	175
MW-3	installed 10/11/11											
	10/14/2011	3980	1260	5240	1560	2910	10200	2280	12480	169	856	9780
	6/23/2012	3340	993	4333	742	2560			11200	<38.1	632	7910
	5/14/2013	3130	944	4074	978	2230			9720	<38.1	606	7450
	12/3/2013	3270	998	4268	662	2300			9720	<37.1	577	6850
	4/15/2014	2870	888	3758	663	2200			9100	<48.5	567	5520
MW-4	installed 10/11/11											
	10/14/2011	2420	711	3131	1400	2380	6980	1890	8870	98.8	589	7460
	6/23/2012	3020	866	3886	1360	2370			10800	<19	686	7720
	5/14/2013	2770	809	3579	1660	2230			12300	<38.1	651	8760
	10/22/2013	*well abandoned due to excavation*										
MW-5	installed 5/6/13											
	5/14/2013	3090	919	4009	88.8	1120			4040	<19	655	387
	12/3/2013	2460	720	3180	103	770			2050	<9.3	450	223
	4/15/2014	3200	968	4168	82.5	890			2330	<12.1	501	201
MW-6	installed 5/6/13											
	5/14/2013	2430	781	3211	44.6	1280			6470	16.1J	446	1810
	12/3/2013	2050	661	2711	41.5	747			2490	10.7	282	557
	4/15/2014	1080	336	1416	20.4	343			1280	<9.7	103	430
MW-7	installed 5/7/13											
	5/14/2013	275	147	422	26.8	92.3			135	6.7J	41.4	29.2
	12/3/2013	116	33.4	149.4	18.8	85.6			131	6.7	33.2	19.7
	4/15/2014	80.7	30.9	111.6	12.4	53.4			69.8	9.3	19.8	13.5
MW-8A	installed 10/28/13											
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	3.4	<.42	<.39
MW-8B	installed 10/28/13											
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	<.48	<.42	<.39
MW-9A	installed 10/28/13											
	12/3/2013	<.33	<.36	<.36	1.9	<.34			<1	1.7	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	0.97			<1.2	2	<.42	<.39
MW-9B	installed 10/28/13											
	12/3/2013	<.33	<.36	<.36	2.7	<.34			<1	<.37	1.1	<.34
	4/15/2014	<.42	<.42	<.42	2.1	<.39			<1.2	0.56	<.42	<.39

unstable

↑

↓

aband

↑

↓

↓ –

Except MTBE

MW-1
7ES - total TMBs, Benzene, naphthalene

MW-2
7ES - total TMB's, Benzene, naphthalene

Over!?

MW-3
7ES - total TMB's, Benzene, Ethylbenzene, total xylenes, naphthalene & Toluene - HOT!

MW-4 7ES - total TMB's, Benzene, Ethylbenzene, total xylenes, naphthalene + ~~Toluene~~ - HOT!
*aband - excavation

MW-5
TES - Total TMB's, Benzene, Ethylbenzene, Total Xylenes, Naphthalene

MW-6
TES - Total TMB's, Benzene, Naphthalene

MW-7
TES - Benzene

Private Well Sampling Results												
Well	Date	1,2,4-TMB	1,3,5-TMB	Total TMB	Benzene	Ethylbenzene	m&p-xylene	o-xylene	Total Xylenes	MTBE	Naphthalene	Toluene
Units		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
NR140 Enforcement Standard				480	5	700			2000	60	100	800
Bar (onsite well)												
(basement)	10/14/2011	<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<2	<.37
(outside)	6/23/2012	<.05	<.086	<.086	<.047	<.078	<.15	<.12	<.27	<.048	<.11	<.065
	5/14/2013	<.43	<.4	<.43	<.39	<.41			<1.3	<.38	<.4	<.42
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	<.48	<.42	<.39
Lyne (14767 Hwy. 73)												
	6/23/2012	<.05	<.086	<.086	<.047	<.078	<.15	<.12	<.27	<.048	<.11	<.065
	5/14/2013	<.43	<.4	<.43	<.39	<.41			<1.3	<.38	<.4	<.42
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	<.48	<.42	<.39
8910 (Mike Mason)												
	6/23/2012	<.05	<.086	<.086	.075J	<.078	<.15	<.12	<.27	.18J	<.11	<.065
	5/14/2013	<.43	<.4	<.43	<.39	<.41			<1.3	<.38	<.4	<.42
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	<.48	<.42	<.39
14789 State Hwy. 73												
	6/23/2012	<.05	<.086	<.086	6	<.078	<.15	<.12	<.27	1.6	<.11	<.065
	5/14/2013	<.43	<.4	<.43	5.7	<.41			<1.3	1.3	<.4	<.42
	12/3/2013	<.33	<.36	<.36	0.4	<.34			<1	1	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	0.99	<.42	<.39
14778 River Street (Milam)												
	5/14/2013	<.57	<2.5	<2.5	<.5	<.5	<.82	<.5	<.82	<.49	<2.5	<.44
	12/3/2013	Inaccessible										
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	<.48	<.42	<.39
Community Center												
	5/14/2013	<.57	<2.5	<2.5	<.5	<.5	<.82	<.5	<.82	<.49	<2.5	<.44
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	<.48	<.42	<.39
8887 Bridge St.												
	5/14/2013	<.57	<2.5	<2.5	<.5	<.5	<.82	<.5	<.82	<.49	<2.5	<.44
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	<.37	<.37	<.34
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	0.55	<.42	<.39
8890 Bridge St.												
	5/14/2013	<.57	<2.5	<2.5	<.5	<.5	<.82	<.5	<.82	.71J	<2.5	<.44
	12/3/2013	<.33	<.36	<.36	<.34	<.34			<1	0.97	<.37	<.34
	4/15/2014	<.42	<.42	<.42	0.55	<.39			<1.2	1	<.42	<.39
8891 Bridge St (new well at new store)												
	12/3/2013	<.33	<.36	<.36	2	<.34			<1	1.4	<.37	0.42
	4/15/2014	<.42	<.42	<.42	<.4	<.39			<1.2	1.6	<.42	<.39

10 Concentration exceeds NR140 Enforcement Standard
J Lab reports "estimated concentration above the adjusted method detection limit and below the adjusted reporting limit"

Benzene
ES – 5
PALS – 0.5

Toluene
ES – 800
PALS – 160

Naphthalene
ES – 100
PALS – 10

MTBE
ES – 60
PALS – 12

Table 3: Ground Water Level Measurements
Jim and Cindy's Bar
Jump River, Wisconsin
Meridian No. 05F781

(26.25') (26.25') (26.25')

MW-1 (installed 10/11/11)			MW-2 (installed 10/11/11)			MW-3 (installed 10/11/11)		
Surface Elevation (ft)		100.25	Surface Elevation (ft)		100.25	Surface Elevation (ft)		100.75
Top of Casing elevation (ft)		100	Top of Casing elevation (ft)		100.01	Top of Casing elevation (ft)		100.54
Top of Screen Elevation (ft)		84	Top of Screen Elevation (ft)		84	Top of Screen Elevation (ft)		84.5
Bottom of Screen Elevation (ft)		74	Bottom of Screen Elevation (ft)		74	Bottom of Screen Elevation (ft)		74.5
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
10/14/2011	17.05	82.95	10/14/2011	16.98	83.03	10/14/2011	17.6	82.94
10/28/2011	17.2	82.8	10/28/2011	17.19	82.82	10/28/2011	17.78	82.76
6/23/2012	16.88	83.12	6/23/2012	16.83	83.18	6/23/2012	17.46	83.08
5/14/2013	16.14	83.86	5/14/2013	16.11	83.9	5/14/2013	16.72	83.82
12/3/2013	NM	NM	12/3/2013	17.48	82.53	12/3/2013	18.07	82.47
Resurvey April 15, 2014		**100**			**100.01**			**100.54**
4/15/2014	16.16	83.84	4/15/2014	16.19	83.82	4/15/2014	16.78	83.76

(26.50') (25')

MW-4 (installed 10/11/11)			MW-5 (installed 5/6/13)			MW-6 (installed 5/6/13)		
Surface Elevation (ft)		100.75	Surface Elevation (ft)		100.75	Surface Elevation (ft)		100
Top of Casing elevation (ft)		100.35	Top of Casing elevation (ft)		100.5	Top of Casing elevation (ft)		99.85
Top of Screen Elevation (ft)		84.5	Top of Screen Elevation (ft)		84.25	Top of Screen Elevation (ft)		85
Bottom of Screen Elevation (ft)		74.5	Bottom of Screen Elevation (ft)		74.25	Bottom of Screen Elevation (ft)		75
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
10/14/2011	17.45	82.9						
10/28/2011	17.61	82.74						
6/23/2012	17.3	83.05						
5/14/2013	16.55	83.8	5/14/2013	16.68	83.82	5/14/2013	15.95	83.9
Well abandoned 10/22/13			12/3/2013	18.02	82.48	12/3/2013	17.33	82.52
			Resurvey April 15, 2014		**100.53**			**99.86**
			4/15/2014	16.73	83.8	4/15/2014	15.98	83.88

(24.50') (25') (40')

MW-7 (installed 5/7/13)			MW-8A (installed 10/28/13)			MW-8B (installed 10/28/13)		
Surface Elevation (ft)		100.5	Surface Elevation (ft)		99.75	Surface Elevation (ft)		99.7
Top of Casing elevation (ft)		100.14	Top of Casing elevation (ft)		99.54	Top of Casing elevation (ft)		99.49
Top of Screen Elevation (ft)		86	Top of Screen Elevation (ft)		84.75	Top of Screen Elevation (ft)		64.7
Bottom of Screen Elevation (ft)		76	Bottom of Screen Elevation (ft)		74.75	Bottom of Screen Elevation (ft)		59.7
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
5/14/2013	16.3	83.84						
12/3/2013	17.65	82.49	12/3/2013	17.06	82.48	12/3/2013	18.51	80.98
Resurvey April 15, 2014		**100.21**			**99.54**			**99.49**
4/15/2014	16.37	83.84	4/15/2014	15.37	84.17	4/15/2014	16.21	83.28

(25') (40')

MW-9A (installed 10/28/13)			MW-9B (installed 10/28/13)		
Surface Elevation (ft)		101	Surface Elevation (ft)		100.5
Top of Casing elevation (ft)		100.95	Top of Casing elevation (ft)		100.44
Top of Screen Elevation (ft)		86	Top of Screen Elevation (ft)		65.5
Bottom of Screen Elevation (ft)		76	Bottom of Screen Elevation (ft)		60.5
Measurement Date	DTW (ft)	GW Elev (ft)	Measurement Date	DTW (ft)	GW Elev (ft)
12/3/2013	18.5	82.45	12/3/2013	18.98	81.46
Resurvey April 15, 2014		**100.95**			**100.44**
4/15/2014	17.11	83.84	4/15/2014	18	82.44

Vertical Gradient

Date	MW-8A	MW-8B	Gradient (negative downward)	9A	9B	Gradient (negative downward)
December 3, 2013	82.48	80.98	-1.5	82.45	81.46	-0.99
April 5, 2014	84.17	83.28	-0.89	83.84	82.44	-1.4

FIGURES

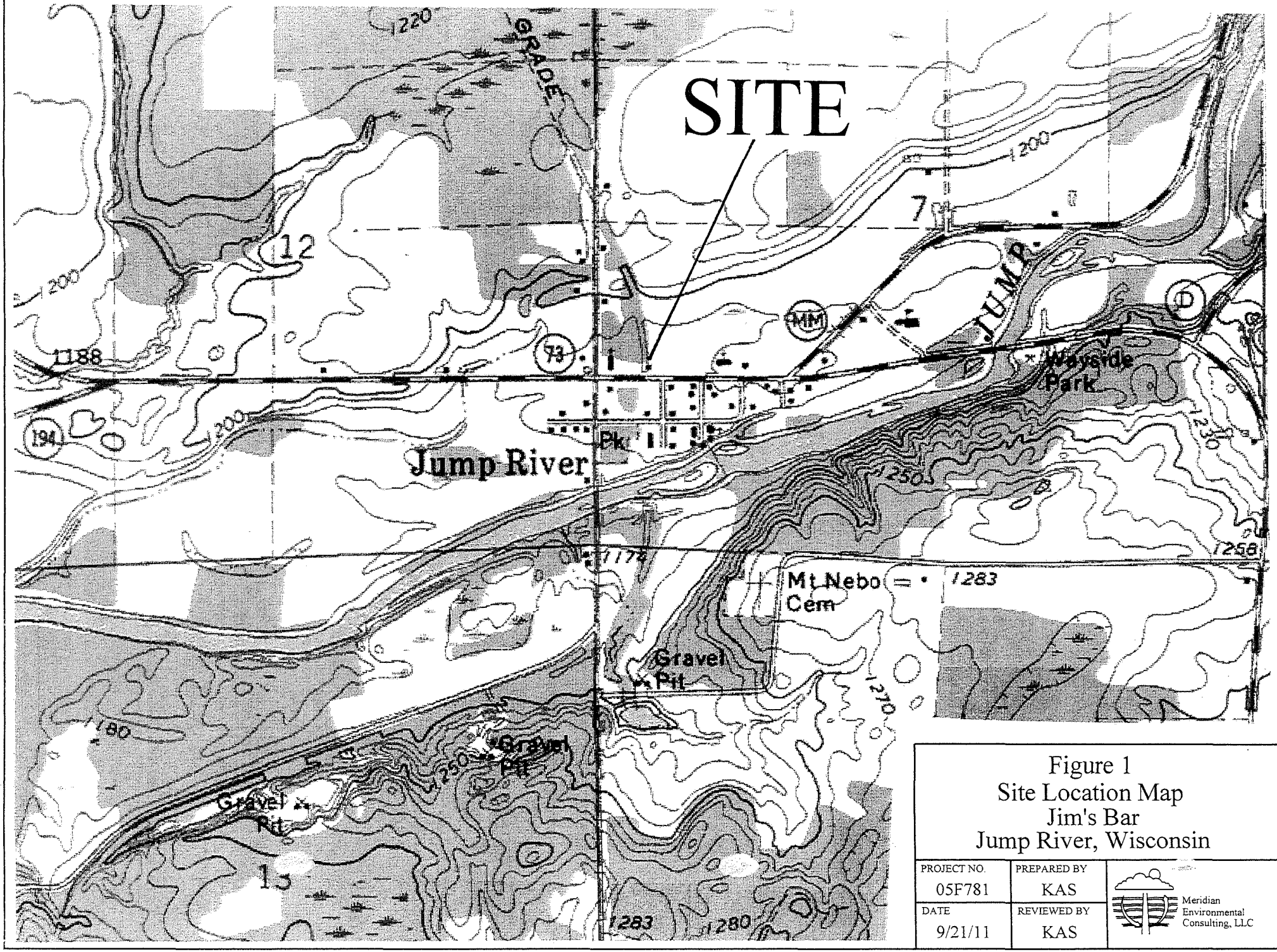


Figure 1
Site Location Map
Jim's Bar
Jump River, Wisconsin

PROJECT NO.	PREPARED BY
05F781	KAS
DATE	REVIEWED BY
9/21/11	KAS

Meridian Environmental Consulting, LLC

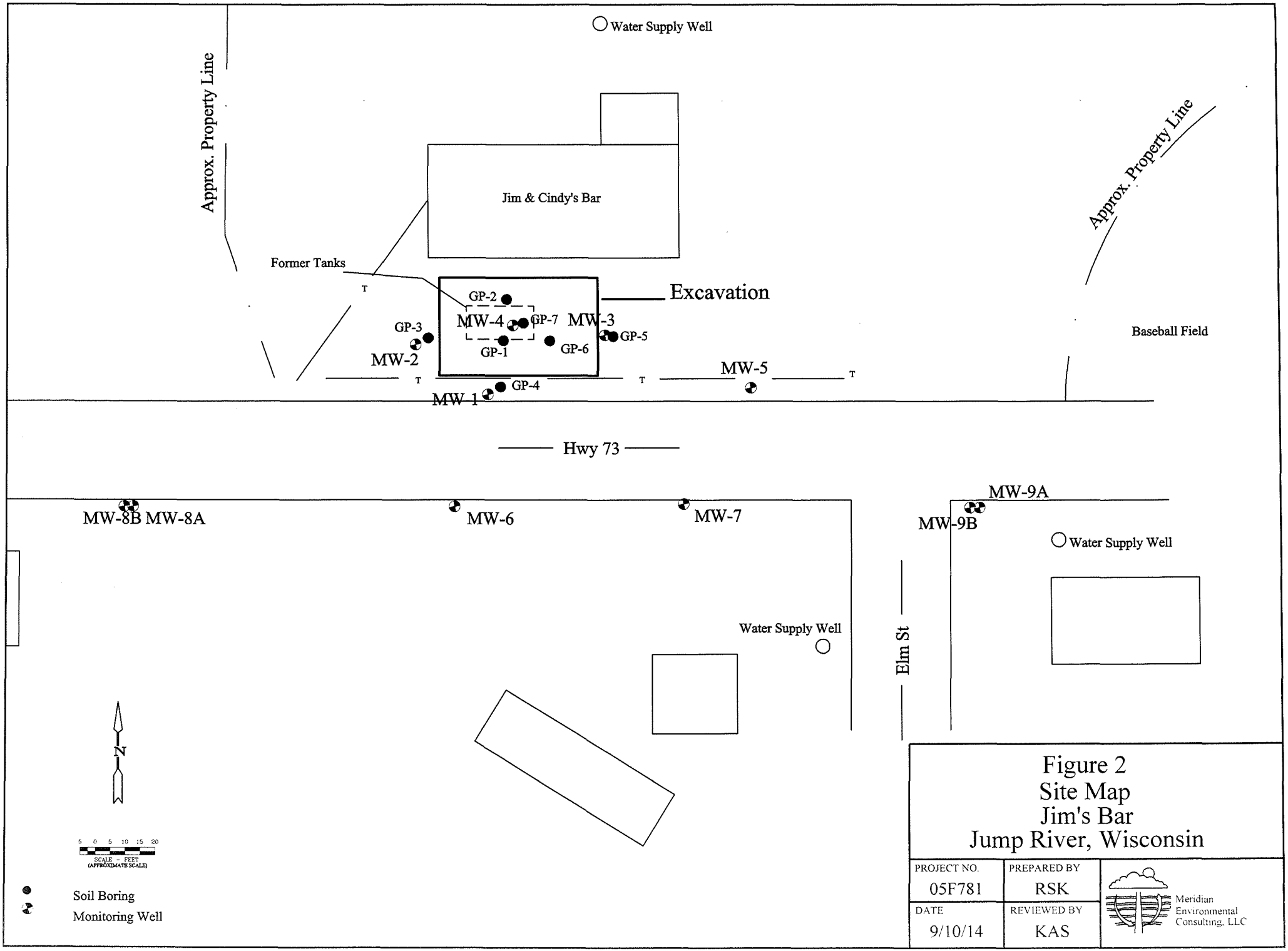


Figure 2
Site Map
Jim's Bar
Jump River, Wisconsin

PROJECT NO.	PREPARED BY
05F781	RSK
DATE	REVIEWED BY
9/10/14	KAS

Meridian Environmental Consulting, LLC

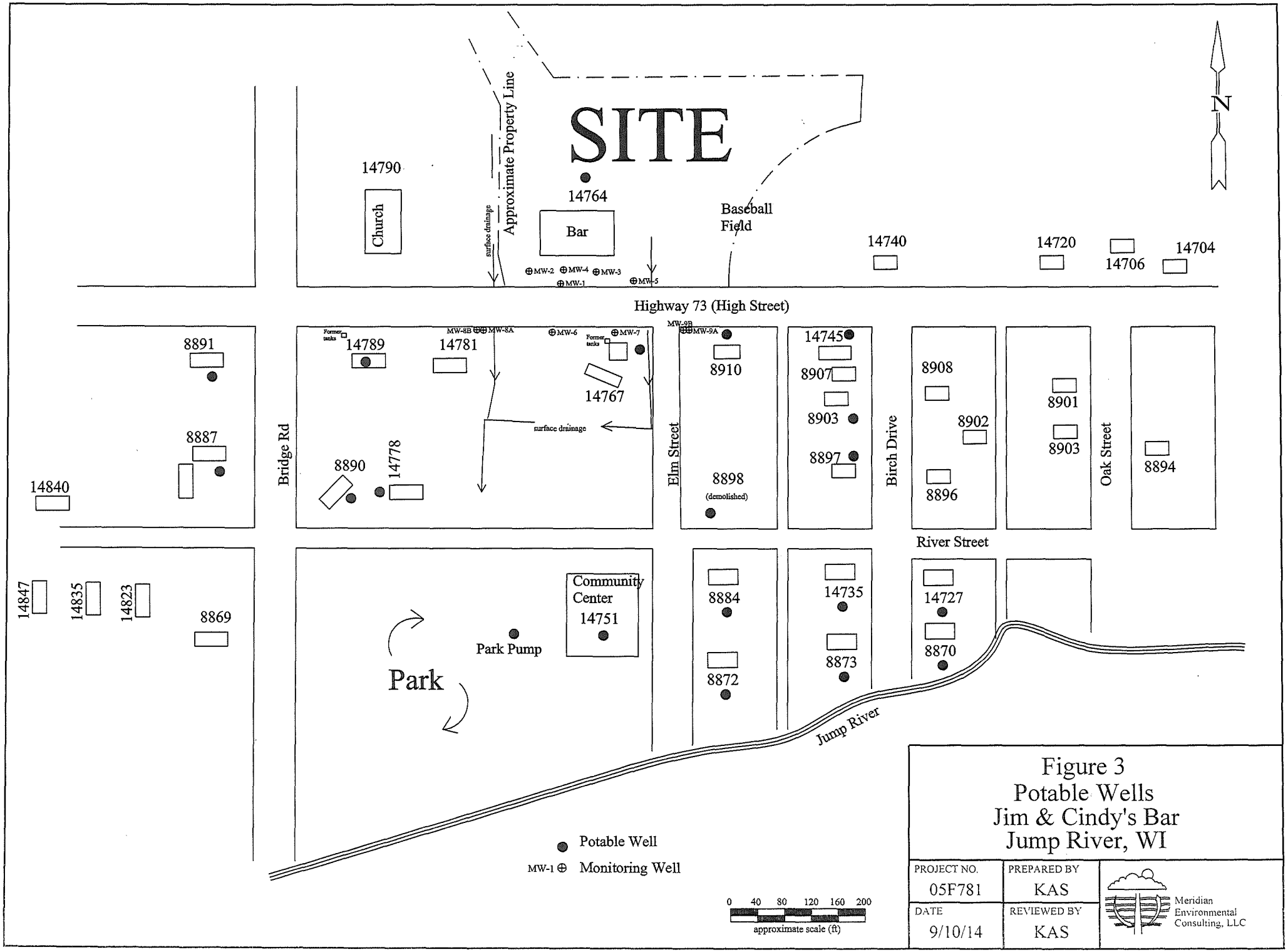


Figure 3
Potable Wells
Jim & Cindy's Bar
Jump River, WI

PROJECT NO.	PREPARED BY
05F781	KAS
DATE	REVIEWED BY
9/10/14	KAS

Meridian Environmental Consulting, LLC

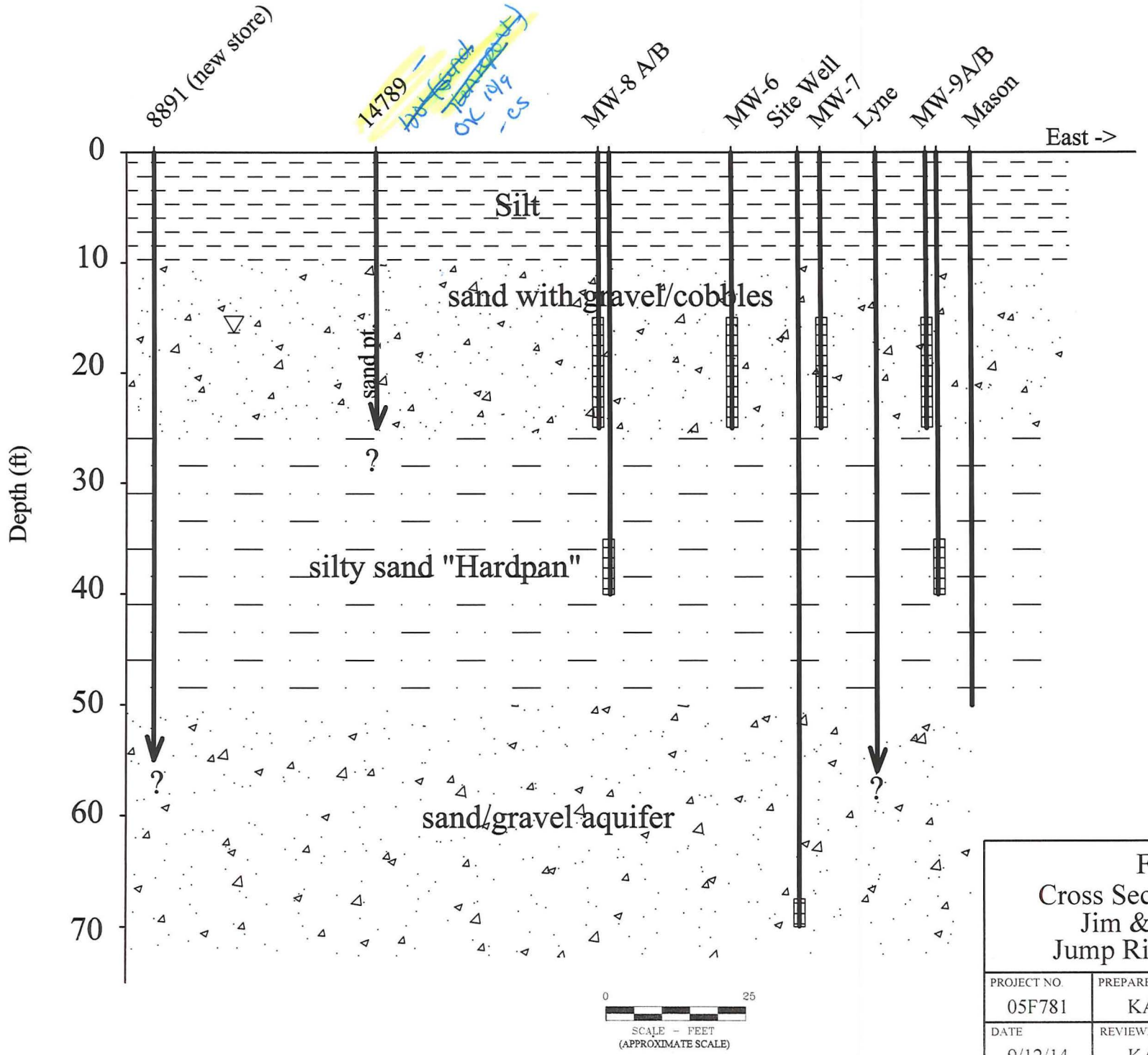
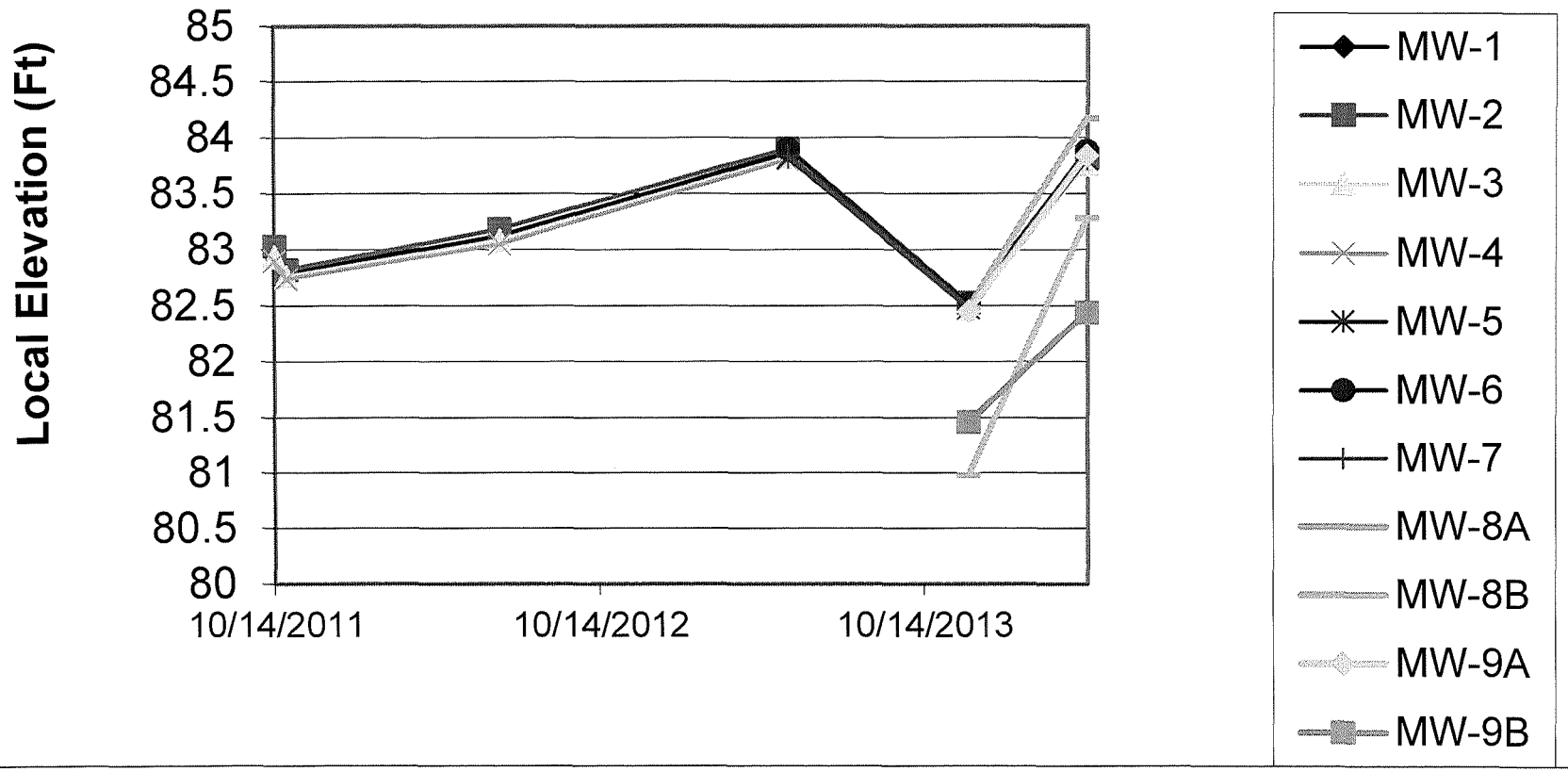


Figure 4
Cross Section (east-west)
Jim & Cindy's Bar
Jump River, Wisconsin

PROJECT NO	PREPARED BY
05F781	KAS
DATE	REVIEWED BY
9/12/14	KAS

Meridian Environmental Consulting, LLC

Figure 5: Hydrograph



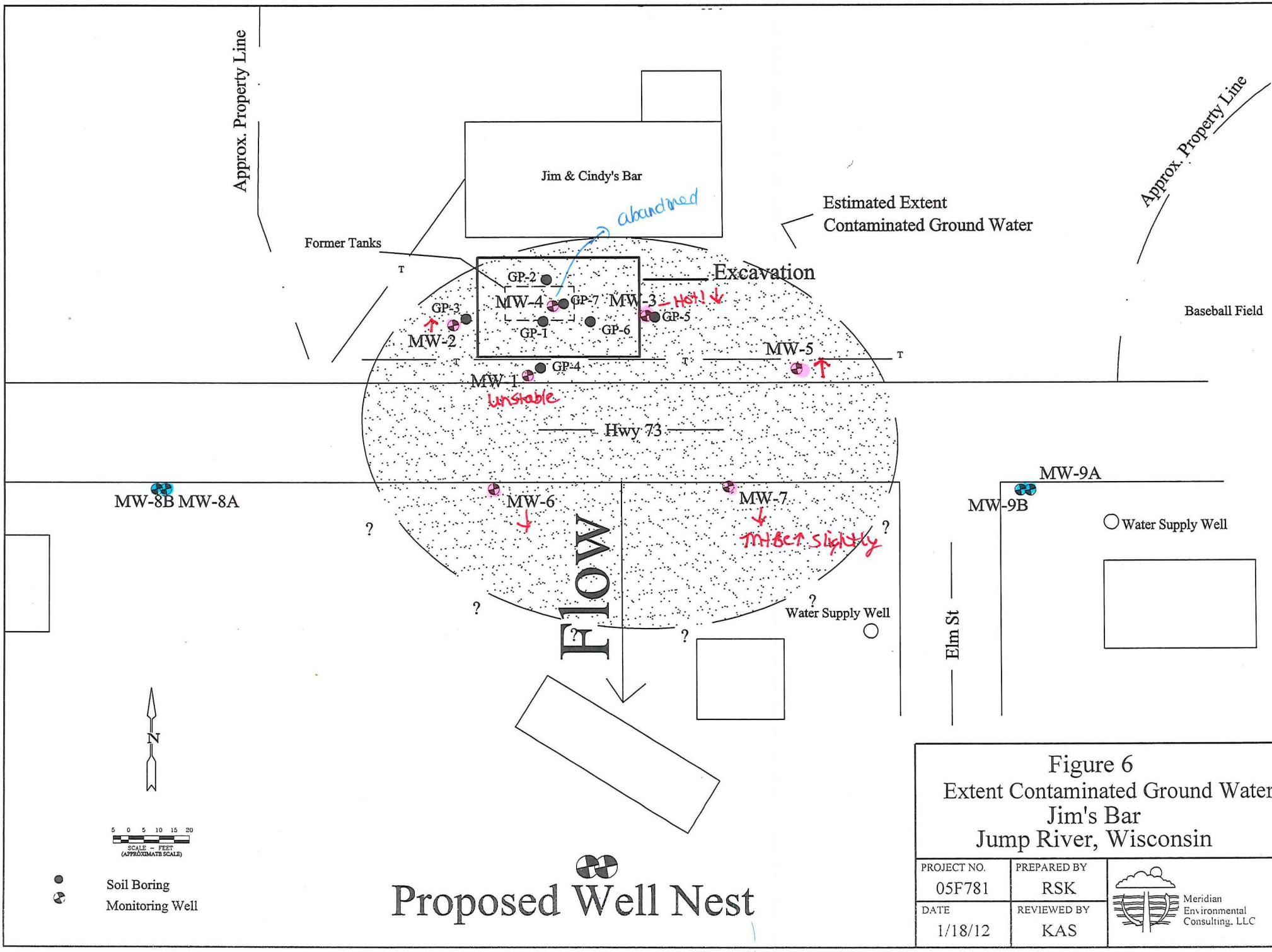


Figure 6
Extent Contaminated Ground Water
Jim's Bar
Jump River, Wisconsin

PROJECT NO.	PREPARED BY
05F781	RSK
DATE	REVIEWED BY
1/18/12	KAS

Meridian Environmental Consulting, LLC

APPENDIX A

ANALYTICAL REPORTS

Pace Analytical®
www.pacelabs.com

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

October 31, 2013

So:1

Kennith Shimko
Meridain Environmental Consulting, LLC
2711 North Elco Rd
Fall Creek, WI 54742

RE: Project: JUMP RIVER
Pace Project No.: 4087472

Dear Kennith Shimko:
Enclosed are the analytical results for sample(s) received by the laboratory on October 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

Pace Analytical®
www.pacelabs.com

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

CERTIFICATIONS

Project: JUMP RIVER
Pace Project No.: 4087472

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
New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: JUMP RIVER
Pace Project No.: 4087472

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4087472001	N E	Solid	10/24/13 00:00	10/29/13 07:45
4087472002	N W	Solid	10/24/13 00:00	10/29/13 07:45
4087472003	E N	Solid	10/24/13 00:00	10/29/13 07:45
4087472004	E S	Solid	10/24/13 00:00	10/29/13 07:45
4087472005	S E	Solid	10/24/13 00:00	10/29/13 07:45
4087472006	S W	Solid	10/24/13 00:00	10/29/13 07:45
4087472007	W N	Solid	10/24/13 00:00	10/29/13 07:45
4087472008	W S	Solid	10/24/13 00:00	10/29/13 07:45
4087472009	TRIP BLANK	Solid	10/24/13 00:00	10/29/13 07:45

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SAMPLE ANALYTE COUNT

Project: JUMP RIVER
Pace Project No.: 4087472

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4087472001	N E	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472002	N W	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472003	E N	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472004	E S	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472005	S E	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472006	S W	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472007	W N	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472008	W S	WI MOD GRO	LCF	12	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4087472009	TRIP BLANK	WI MOD GRO	LCF	12	PASI-G

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PROJECT NARRATIVE

Project: JUMP RIVER
Pace Project No.: 4087472

Method: WI MOD GRO
Description: WIGRO GCV
Client: Meridian Environmental Consulting, LLC
Date: October 31, 2013

General Information:
9 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

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

Sample Preparation:
The samples were prepared in accordance with TPH GRO/PVOC WI ext. 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.

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4087472

Sample: N E **Lab ID: 4087472001** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 18:22		W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 18:22	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 18:22	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:22	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	10/30/13 07:46	10/30/13 18:22	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.7**	%	0.10	0.10	1		10/29/13 16:21		

Sample: N W **Lab ID: 4087472002** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 18:48		W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 18:48	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 18:48	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 18:48	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	10/30/13 07:46	10/30/13 18:48	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.3**	%	0.10	0.10	1		10/29/13 16:21		

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4087472

Sample: E N **Lab ID: 4087472003** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**76.4**	ug/kg	72.6	30.2	1	10/30/13 07:46	10/30/13 23:03	71-43-2	
Ethylbenzene	**249**	ug/kg	72.6	30.2	1	10/30/13 07:46	10/30/13 23:03	100-41-4	
Methyl-tert-butyl ether	**<25.3**	ug/kg	60.6	25.3	1	10/30/13 07:46	10/30/13 23:03	1634-04-4	W
Naphthalene	**<25.3**	ug/kg	60.6	25.3	1	10/30/13 07:46	10/30/13 23:03	91-20-3	W
Toluene	**40.3J**	ug/kg	72.6	30.2	1	10/30/13 07:46	10/30/13 23:03	108-88-3	
Total Trimethylbenzenes	**349**	ug/kg	145	60.5	1	10/30/13 07:46	10/30/13 23:03		
1,2,4-Trimethylbenzene	**200**	ug/kg	72.6	30.2	1	10/30/13 07:46	10/30/13 23:03	95-63-6	
1,3,5-Trimethylbenzene	**149**	ug/kg	72.6	30.2	1	10/30/13 07:46	10/30/13 23:03	108-67-8	
Xylene (Total)	**896**	ug/kg	218	90.7	1	10/30/13 07:46	10/30/13 23:03	1330-20-7	
m&p-Xylene	**776**	ug/kg	145	60.5	1	10/30/13 07:46	10/30/13 23:03	179601-23-1	
o-Xylene	**121**	ug/kg	72.6	30.2	1	10/30/13 07:46	10/30/13 23:03	95-47-6	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		1	10/30/13 07:46	10/30/13 23:03	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.5**	%	0.10	0.10	1		10/29/13 16:21		

Sample: E S **Lab ID: 4087472004** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 19:13		W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 19:13	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 19:13	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:13	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	10/30/13 07:46	10/30/13 19:13	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.3**	%	0.10	0.10	1		10/29/13 16:21		

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4087472

Sample: S E **Lab ID: 4087472005** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 19:39		W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 19:39	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 19:39	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 19:39	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	10/30/13 07:46	10/30/13 19:39	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.8**	%	0.10	0.10	1		10/29/13 16:21		

Sample: S W **Lab ID: 4087472006** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 20:04		W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 20:04	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 20:04	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:04	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		1	10/30/13 07:46	10/30/13 20:04	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.0**	%	0.10	0.10	1		10/29/13 16:21		

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4087472

Sample: W N **Lab ID: 4087472007** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 20:30		W
1,2,4-Trimethylbenzene	**32.4J**	ug/kg	75.1	31.3	1	10/30/13 07:46	10/30/13 20:30	95-63-6	
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 20:30	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 20:30	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:30	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1	10/30/13 07:46	10/30/13 20:30	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.1**	%	0.10	0.10	1		10/29/13 16:21		

Sample: W S **Lab ID: 4087472008** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 20:56		W
1,2,4-Trimethylbenzene	**31.8J**	ug/kg	75.6	31.5	1	10/30/13 07:46	10/30/13 20:56	95-63-6	
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 20:56	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 20:56	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 20:56	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1	10/30/13 07:46	10/30/13 20:56	98-08-8	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.6**	%	0.10	0.10	1		10/29/13 16:21		

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4087472

Sample: TRIP BLANK **Lab ID: 4087472009** Collected: 10/24/13 00:00 Received: 10/29/13 07:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	71-43-2	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	100-41-4	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	1634-04-4	W
Naphthalene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	91-20-3	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	108-88-3	W
Total Trimethylbenzenes	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 21:47		W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	108-67-8	W
Xylene (Total)	**<75.0**	ug/kg	180	75.0	1	10/30/13 07:46	10/30/13 21:47	1330-20-7	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	10/30/13 07:46	10/30/13 21:47	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	10/30/13 07:46	10/30/13 21:47	95-47-6	W
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1	10/30/13 07:46	10/30/13 21:47	98-08-8	

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QUALITY CONTROL DATA

Project: JUMP RIVER
Pace Project No.: 4087472

QC Batch: GCV/11326 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 4087472001, 4087472002, 4087472003, 4087472004, 4087472005, 4087472006, 4087472007, 4087472008, 4087472009

METHOD BLANK: 884593 Matrix: Solid
Associated Lab Samples: 4087472001, 4087472002, 4087472003, 4087472004, 4087472005, 4087472006, 4087472007, 4087472008, 4087472009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	10/30/13 16:40	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	10/30/13 16:40	
Benzene	ug/kg	<25.0	60.0	10/30/13 16:40	
Ethylbenzene	ug/kg	<25.0	60.0	10/30/13 16:40	
m&p-Xylene	ug/kg	<50.0	120	10/30/13 16:40	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	10/30/13 16:40	
Naphthalene	ug/kg	<25.0	60.0	10/30/13 16:40	
o-Xylene	ug/kg	<25.0	60.0	10/30/13 16:40	
Toluene	ug/kg	<25.0	60.0	10/30/13 16:40	
Total Trimethylbenzenes	ug/kg	<50.0	120	10/30/13 16:40	
Xylene (Total)	ug/kg	<75.0	180	10/30/13 16:40	
a,a,a-Trifluorotoluene (S)	%	101	80-120	10/30/13 16:40	

LABORATORY CONTROL SAMPLE & LCSD: 884594 884595

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1050	1060	105	106	80-120	1	20	
1,3,5-Trimethylbenzene	ug/kg	1000	999	1010	100	101	80-120	1	20	
Benzene	ug/kg	1000	1020	1020	102	102	80-120	0	20	
Ethylbenzene	ug/kg	1000	1040	1050	104	105	80-120	1	20	
m&p-Xylene	ug/kg	2000	2070	2090	104	104	80-120	1	20	
Methyl-tert-butyl ether	ug/kg	1000	1030	1000	103	100	80-120	3	20	
Naphthalene	ug/kg	1000	995	1020	100	102	80-120	3	20	
o-Xylene	ug/kg	1000	1010	1020	101	102	80-120	1	20	
Toluene	ug/kg	1000	1010	1020	101	102	80-120	1	20	
Total Trimethylbenzenes	ug/kg	2000	2050	2080	103	104	80-120	1	20	
Xylene (Total)	ug/kg	3000	3080	3110	103	104	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				104	103	80-120			

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QUALITY CONTROL DATA

Project: JUMP RIVER
Pace Project No.: 4087472

QC Batch: PMST/9084 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 4087472001, 4087472002, 4087472003, 4087472004, 4087472005, 4087472006, 4087472007, 4087472008

SAMPLE DUPLICATE: 884442

Parameter	Units	4087463003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.9	6.9	0	10	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JUMP RIVER
Pace Project No.: 4087472

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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

W Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JUMP RIVER
Pace Project No.: 4087472

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4087472001	N E	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472002	N W	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472003	E N	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472004	E S	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472005	S E	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472006	S W	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472007	W N	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472008	W S	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472009	TRIP BLANK	TPH GRO/PVOC WI ext.	GCV/11326	WI MOD GRO	GCV/11327
4087472001	N E	ASTM D2974-87	PMST/9084		
4087472002	N W	ASTM D2974-87	PMST/9084		
4087472003	E N	ASTM D2974-87	PMST/9084		
4087472004	E S	ASTM D2974-87	PMST/9084		
4087472005	S E	ASTM D2974-87	PMST/9084		
4087472006	S W	ASTM D2974-87	PMST/9084		
4087472007	W N	ASTM D2974-87	PMST/9084		
4087472008	W S	ASTM D2974-87	PMST/9084		

WO#: 4087472

4087472

4087472 MAT

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CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	Meridian
Branch/Location:	
Project Contact:	Ken Shimko
Phone:	715 579 0723
Project Number:	
Project Name:	Jump River
Project State:	WI
Sampled By (Print):	Ken Shimko
Sampled By (Sign):	
PO #:	Regulatory Program:

*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

Mail To Contact:	SAME
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PVOC + Naph	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	NE	10/24	(E)	S			X		1-40zpA 1-40mLF	
002	NW									
003	EW									
004	ES									
005	SE									
006	SW									
007	WW									
008	WS									
009	*tripblank									
	*received in Shipment, added to COC by lab. MH 10/29/13									

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/28/13 10am	Dunham	10/25/13 10:-2
Dunham	10/29/13 0745	Mary Mt Pace CB	10/29/13 0745

PACE Project No. 4087472

Receipt Temp = 20.1 °C

Sample Receipt pH OK / Adjusted

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

Version 6.0 06/14/06

C019a(27Jun2006)

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Sample Condition Upon Receipt

Client Name: Meridian Project # 4087472

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace Other Dunham

Tracking #: 6296680

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 Ziploc

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

Cooler Temperature Uncorr: 2.01 /Corr: Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☒ yes ☐ no

Person examining contents:
Date: 10/29/13
Initials: MH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics. OTHER:	☐Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution: ☒ trip blank received in shipment and added to COC by lab. mH 10/29/13
received 4 empty 40zp and 40mlv mH 10/29/13

Project Manager Review: Date: 10-29-13

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December 10, 2013

Kennith Shimko
Meridain Environmental Consulting, LLC
2711 North Elco Rd
Fall Creek, WI 54742

RE: Project: JUMP RIVER
Pace Project No.: 4089510

Dear Kennith Shimko:
Enclosed are the analytical results for sample(s) received by the laboratory on December 05, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: JUMP RIVER
Pace Project No.: 4089510

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
New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: JUMP RIVER
Pace Project No.: 4089510

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4089510001	MW-1	Water	12/03/13 00:00	12/05/13 08:00
4089510002	MW-2	Water	12/03/13 00:00	12/05/13 08:00
4089510003	MW-3	Water	12/03/13 00:00	12/05/13 08:00
4089510004	MW-5	Water	12/03/13 00:00	12/05/13 08:00
4089510005	MW-6	Water	12/03/13 00:00	12/05/13 08:00
4089510006	MW-7	Water	12/03/13 00:00	12/05/13 08:00
4089510007	MW-8A	Water	12/03/13 00:00	12/05/13 08:00
4089510008	MW-8B	Water	12/03/13 00:00	12/05/13 08:00
4089510009	MW-9A	Water	12/03/13 00:00	12/05/13 08:00
4089510010	MW-9B	Water	12/03/13 00:00	12/05/13 08:00
4089510011	8887 BRIDGE	Water	12/03/13 00:00	12/05/13 08:00
4089510012	MASON	Water	12/03/13 00:00	12/05/13 08:00
4089510013	BAR	Water	12/03/13 00:00	12/05/13 08:00
4089510014	14789	Water	12/03/13 00:00	12/05/13 08:00
4089510015	8891	Water	12/03/13 00:00	12/05/13 08:00
4089510016	14767	Water	12/03/13 00:00	12/05/13 08:00
4089510017	COMM CTR	Water	12/03/13 00:00	12/05/13 08:00
4089510018	8890 BRIDGE	Water	12/03/13 00:00	12/05/13 08:00
4089510019	TRIP BLANKS	Water	12/03/13 00:00	12/05/13 08:00

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SAMPLE ANALYTE COUNT

Project: JUMP RIVER
Pace Project No.: 4089510

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4089510001	MW-1	WI MOD GRO	PMS	9	PASI-G
4089510002	MW-2	WI MOD GRO	PMS	9	PASI-G
4089510003	MW-3	WI MOD GRO	PMS	9	PASI-G
4089510004	MW-5	WI MOD GRO	PMS	9	PASI-G
4089510005	MW-6	WI MOD GRO	PMS	9	PASI-G
4089510006	MW-7	WI MOD GRO	PMS	9	PASI-G
4089510007	MW-8A	WI MOD GRO	PMS	9	PASI-G
4089510008	MW-8B	WI MOD GRO	PMS	9	PASI-G
4089510009	MW-9A	WI MOD GRO	PMS	9	PASI-G
4089510010	MW-9B	WI MOD GRO	PMS	9	PASI-G
4089510011	8887 BRIDGE	WI MOD GRO	PMS	9	PASI-G
4089510012	MASON	WI MOD GRO	PMS	9	PASI-G
4089510013	BAR	WI MOD GRO	PMS	9	PASI-G
4089510014	14789	WI MOD GRO	PMS	9	PASI-G
4089510015	8891	WI MOD GRO	PMS	9	PASI-G
4089510016	14767	WI MOD GRO	PMS	9	PASI-G
4089510017	COMM CTR	WI MOD GRO	PMS	9	PASI-G
4089510018	8890 BRIDGE	WI MOD GRO	PMS	9	PASI-G
4089510019	TRIP BLANKS	WI MOD GRO	PMS	9	PASI-G

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PROJECT NARRATIVE

Project: JUMP RIVER
Pace Project No.: 4089510

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: Meridian Environmental Consulting, LLC
Date: December 10, 2013

General Information:
19 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

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.

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: MW-1 **Lab ID: 4089510001** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**278**	ug/L	10.0	3.4	10		12/09/13 11:01	71-43-2	
Ethylbenzene	**367**	ug/L	10.0	3.4	10		12/09/13 11:01	100-41-4	
Methyl-tert-butyl ether	**8.7J**	ug/L	10.0	3.7	10		12/09/13 11:01	1634-04-4	
Naphthalene	**62.6**	ug/L	10.0	3.7	10		12/09/13 11:01	91-20-3	
Toluene	**476**	ug/L	10.0	3.4	10		12/09/13 11:01	108-88-3	
1,2,4-Trimethylbenzene	**382**	ug/L	10.0	3.3	10		12/09/13 11:01	95-63-6	
1,3,5-Trimethylbenzene	**66.2**	ug/L	10.0	3.6	10		12/09/13 11:01	108-67-8	
Xylene (Total)	**608**	ug/L	30.0	10.3	10		12/09/13 11:01	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		10		12/09/13 11:01	98-08-8	

Sample: MW-2 **Lab ID: 4089510002** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**68.3**	ug/L	5.0	1.7	5		12/06/13 17:24	71-43-2	
Ethylbenzene	**127**	ug/L	5.0	1.7	5		12/06/13 17:24	100-41-4	
Methyl-tert-butyl ether	**12.7**	ug/L	5.0	1.9	5		12/06/13 17:24	1634-04-4	
Naphthalene	**53.6**	ug/L	5.0	1.9	5		12/06/13 17:24	91-20-3	
Toluene	**75.8**	ug/L	5.0	1.7	5		12/06/13 17:24	108-88-3	
1,2,4-Trimethylbenzene	**203**	ug/L	5.0	1.7	5		12/06/13 17:24	95-63-6	
1,3,5-Trimethylbenzene	**60.2**	ug/L	5.0	1.8	5		12/06/13 17:24	108-67-8	
Xylene (Total)	**276**	ug/L	15.0	5.1	5		12/06/13 17:24	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	109	%	80-120		5		12/06/13 17:24	98-08-8	

Sample: MW-3 **Lab ID: 4089510003** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**662**	ug/L	100	33.5	100		12/06/13 17:53	71-43-2	
Ethylbenzene	**2300**	ug/L	100	34.0	100		12/06/13 17:53	100-41-4	
Methyl-tert-butyl ether	**<37.1**	ug/L	100	37.1	100		12/06/13 17:53	1634-04-4	
Naphthalene	**577**	ug/L	100	37.1	100		12/06/13 17:53	91-20-3	
Toluene	**5850**	ug/L	100	34.4	100		12/06/13 17:53	108-88-3	
1,2,4-Trimethylbenzene	**3270**	ug/L	100	33.2	100		12/06/13 17:53	95-63-6	
1,3,5-Trimethylbenzene	**998**	ug/L	100	35.6	100		12/06/13 17:53	108-67-8	
Xylene (Total)	**9720**	ug/L	300	103	100		12/06/13 17:53	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		100		12/06/13 17:53	98-08-8	

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: MW-5 **Lab ID: 4089510004** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**103**	ug/L	25.0	8.4	25		12/06/13 15:29	71-43-2	
Ethylbenzene	**770**	ug/L	25.0	8.5	25		12/06/13 15:29	100-41-4	
Methyl-tert-butyl ether	**<9.3**	ug/L	25.0	9.3	25		12/06/13 15:29	1634-04-4	
Naphthalene	**450**	ug/L	25.0	9.3	25		12/06/13 15:29	91-20-3	
Toluene	**223**	ug/L	25.0	8.6	25		12/06/13 15:29	108-88-3	
1,2,4-Trimethylbenzene	**2460**	ug/L	25.0	8.3	25		12/06/13 15:29	95-63-6	
1,3,5-Trimethylbenzene	**720**	ug/L	25.0	8.9	25		12/06/13 15:29	108-67-8	
Xylene (Total)	**2050**	ug/L	75.0	25.7	25		12/06/13 15:29	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		25		12/06/13 15:29	98-08-8	

Sample: MW-6 **Lab ID: 4089510005** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**41.5**	ug/L	25.0	8.4	25		12/06/13 18:22	71-43-2	
Ethylbenzene	**747**	ug/L	25.0	8.5	25		12/06/13 18:22	100-41-4	
Methyl-tert-butyl ether	**10.7J**	ug/L	25.0	9.3	25		12/06/13 18:22	1634-04-4	
Naphthalene	**282**	ug/L	25.0	9.3	25		12/06/13 18:22	91-20-3	
Toluene	**557**	ug/L	25.0	8.6	25		12/06/13 18:22	108-88-3	
1,2,4-Trimethylbenzene	**2050**	ug/L	25.0	8.3	25		12/06/13 18:22	95-63-6	
1,3,5-Trimethylbenzene	**661**	ug/L	25.0	8.9	25		12/06/13 18:22	108-67-8	
Xylene (Total)	**2490**	ug/L	75.0	25.7	25		12/06/13 18:22	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		25		12/06/13 18:22	98-08-8	

Sample: MW-7 **Lab ID: 4089510006** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**18.8**	ug/L	2.5	0.84	2.5		12/06/13 18:50	71-43-2	
Ethylbenzene	**85.6**	ug/L	2.5	0.85	2.5		12/06/13 18:50	100-41-4	
Methyl-tert-butyl ether	**6.7**	ug/L	2.5	0.93	2.5		12/06/13 18:50	1634-04-4	
Naphthalene	**33.2**	ug/L	2.5	0.93	2.5		12/06/13 18:50	91-20-3	
Toluene	**19.7**	ug/L	2.5	0.86	2.5		12/06/13 18:50	108-88-3	
1,2,4-Trimethylbenzene	**116**	ug/L	2.5	0.83	2.5		12/06/13 18:50	95-63-6	
1,3,5-Trimethylbenzene	**33.4**	ug/L	2.5	0.89	2.5		12/06/13 18:50	108-67-8	
Xylene (Total)	**131**	ug/L	7.5	2.6	2.5		12/06/13 18:50	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	116	%	80-120		2.5		12/06/13 18:50	98-08-8	

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: MW-8A **Lab ID: 4089510007** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 19:19	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 19:19	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 19:19	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 19:19	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 19:19	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 19:19	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 19:19	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 19:19	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 19:19	98-08-8	

Sample: MW-8B **Lab ID: 4089510008** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 19:47	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 19:47	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 19:47	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 19:47	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 19:47	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 19:47	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 19:47	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 19:47	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		12/06/13 19:47	98-08-8	

Sample: MW-9A **Lab ID: 4089510009** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**1.9**	ug/L	1.0	0.34	1		12/06/13 20:16	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 20:16	100-41-4	
Methyl-tert-butyl ether	**1.7**	ug/L	1.0	0.37	1		12/06/13 20:16	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 20:16	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 20:16	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 20:16	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 20:16	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 20:16	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	109	%	80-120		1		12/06/13 20:16	98-08-8	

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: MW-9B **Lab ID: 4089510010** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**2.7**	ug/L	1.0	0.34	1		12/06/13 20:45	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 20:45	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 20:45	1634-04-4	
Naphthalene	**1.1**	ug/L	1.0	0.37	1		12/06/13 20:45	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 20:45	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 20:45	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 20:45	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 20:45	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 20:45	98-08-8	

Sample: 8887 BRIDGE **Lab ID: 4089510011** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 10:42	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 10:42	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 10:42	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 10:42	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 10:42	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 10:42	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 10:42	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 10:42	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	103	%	80-120		1		12/06/13 10:42	98-08-8	

Sample: MASON **Lab ID: 4089510012** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 11:11	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 11:11	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 11:11	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 11:11	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 11:11	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 11:11	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 11:11	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 11:11	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 11:11	98-08-8	

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: BAR **Lab ID: 4089510013** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 11:40	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 11:40	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 11:40	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 11:40	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 11:40	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 11:40	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 11:40	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 11:40	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 11:40	98-08-8	

Sample: 14789 **Lab ID: 4089510014** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**0.40J**	ug/L	1.0	0.34	1		12/06/13 12:08	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 12:08	100-41-4	
Methyl-tert-butyl ether	**1.0**	ug/L	1.0	0.37	1		12/06/13 12:08	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 12:08	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 12:08	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 12:08	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 12:08	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 12:08	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 12:08	98-08-8	

Sample: 8891 **Lab ID: 4089510015** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**2.0**	ug/L	1.0	0.34	1		12/06/13 12:37	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 12:37	100-41-4	
Methyl-tert-butyl ether	**1.4**	ug/L	1.0	0.37	1		12/06/13 12:37	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 12:37	91-20-3	
Toluene	**0.42J**	ug/L	1.0	0.34	1		12/06/13 12:37	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 12:37	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 12:37	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 12:37	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 12:37	98-08-8	

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: 14767 **Lab ID: 4089510016** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 13:06	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 13:06	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 13:06	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 13:06	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 13:06	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 13:06	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 13:06	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 13:06	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		12/06/13 13:06	98-08-8	

Sample: COMM CTR **Lab ID: 4089510017** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 13:35	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 13:35	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 13:35	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 13:35	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 13:35	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 13:35	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 13:35	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 13:35	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		12/06/13 13:35	98-08-8	

Sample: 8890 BRIDGE **Lab ID: 4089510018** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 14:03	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 14:03	100-41-4	
Methyl-tert-butyl ether	**0.97J**	ug/L	1.0	0.37	1		12/06/13 14:03	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 14:03	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 14:03	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 14:03	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 14:03	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 14:03	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 14:03	98-08-8	

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4089510

Sample: TRIP BLANKS **Lab ID: 4089510019** Collected: 12/03/13 00:00 Received: 12/05/13 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 14:32	71-43-2	
Ethylbenzene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 14:32	100-41-4	
Methyl-tert-butyl ether	**<0.37**	ug/L	1.0	0.37	1		12/06/13 14:32	1634-04-4	
Naphthalene	**<0.37**	ug/L	1.0	0.37	1		12/06/13 14:32	91-20-3	
Toluene	**<0.34**	ug/L	1.0	0.34	1		12/06/13 14:32	108-88-3	
1,2,4-Trimethylbenzene	**<0.33**	ug/L	1.0	0.33	1		12/06/13 14:32	95-63-6	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		12/06/13 14:32	108-67-8	
Xylene (Total)	**<1.0**	ug/L	3.0	1.0	1		12/06/13 14:32	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		12/06/13 14:32	98-08-8	

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QUALITY CONTROL DATA

Project: JUMP RIVER
Pace Project No.: 4089510

QC Batch: GCV/11576 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4089510001, 4089510002, 4089510003, 4089510004, 4089510005, 4089510006, 4089510007, 4089510008, 4089510009, 4089510010, 4089510011, 4089510012, 4089510013, 4089510014, 4089510015, 4089510016, 4089510017, 4089510018, 4089510019

METHOD BLANK: 907199 Matrix: Water
Associated Lab Samples: 4089510001, 4089510002, 4089510003, 4089510004, 4089510005, 4089510006, 4089510007, 4089510008, 4089510009, 4089510010, 4089510011, 4089510012, 4089510013, 4089510014, 4089510015, 4089510016, 4089510017, 4089510018, 4089510019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.33	1.0	12/06/13 09:16	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	12/06/13 09:16	
Benzene	ug/L	<0.34	1.0	12/06/13 09:16	
Ethylbenzene	ug/L	<0.34	1.0	12/06/13 09:16	
Methyl-tert-butyl ether	ug/L	<0.37	1.0	12/06/13 09:16	
Naphthalene	ug/L	<0.37	1.0	12/06/13 09:16	
Toluene	ug/L	<0.34	1.0	12/06/13 09:16	
Xylene (Total)	ug/L	<1.0	3.0	12/06/13 09:16	
a,a,a-Trifluorotoluene (S)	%	102	80-120	12/06/13 09:16	

LABORATORY CONTROL SAMPLE & LCSD: 907200 907201

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	19.9	99	100	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	19.8	19.9	99	99	80-120	1	20	
Benzene	ug/L	20	19.7	19.4	98	97	80-120	2	20	
Ethylbenzene	ug/L	20	19.8	19.7	99	99	80-120	1	20	
Methyl-tert-butyl ether	ug/L	20	18.7	19.1	94	95	80-120	2	20	
Naphthalene	ug/L	20	19.2	19.7	96	99	80-120	3	20	
Toluene	ug/L	20	19.7	19.4	98	97	80-120	1	20	
Xylene (Total)	ug/L	60	59.5	59.0	99	98	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				100	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 907380 907381

Parameter	Units	4089510004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	2460	500	500	3250	3160	157	140	26-200	3	20	
1,3,5-Trimethylbenzene	ug/L	720	500	500	1350	1330	126	121	70-160	2	20	
Benzene	ug/L	103	500	500	634	629	106	105	49-165	1	20	
Ethylbenzene	ug/L	770	500	500	1360	1340	119	115	59-156	2	20	
Methyl-tert-butyl ether	ug/L	<9.3	500	500	496	475	99	95	80-127	4	20	
Naphthalene	ug/L	450	500	500	1000	971	110	104	71-130	3	20	
Toluene	ug/L	223	500	500	764	761	108	108	80-135	0	20	
Xylene (Total)	ug/L	2050	1500	1500	3810	3750	117	113	48-165	2	20	
a,a,a-Trifluorotoluene (S)	%						102	100	80-120			

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JUMP RIVER
Pace Project No.: 4089510

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JUMP RIVER
Pace Project No.: 4089510

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4089510001	MW-1	WI MOD GRO	GCV/11576		
4089510002	MW-2	WI MOD GRO	GCV/11576		
4089510003	MW-3	WI MOD GRO	GCV/11576		
4089510004	MW-5	WI MOD GRO	GCV/11576		
4089510005	MW-6	WI MOD GRO	GCV/11576		
4089510006	MW-7	WI MOD GRO	GCV/11576		
4089510007	MW-8A	WI MOD GRO	GCV/11576		
4089510008	MW-8B	WI MOD GRO	GCV/11576		
4089510009	MW-9A	WI MOD GRO	GCV/11576		
4089510010	MW-9B	WI MOD GRO	GCV/11576		
4089510011	8887 BRIDGE	WI MOD GRO	GCV/11576		
4089510012	MASON	WI MOD GRO	GCV/11576		
4089510013	BAR	WI MOD GRO	GCV/11576		
4089510014	14789	WI MOD GRO	GCV/11576		
4089510015	8891	WI MOD GRO	GCV/11576		
4089510016	14767	WI MOD GRO	GCV/11576		
4089510017	COMM CTR	WI MOD GRO	GCV/11576		
4089510018	8890 BRIDGE	WI MOD GRO	GCV/11576		
4089510019	TRIP BLANKS	WI MOD GRO	GCV/11576		

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

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CHAIN OF CUSTODY

4089510

JB1

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

(Please Print Clearly)	
Company Name:	Meridian Env Cnty
Branch/Location:	
Project Contact:	Ken Shimko
Phone:	715 579 0723
Project Number:	
Project Name:	Jump River
Project State:	WI
Sampled By (Print):	Ken Shimko
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ken Shimko
Mail To Company:	Meridian
Mail To Address:	2711 N. Elco Rd 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 DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PVOC + Naph	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW-1	12/3		W			X		3-40mlB	
002	MW-2									
003	MW-3									
004	MW-5									
005	-6									
006	-7									
007	-8A									
008	-8B									
009	-9A									
010	-9B									
011	8887 Bridge									
012	Mason									
013	Bar									

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
See Pg.		Two	
Dunham	12/5/13 0800	Mary Kate PACE GB	12/5/13 0800

PACE Project No.: 4089510

Receipt Temp = 2.0 °C

Sample Receipt pH OK / Adjusted

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

Version 6.0 06/14/06

C019a(27-Jun2006)

ORIGINAL

4089510

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

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	
Branch/Location:	
Project Contact:	
Phone:	
Project Number:	
Project Name:	
Project State:	
Sampled By (Print):	
Sampled By (Sign):	
PO #:	Regulatory Program:

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

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

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

Matrix Codes
A = Air, 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 DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PYOCTmagh	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
014	14789	12/3		W			X		3-40mL B	
015	8891	↓		↓			↓		↓	
016	14767									
017	Comm Ctr									
018	8890 Bridge	↓		↓			↓		↓	
019	*trip blanks								4-40mL B	
							PAGE TWO			
	* received in shipment, added to COC by lab mH 12/5/13									

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	
Transmit Prelim Rush Results by (complete what you want):	
Email #1:	
Email #2:	
Telephone:	
Fax:	

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	12/4/13 10 am	Dunham	12/4/13 10 am
Dunham	12/5/13 0800	[signature] MaryM Pace LB	12/5/13 0800
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.

Receipt Temp = R01 °C

Sample Receipt pH OK / Adjusted

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

C019a(27Jun2006)

Version 6.0 06/14/06

Sample Condition Upon Receipt

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Green Bay, WI 54302

Project #: WO# : 4089510

4089510

Client Name: Meridian Env City

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Dunham

Tracking #: 6533104

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 packing peanuts

Thermometer Used N/A Type of Ice: Wet (Blue) Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20.1 /Corr: Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 12/5/13
Initials: MH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2. only first page, mH 12/5/13
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3. only second page mH 12/5/13
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12. only By ID No date on samples mH 12/5/13
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	14.
Trip Blank Present:	☑Yes ☐No ☐N/A	15.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 313, 315		

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

Person Contacted: Date/Time:

Comments/ Resolution: # recieved in shipment, added to coc by lab mH 12/5/13

Project Manager Review: Date: 12/5/13

F-GB-C-031-Rev.02 (28Oct2013) SCUR Form

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April 21, 2014

Kennith Shimko
Meridain Environmental Consulting, LLC
2711 North Elco Rd
Fall Creek, WI 54742

RE: Project: JUMP RIVER
Pace Project No.: 4094908

Dear Kennith Shimko:
Enclosed are the analytical results for sample(s) received by the laboratory on April 17, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: JUMP RIVER
Pace Project No.: 4094908

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
New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: JUMP RIVER
Pace Project No.: 4094908

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4094908001	MW-1	Water	04/15/14 00:00	04/17/14 07:30
4094908002	MW-2	Water	04/15/14 00:00	04/17/14 07:30
4094908003	MW-3	Water	04/15/14 00:00	04/17/14 07:30
4094908004	MW-5	Water	04/15/14 00:00	04/17/14 07:30
4094908005	MW-6	Water	04/15/14 00:00	04/17/14 07:30
4094908006	MW-7	Water	04/15/14 00:00	04/17/14 07:30
4094908007	MW-8A	Water	04/15/14 00:00	04/17/14 07:30
4094908008	MW-8B	Water	04/15/14 00:00	04/17/14 07:30
4094908009	MW-9A	Water	04/15/14 00:00	04/17/14 07:30
4094908010	MW-9B	Water	04/15/14 00:00	04/17/14 07:30
4094908011	BAR	Water	04/15/14 00:00	04/17/14 07:30
4094908012	COM CTR	Water	04/15/14 00:00	04/17/14 07:30
4094908013	14767	Water	04/15/14 00:00	04/17/14 07:30
4094908014	14778	Water	04/15/14 00:00	04/17/14 07:30
4094908015	14789	Water	04/15/14 00:00	04/17/14 07:30
4094908016	8887	Water	04/15/14 00:00	04/17/14 07:30
4094908017	8890	Water	04/15/14 00:00	04/17/14 07:30
4094908018	8891	Water	04/15/14 00:00	04/17/14 07:30
4094908019	8910	Water	04/15/14 00:00	04/17/14 07:30
4094908020	TRIP BLANK	Water	04/15/14 00:00	04/17/14 07:30

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SAMPLE ANALYTE COUNT

Project: JUMP RIVER
Pace Project No.: 4094908

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4094908001	MW-1	WI MOD GRO	LCF	9	PASI-G
4094908002	MW-2	WI MOD GRO	LCF	9	PASI-G
4094908003	MW-3	WI MOD GRO	LCF	9	PASI-G
4094908004	MW-5	WI MOD GRO	LCF	9	PASI-G
4094908005	MW-6	WI MOD GRO	LCF	9	PASI-G
4094908006	MW-7	WI MOD GRO	LCF	9	PASI-G
4094908007	MW-8A	WI MOD GRO	LCF	9	PASI-G
4094908008	MW-8B	WI MOD GRO	LCF	9	PASI-G
4094908009	MW-9A	WI MOD GRO	LCF	9	PASI-G
4094908010	MW-9B	WI MOD GRO	LCF	9	PASI-G
4094908011	BAR	WI MOD GRO	LCF	9	PASI-G
4094908012	COM CTR	WI MOD GRO	LCF	9	PASI-G
4094908013	14767	WI MOD GRO	LCF	9	PASI-G
4094908014	14778	WI MOD GRO	LCF	9	PASI-G
4094908015	14789	WI MOD GRO	LCF	9	PASI-G
4094908016	8887	WI MOD GRO	LCF	9	PASI-G
4094908017	8890	WI MOD GRO	LCF	9	PASI-G
4094908018	8891	WI MOD GRO	LCF	9	PASI-G
4094908019	8910	WI MOD GRO	LCF	9	PASI-G
4094908020	TRIP BLANK	WI MOD GRO	LCF	9	PASI-G

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PROJECT NARRATIVE

Project: JUMP RIVER
Pace Project No.: 4094908

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: Meridian Environmental Consulting, LLC
Date: April 21, 2014

General Information:
20 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

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.

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: MW-1 **Lab ID: 4094908001** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**219**	ug/L	10.0	4.0	10		04/18/14 21:35	71-43-2	
Ethylbenzene	**439**	ug/L	10.0	3.9	10		04/18/14 21:35	100-41-4	
Methyl-tert-butyl ether	**11.2**	ug/L	10.0	4.8	10		04/18/14 21:35	1634-04-4	
Naphthalene	**101**	ug/L	10.0	4.2	10		04/18/14 21:35	91-20-3	
Toluene	**842**	ug/L	10.0	3.9	10		04/18/14 21:35	108-88-3	
1,2,4-Trimethylbenzene	**648**	ug/L	10.0	4.2	10		04/18/14 21:35	95-63-6	
1,3,5-Trimethylbenzene	**145**	ug/L	10.0	4.2	10		04/18/14 21:35	108-67-8	
Xylene (Total)	**1440**	ug/L	30.0	12.5	10		04/18/14 21:35	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	106	%	80-120		10		04/18/14 21:35	98-08-8	

Sample: MW-2 **Lab ID: 4094908002** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**72.3**	ug/L	5.0	2.0	5		04/18/14 21:07	71-43-2	
Ethylbenzene	**295**	ug/L	5.0	2.0	5		04/18/14 21:07	100-41-4	
Methyl-tert-butyl ether	**16.4**	ug/L	5.0	2.4	5		04/18/14 21:07	1634-04-4	
Naphthalene	**119**	ug/L	5.0	2.1	5		04/18/14 21:07	91-20-3	
Toluene	**175**	ug/L	5.0	1.9	5		04/18/14 21:07	108-88-3	
1,2,4-Trimethylbenzene	**617**	ug/L	5.0	2.1	5		04/18/14 21:07	95-63-6	
1,3,5-Trimethylbenzene	**194**	ug/L	5.0	2.1	5		04/18/14 21:07	108-67-8	
Xylene (Total)	**750**	ug/L	15.0	6.2	5		04/18/14 21:07	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-120		5		04/18/14 21:07	98-08-8	

Sample: MW-3 **Lab ID: 4094908003** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**663**	ug/L	100	39.6	100		04/18/14 22:33	71-43-2	
Ethylbenzene	**2200**	ug/L	100	39.3	100		04/18/14 22:33	100-41-4	
Methyl-tert-butyl ether	**<48.5**	ug/L	100	48.5	100		04/18/14 22:33	1634-04-4	
Naphthalene	**567**	ug/L	100	42.4	100		04/18/14 22:33	91-20-3	
Toluene	**5520**	ug/L	100	38.8	100		04/18/14 22:33	108-88-3	
1,2,4-Trimethylbenzene	**2870**	ug/L	100	41.8	100		04/18/14 22:33	95-63-6	
1,3,5-Trimethylbenzene	**888**	ug/L	100	41.6	100		04/18/14 22:33	108-67-8	
Xylene (Total)	**9100**	ug/L	300	125	100		04/18/14 22:33	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		100		04/18/14 22:33	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: MW-5 **Lab ID: 4094908004** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**82.5**	ug/L	25.0	9.9	25		04/18/14 22:04	71-43-2	
Ethylbenzene	**890**	ug/L	25.0	9.8	25		04/18/14 22:04	100-41-4	
Methyl-tert-butyl ether	**<12.1**	ug/L	25.0	12.1	25		04/18/14 22:04	1634-04-4	
Naphthalene	**501**	ug/L	25.0	10.6	25		04/18/14 22:04	91-20-3	
Toluene	**201**	ug/L	25.0	9.7	25		04/18/14 22:04	108-88-3	
1,2,4-Trimethylbenzene	**3200**	ug/L	25.0	10.4	25		04/18/14 22:04	95-63-6	
1,3,5-Trimethylbenzene	**968**	ug/L	25.0	10.4	25		04/18/14 22:04	108-67-8	
Xylene (Total)	**2330**	ug/L	75.0	31.2	25		04/18/14 22:04	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		25		04/18/14 22:04	98-08-8	

Sample: MW-6 **Lab ID: 4094908005** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**20.4**	ug/L	20.0	7.9	20		04/18/14 18:43	71-43-2	
Ethylbenzene	**343**	ug/L	20.0	7.9	20		04/18/14 18:43	100-41-4	
Methyl-tert-butyl ether	**<9.7**	ug/L	20.0	9.7	20		04/18/14 18:43	1634-04-4	
Naphthalene	**103**	ug/L	20.0	8.5	20		04/18/14 18:43	91-20-3	
Toluene	**430**	ug/L	20.0	7.8	20		04/18/14 18:43	108-88-3	
1,2,4-Trimethylbenzene	**1080**	ug/L	20.0	8.4	20		04/18/14 18:43	95-63-6	
1,3,5-Trimethylbenzene	**336**	ug/L	20.0	8.3	20		04/18/14 18:43	108-67-8	
Xylene (Total)	**1280**	ug/L	60.0	24.9	20		04/18/14 18:43	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		20		04/18/14 18:43	98-08-8	

Sample: MW-7 **Lab ID: 4094908006** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**12.4**	ug/L	2.5	0.99	2.5		04/18/14 20:38	71-43-2	
Ethylbenzene	**53.4**	ug/L	2.5	0.98	2.5		04/18/14 20:38	100-41-4	
Methyl-tert-butyl ether	**9.3**	ug/L	2.5	1.2	2.5		04/18/14 20:38	1634-04-4	
Naphthalene	**19.8**	ug/L	2.5	1.1	2.5		04/18/14 20:38	91-20-3	
Toluene	**13.5**	ug/L	2.5	0.97	2.5		04/18/14 20:38	108-88-3	
1,2,4-Trimethylbenzene	**80.7**	ug/L	2.5	1.0	2.5		04/18/14 20:38	95-63-6	
1,3,5-Trimethylbenzene	**30.9**	ug/L	2.5	1.0	2.5		04/18/14 20:38	108-67-8	
Xylene (Total)	**69.8**	ug/L	7.5	3.1	2.5		04/18/14 20:38	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		2.5		04/18/14 20:38	98-08-8	

REPORT OF LABORATORY ANALYSIS

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

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: MW-8A **Lab ID: 4094908007** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 12:59	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 12:59	100-41-4	
Methyl-tert-butyl ether	**3.4**	ug/L	1.0	0.48	1		04/18/14 12:59	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 12:59	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 12:59	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 12:59	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 12:59	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 12:59	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	109	%	80-120		1		04/18/14 12:59	98-08-8	

Sample: MW-8B **Lab ID: 4094908008** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 13:28	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 13:28	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/18/14 13:28	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 13:28	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 13:28	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 13:28	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 13:28	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 13:28	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-120		1		04/18/14 13:28	98-08-8	

Sample: MW-9A **Lab ID: 4094908009** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 13:57	71-43-2	
Ethylbenzene	**0.97J**	ug/L	1.0	0.39	1		04/18/14 13:57	100-41-4	
Methyl-tert-butyl ether	**2.0**	ug/L	1.0	0.48	1		04/18/14 13:57	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 13:57	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 13:57	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 13:57	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 13:57	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 13:57	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	80-120		1		04/18/14 13:57	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: MW-9B **Lab ID: 4094908010** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**2.1**	ug/L	1.0	0.40	1		04/18/14 14:26	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 14:26	100-41-4	
Methyl-tert-butyl ether	**0.56J**	ug/L	1.0	0.48	1		04/18/14 14:26	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 14:26	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 14:26	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 14:26	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 14:26	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 14:26	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 14:26	98-08-8	

Sample: BAR **Lab ID: 4094908011** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 14:54	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 14:54	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/18/14 14:54	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 14:54	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 14:54	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 14:54	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 14:54	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 14:54	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 14:54	98-08-8	

Sample: COM CTR **Lab ID: 4094908012** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 15:23	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 15:23	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/18/14 15:23	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 15:23	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 15:23	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 15:23	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 15:23	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 15:23	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 15:23	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: 14767 **Lab ID: 4094908013** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 15:51	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 15:51	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/18/14 15:51	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 15:51	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 15:51	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 15:51	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 15:51	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 15:51	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 15:51	98-08-8	

Sample: 14778 **Lab ID: 4094908014** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/19/14 00:27	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/19/14 00:27	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/19/14 00:27	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/19/14 00:27	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/19/14 00:27	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/19/14 00:27	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/19/14 00:27	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/19/14 00:27	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/19/14 00:27	98-08-8	

Sample: 14789 **Lab ID: 4094908015** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 16:20	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 16:20	100-41-4	
Methyl-tert-butyl ether	**0.99J**	ug/L	1.0	0.48	1		04/18/14 16:20	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 16:20	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 16:20	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 16:20	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 16:20	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 16:20	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 16:20	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: 8887 **Lab ID: 4094908016** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 16:49	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 16:49	100-41-4	
Methyl-tert-butyl ether	**0.55J**	ug/L	1.0	0.48	1		04/18/14 16:49	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 16:49	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 16:49	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 16:49	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 16:49	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 16:49	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 16:49	98-08-8	

Sample: 8890 **Lab ID: 4094908017** Collected: 04/15/14 00:00 Received: 04/17/14 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**0.55J**	ug/L	1.0	0.40	1		04/18/14 23:30	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 23:30	100-41-4	
Methyl-tert-butyl ether	**1.0J**	ug/L	1.0	0.48	1		04/18/14 23:30	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 23:30	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 23:30	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 23:30	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 23:30	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 23:30	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 23:30	98-08-8	

Sample: 8891 **Lab ID: 4094908018** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 23:58	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 23:58	100-41-4	
Methyl-tert-butyl ether	**1.6**	ug/L	1.0	0.48	1		04/18/14 23:58	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 23:58	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 23:58	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 23:58	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 23:58	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 23:58	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	80-120		1		04/18/14 23:58	98-08-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JUMP RIVER
Pace Project No.: 4094908

Sample: 8910 **Lab ID: 4094908019** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/19/14 00:56	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/19/14 00:56	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/19/14 00:56	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/19/14 00:56	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/19/14 00:56	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/19/14 00:56	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/19/14 00:56	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/19/14 00:56	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/19/14 00:56	98-08-8	

Sample: TRIP BLANK **Lab ID: 4094908020** Collected: 04/15/14 00:00 Received: 04/17/14 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		04/18/14 17:17	71-43-2	
Ethylbenzene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 17:17	100-41-4	
Methyl-tert-butyl ether	**<0.48**	ug/L	1.0	0.48	1		04/18/14 17:17	1634-04-4	
Naphthalene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 17:17	91-20-3	
Toluene	**<0.39**	ug/L	1.0	0.39	1		04/18/14 17:17	108-88-3	
1,2,4-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 17:17	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/L	1.0	0.42	1		04/18/14 17:17	108-67-8	
Xylene (Total)	**<1.2**	ug/L	3.0	1.2	1		04/18/14 17:17	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-120		1		04/18/14 17:17	98-08-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: JUMP RIVER
Pace Project No.: 4094908

QC Batch: GCV/12215 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 4094908001, 4094908002, 4094908003, 4094908004, 4094908005, 4094908006, 4094908007, 4094908008, 4094908009, 4094908010, 4094908011, 4094908012, 4094908013, 4094908014, 4094908015, 4094908016, 4094908017, 4094908018, 4094908019, 4094908020

METHOD BLANK: 957521 Matrix: Water
Associated Lab Samples: 4094908001, 4094908002, 4094908003, 4094908004, 4094908005, 4094908006, 4094908007, 4094908008, 4094908009, 4094908010, 4094908011, 4094908012, 4094908013, 4094908014, 4094908015, 4094908016, 4094908017, 4094908018, 4094908019, 4094908020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.42	1.0	04/18/14 11:05	
1,3,5-Trimethylbenzene	ug/L	<0.42	1.0	04/18/14 11:05	
Benzene	ug/L	<0.40	1.0	04/18/14 11:05	
Ethylbenzene	ug/L	<0.39	1.0	04/18/14 11:05	
Methyl-tert-butyl ether	ug/L	<0.48	1.0	04/18/14 11:05	
Naphthalene	ug/L	<0.42	1.0	04/18/14 11:05	
Toluene	ug/L	<0.39	1.0	04/18/14 11:05	
Xylene (Total)	ug/L	<1.2	3.0	04/18/14 11:05	
a,a,a-Trifluorotoluene (S)	%	102	80-120	04/18/14 11:05	

LABORATORY CONTROL SAMPLE & LCSD: 957522 957523

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.5	21.3	107	107	80-120	1	20	
1,3,5-Trimethylbenzene	ug/L	20	21.0	20.8	105	104	80-120	1	20	
Benzene	ug/L	20	20.9	20.5	105	103	80-120	2	20	
Ethylbenzene	ug/L	20	21.3	20.8	106	104	80-120	2	20	
Methyl-tert-butyl ether	ug/L	20	20.8	20.3	104	102	80-120	2	20	
Naphthalene	ug/L	20	20.2	20.6	101	103	80-120	2	20	
Toluene	ug/L	20	21.2	20.8	106	104	80-120	2	20	
Xylene (Total)	ug/L	60	63.0	61.8	105	103	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				101	101	80-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 957524 957525

Parameter	Units	4094908005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	ug/L	1080	400	400	1560	1620	122	135	26-200	3	20	
1,3,5-Trimethylbenzene	ug/L	336	400	400	805	832	117	124	70-160	3	20	
Benzene	ug/L	20.4	400	400	450	451	107	108	49-165	0	20	
Ethylbenzene	ug/L	343	400	400	794	803	113	115	59-156	1	20	
Methyl-tert-butyl ether	ug/L	<9.7	400	400	412	417	103	104	80-127	1	20	
Naphthalene	ug/L	103	400	400	503	530	100	107	71-130	5	20	
Toluene	ug/L	430	400	400	874	877	111	112	80-135	0	20	
Xylene (Total)	ug/L	1280	1200	1200	2610	2660	111	115	48-165	2	20	
a,a,a-Trifluorotoluene (S)	%						100	100	80-120			

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JUMP RIVER
Pace Project No.: 4094908

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JUMP RIVER
Pace Project No.: 4094908

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4094908001	MW-1	WI MOD GRO	GCV/12215		
4094908002	MW-2	WI MOD GRO	GCV/12215		
4094908003	MW-3	WI MOD GRO	GCV/12215		
4094908004	MW-5	WI MOD GRO	GCV/12215		
4094908005	MW-6	WI MOD GRO	GCV/12215		
4094908006	MW-7	WI MOD GRO	GCV/12215		
4094908007	MW-8A	WI MOD GRO	GCV/12215		
4094908008	MW-8B	WI MOD GRO	GCV/12215		
4094908009	MW-9A	WI MOD GRO	GCV/12215		
4094908010	MW-9B	WI MOD GRO	GCV/12215		
4094908011	BAR	WI MOD GRO	GCV/12215		
4094908012	COM CTR	WI MOD GRO	GCV/12215		
4094908013	14767	WI MOD GRO	GCV/12215		
4094908014	14778	WI MOD GRO	GCV/12215		
4094908015	14789	WI MOD GRO	GCV/12215		
4094908016	8887	WI MOD GRO	GCV/12215		
4094908017	8890	WI MOD GRO	GCV/12215		
4094908018	8891	WI MOD GRO	GCV/12215		
4094908019	8910	WI MOD GRO	GCV/12215		
4094908020	TRIP BLANK	WI MOD GRO	GCV/12215		

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www.pacelabs.com

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

4094908

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	Meridian Env. Cs Hg, Lk
Branch/Location:	
Project Contact:	Ken Shimka
Phone:	715-579-0723
Project Number:	
Project Name:	Jump River
Project State:	WI
Sampled By (Print):	Ken Shimka
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ken Shimka
Mail To Company:	Meridian Env. Cs Hg.
Mail To Address:	2711 N. Elco Rd Fall Creek, WI 54742
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PUBL + Mapk	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW-1	4/15/14		GW			X		3-40mL B	
002	-2									
003	-3									
004	-5									
005	-6									
006	-7									
007	-8A									
008	-8B									
009	-9A									
010	-9B									
011	Bar									
012	Com Ctr	↓		↓			↓		↓	

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By: Dunham	Date/Time: 4/17/14 0730	Received By: MeaganMAPaulGB	Date/Time: 4/17/14 0730

Pg. 1 of 2

PACE Project No. 4094908

Receipt Temp = [illegible] °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

Page 17 of 18

4094908

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CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	Meridian Env. Grp
Branch/Location:	
Project Contact:	Ken Shinko
Phone:	715-579-0723
Project Number:	
Project Name:	Jump River
Project State:	WI
Sampled By (Print):	Ken Shinko
Sampled By (Sign):	
PO #:	Regulatory Program:

*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

Quote #:	
Mail To Contact:	Ken Shinko
Mail To Company:	Meridian E.C.
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: FILTERED? (YES/NO) Y/N	Analyses Requested: PRESERVATION (CODE)* Pick Letter	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
013	14767	4/15/14		GW		X		3-40mL B	
014	14778	"		"		"		"	
015	14789	"		"		"		"	
016	8887	"		"		"		"	
017	8890	"		"		"		"	
018	8891	"		"		"		"	
019	8910	"		"		"		"	
020	* trip blank							2-40mL B	

* trip blank added to COC by labmt 4/17/14

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	4/16/14 9am	Dunham	4/16/14 9am
Dunham	4/17/14 0730	Maryann Pawlos	4/17/14 0730

PACE Project No.

Receipt Temp = 20.1 °C

Sample Receipt pH OK / Adjusted

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

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

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

Pace Analytical™

Project #: **WO# : 4094908**

4094908

Client Name: Meridian Env.

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Dunham

Tracking #: 738266

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 N/A Type of Ice: (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: R01 /Corr: Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 4/17/14
Initials: mH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3. Only second page mH 4/17/14
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. 001 - 010 doesn't have "mw" in front of number and no ~~time~~ date on samples mH 4/17/14
-Includes date/time/ID/Analysis Matrix: W		mH 4/17/14
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDRO~~W~~, Phenolics, OTHER:	☑Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	14.
Trip Blank Present:	☑Yes ☐No ☐N/A	15. added to COC by lab mH 4/17/14
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 317		

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 4-18-14

APPENDIX B

SOIL BORING LOGS AND MONITORING WELL FORMS

MW-4

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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

☐ Verification Only of Fill and Seal

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County: Taylor

WI Unique Well # of Removed Well: — — — — —

Hicap #:

Lattitude / Longitude (Degrees and Minutes): — — ° — — . — — — 'N; — — ° — — . — — — 'W

Method Code (see instructions): — — — — — —

¼ / ¼ or Gov't Lot #: ¼

Section:

Township: N

Range: ☐ E ☐ W

Well Street Address: W14764 Hwy. 73

Well City, Village or Town: Jump River

Well ZIP Code:

Subdivision Name:

Lot #:

Reason For Removal From Service: excavation

WI Unique Well # of Replacement Well: — — — — —

2. Facility / Owner Information

Facility Name: Jim's Bar

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner: Hwy. 73

City of Present Owner: Jump River

State: WI

ZIP Code:

3. Well / Drillhole / Borehole Information

☑ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 10-11-11

If a Well Construction Report is available, please attach.

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

Formation Type: ☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): ~~26~~ 26

Casing Diameter (in.): 2

Lower Drillhole Diameter (in.): 8

Casing Depth (ft.): ~~26~~ 26

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

If yes, to what depth (feet)? 12

Depth to Water (feet): 17.81

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

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

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

Sealing Materials: ☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.) ☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " " ☐ Concrete ☒ Bentonite Chips

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

5. Material Used To Fill Well / Drillhole

Material Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
bentonite chips	Surface	26	~1 bag	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Meridian Env. Cslt, LLC	1061	10/22/13

Street or Route: 2711 N. Elca Rd

Telephone Number: (715) 832-6608

City: Fall Creek

State: WI

ZIP Code: 54742

Signature of Person Doing Work:

Date Signed: 11-8-13

DNR Use Only

Date Received:

Noted By:

Comments:

State of Wisconsin — Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 4-90

Facility/Project Name: Jim & Cindy's Bar - Jump River, WI	Local Grid Location of Well: ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name: MW-8A
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ____ Long. ____ or St. Plane ____ ft. N. ____ ft. E.	Wis. Unique Well Number: DNR Well Number:
Type of Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12	Section Location of Waste/Source: NW 1/4 of SW of Sec. 7, T 33 N, R. 3 ☐ E. ☒ W.	Date Well Installed: 10-28-13
Distance Well Is From Waste/Source Boundary: ____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm): Joe Black; Midwest Engineering Services, Inc.
Is Well A Point of Enforcement Std. Applic. ? ☐ Yes ☐ No		

A. Protective pipe, top elevation ____.__ ft. MSL

B. Well casing, top elevation ____.__ ft. MSL

C. Land surface elevation ____.__ ft. MSL

D. Surface seal, bottom ____.__ ft. MSL or 1.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ ____

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

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top ____.__ ft. MSL or 1.0 ft.

F. Fine sand, top ____.__ ft. MSL or 11.0 ft.

G. Filter pack, top ____.__ ft. MSL or 13.0 ft.

H. Screen joint, top ____.__ ft. MSL or 15.0 ft.

I. Well bottom ____.__ ft. MSL or 25.0 ft.

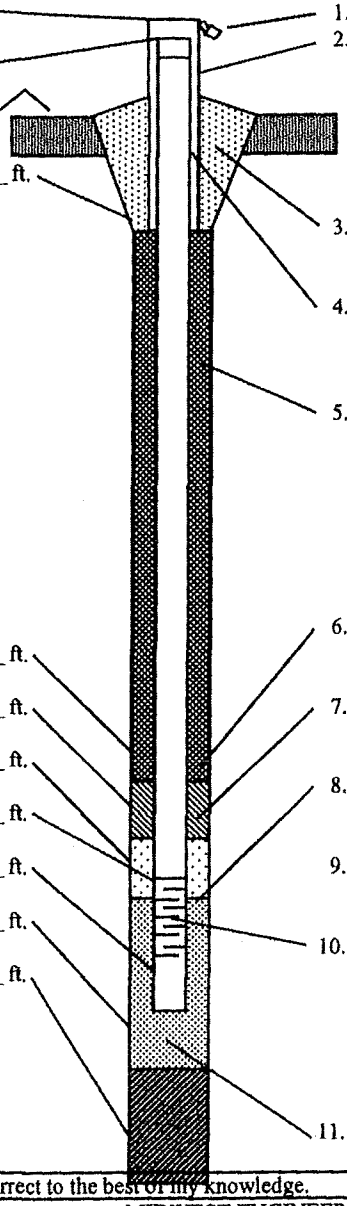
J. Filter pack, bottom ____.__ ft. MSL or 25.0 ft.

K. Borehole, bottom ____.__ ft. MSL or 25.0 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.48 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ ____
d. Additional protection? ☐ Yes ☒ No
if yes, describe: ____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐ ____; Other ☐ ____
5. Annular space seal: a. Granular Bentonite ☒ 33; b. ____ Lbs/gal mud wt. Bentonite-sand slurry ☐ 35; c. ____ Lbs/gal mud weight Bentonite slurry ☐ 31; d. ____ % Bentonite Bentonite-cement grout ☐ 50; e. 3.3 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33; b. ☐ 1/4 in. ☐ 1/2 in. ☒ 3/8 in. Bentonite pellets ☒ 32; c. Other ☐ ____
7. Fine sand material:
a. Red Flint No. 45-55
b. Volume added 0.7 ft³
8. Filter pack material:
a. Red Flint No. 40 RFWS - 34
b. Volume added 3.9 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ____
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ____
b. Manufacturer Diedrich Drill
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14; Other ☐ ____

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

Signature: Suzane Gubel | Firm: MIDWEST ENGINEERING SERVICES, INC.

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Jim + Cindy's Bar		MW-8A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Joe Last Name: Black Firm: Midwest	10/28/2013 (m m d d y y y y)	10/28/2013 (m m d d y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Taylor		Jump River

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Earth Drill			2" PVC							
			10											
			20											
				EOB = 25 ft.										
			30											
			40											

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

Signature _____ Firm Meridian Environmental Co Ltg, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
Jim + Cindy's Bar	Taylor	MW-8A
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	__	_____ / ___

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

2. Well development method

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

3. Time spent developing well ~30 min.

4. Depth of well (from top of well casisng) 25. ft.

5. Inside diameter of well 2. in.

6. Volume of water in filter pack and well casing ~2. gal.

7. Volume of water removed from well ~2. gal.

8. Volume of water added (if any) ___. gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 16.55 ft.	24.__ ft.
Date	b. 11/20/13 m m d d y y y y	11/20/13 m m d d y y y y
Time	c. __:__ ☐ a.m. ☐ p.m.	__:__ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)

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

14. Total suspended solids ____.__ mg/l ____.__ mg/l

15. COD ____.__ mg/l ____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Ken Last Name: Shimko
Firm: Meridian Env. Cstg, LLC

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Ken Last Name: Shimko
Facility/Firm: Meridian Env. Cstg. LLC
Street: 2711 N. Elm Rd
City/State/Zip: Fall Creek, WI 54742

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Ken Shimko
Firm: Meridian Env. Cstg, LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 4-90

Facility/Project Name Jim & Cindy's Bar - Jump River, WI	Local Grid Location of Well ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name MW-8B
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. ____ Long. ____ or St. Plane ____ ft. N. ____ ft. E.	Wis. Unique Well Number DNR Well Number
Type of Well: Water Table Observation Well ☐ 11 Piezometer ☒ 12	Section Location of Waste/Source ☐ E.	Date Well Installed 10-28-13
Distance Well Is From Waste/Source Boundary ft.	NW 1/4 of SW of Sec. 7, T 33 N, R. 3 ☒ W.	Well Installed By: (Person's Name and Firm) Joe Black
Is Well A Point of Enforcement Std. Applic. ? ☐ Yes ☐ No	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Midwest Engineering Services, Inc.

A. Protective pipe, top elevation ____.__ ft. MSL

B. Well casing, top elevation ____.__ ft. MSL

C. Land surface elevation ____.__ ft. MSL

D. Surface seal, bottom ____.__ ft. MSL or 1.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
____ Other ☐

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

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis):
____

E. Bentonite seal, top ____.__ ft. MSL or 1.0 ft.

F. Fine sand, top ____.__ ft. MSL or 30.0 ft.

G. Filter pack, top ____.__ ft. MSL or 33.0 ft.

H. Screen joint, top ____.__ ft. MSL or 35.0 ft.

I. Well bottom ____.__ ft. MSL or 40.0 ft.

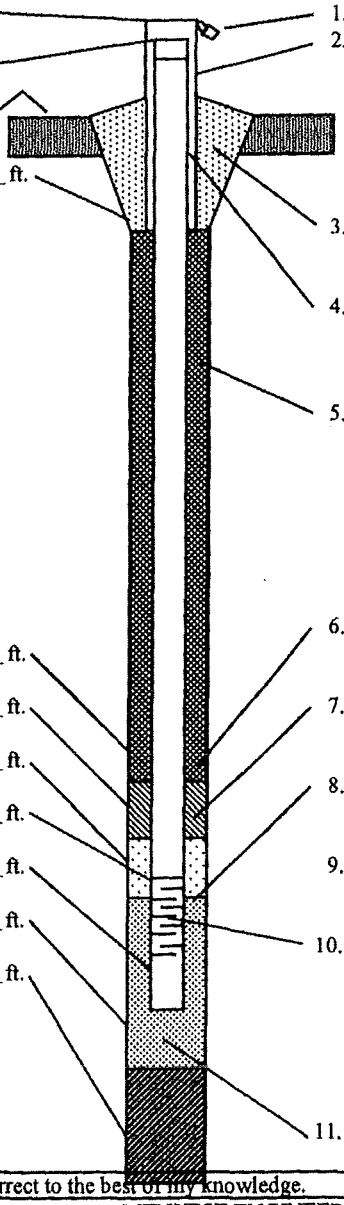
J. Filter pack, bottom ____.__ ft. MSL or 40.0 ft.

K. Borehole, bottom ____.__ ft. MSL or 40.0 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.48 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
____ Other ☐
d. Additional protection? ☐ Yes ☒ No
if yes, describe: ____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
____ Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud wt. Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight Bentonite slurry ☒ 31
d. ____ % Bentonite Bentonite-cement grout ☐ 50
e. 9.5 Ft³ volume added for any of the above
f. How installed: Tremie ☒ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 1/2 in. ☒ 3/8 in. Bentonite pellets ☒ 32
c. ____ Other ☐
7. Fine sand material:
a. Red Flint No. 45-55
b. Volume added 1.0 ft³
8. Filter pack material:
a. Red Flint No. 40 RFWS - 34
b. Volume added 2.3 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
____ Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
____ Other ☐
b. Manufacturer Diedrich Drill
c. Slot size: 0.010 in.
d. Slotted length: 5.0 ft.
11. Backfill material (below filter pack): None ☒ 14
Other ☐

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

Signature Suzanne Giebel Firm MIDWEST ENGINEERING SERVICES, INC.

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State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
Jim + Cindy's Bar	Taylor	8B
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**

1. Can this well be purged dry? ☐ Yes ☒ No (bails down)

2. Well development method

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

3. Time spent developing well ~60 min.

4. Depth of well (from top of well casisng) 40. ft.

5. Inside diameter of well 2. in.

6. Volume of water in filter pack and well casing ~2. gal.

7. Volume of water removed from well ~8. gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 18.58 ft.	38.__ ft.
Date	b. 11/20/13 (m m d d y y y y)	11/20/13 (m m d d y y y y)
Time	c. __:__ ☐ a.m. ☐ p.m.	__:__ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)

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

14. Total suspended solids ____.__ mg/l ____.__ mg/l

15. COD ____.__ mg/l ____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Ken Last Name: Shimko
Firm: Meridian Env. Cs Hy, LLC

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Ken Last Name: Shimko
Facility/Firm: Meridian Env. Cs Hy. LLC
Street: 2711 N. Elm Rd
City/State/Zip: Fall Creek, WI 54742

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Ken Shimko
Firm: Meridian Env. Cs Hy, LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Page 1 of 1

Facility/Project Name: Jim + Cindy's Bar	License/Permit/Monitoring Number:	Boring Number: MW - 8 B
Boring Drilled By: Name of crew chief (first, last) and Firm — First Name: Joe Last Name: Black — Firm: Midwest	Date Drilling Started: 10/28/2013 (m m / d d / y y y y)	Date Drilling Completed: 10/28/2013 (m m / d d / y y y y) — Drilling Method: HSA
WI Unique Well No.	DNR Well ID No.	Well Name
Final Static Water Level: _____ Feet MSL	Surface Elevation: _____ Feet MSL	Borehole Diameter: _____ inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ — State Plane _____ N, _____ E — _____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____	Lat ° ' " — Long ° ' "	Local Grid Location — _____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W
Facility ID	County: Taylor	County Code: Civil Town/City/ or Village: Jump River

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				asphalt / road base gravel										
			5	brown silty clay.				0		m				
			10	brown coarse sand + gravel				0		dry				
			15	coarse sand + gravel (cobbles)				.5		wet				
			20	difficult drilling - no recovery			PVC	—						
			25	sandy, clayey, silt			2"	.5						
			30	same w/ more clay				.5						
			35	same				.5						
			40	same. less clay				.5						

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

Signature: _____ Firm: Meridian Environmental Consulting, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 4-90

Facility/Project Name Jim & Cindy's Bar - Jump River, WI	Local Grid Location of Well ☐ N. ☐ E. ft. ☐ S. ft. ☐ W.	Well Name MW-9A
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	Section Location of Waste/Source ☐ E. NW 1/4 of SW of Sec. 7, T 33 N, R. 3 ☒ W.	Date Well Installed 10-29-13
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) Joe Black Midwest Engineering Services, Inc.
Is Well A Point of Enforcement Std. Applic. ? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____.__ ft. MSL

B. Well casing, top elevation _____.__ ft. MSL

C. Land surface elevation _____.__ ft. MSL

D. Surface seal,bottom _____.__ ft. MSL or 1.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☐ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____.__ ft. MSL or 1.0 ft.

F. Fine sand, top _____.__ ft. MSL or 11.0 ft.

G. Filter pack, top _____.__ ft. MSL or 13.0 ft.

H. Screen joint, top _____.__ ft. MSL or 15.0 ft.

I. Well bottom _____.__ ft. MSL or 25.0 ft.

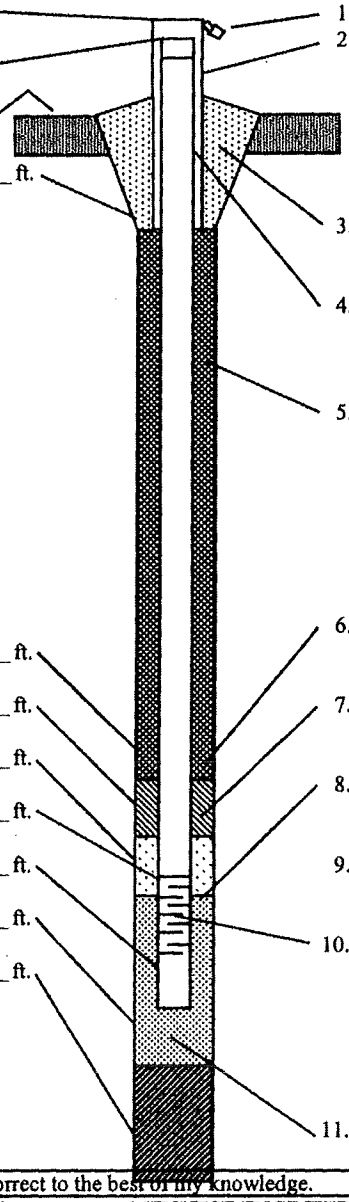
J. Filter pack, bottom _____.__ ft. MSL or 25.0 ft.

K. Borehole, bottom _____.__ ft. MSL or 25.0 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.48 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☒ No
if yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
_____ Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud wt. Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight Bentonite slurry ☐ 31
d. ____ % Bentonite Bentonite-cement grout ☐ 50
e. 3.3 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 1/2 in. ☒ 3/8 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material:
a. Red Flint No. 45-55
b. Volume added 0.7 ft^3
8. Filter pack material:
a. Red Flint No. 40 RFWS - 34
b. Volume added 3.9 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer Diedrich Drill
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14
Other ☐

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

Signature Suzanne Siebel Firm MIDWEST ENGINEERING SERVICES, INC.

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Jim + Cindy's Bar		MW-9A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Joe Last Name: Black Firm: Midwest	10/29/2013 (m m / d d / y y y y)	10/29/2013 (m m / d d / y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet MSL	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Taylor		Jump River

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			10	Earth Drill			2" PVC							
			20											
				EOB = 25 ft.										
			30											
			40											

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

Signature _____ Firm Meridian Environmental Consulting, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
Jim + Cindy's Bar	Taylor	9A
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	___	_____ / ___

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

2. Well development method

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

3. Time spent developing well ~60 min.

4. Depth of well (from top of well casisng) 25. ft.

5. Inside diameter of well 2. in.

6. Volume of water in filter pack and well casing ~1 gal.

7. Volume of water removed from well ~15. gal.

8. Volume of water added (if any) ____. gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 18.50 ft.	18.53 ft.
Date	b. 11/20/13 (m m d d y y y y)	11/20/13 (m m d d y y y y)
Time	c. ___:___ ☐ a.m. ☐ p.m.	___:___ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

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

16. Well developed by: Name (first, last) and Firm
First Name: Ken Last Name: Shimko
Firm: Meridian Env. Cs Hy, LLC

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Ken Last Name: Shimko
Facility/Firm: Meridian Env. Cs Hy. LLC
Street: 2711 N. Elco Rd
City/State/Zip: Fall Creek, WI 54742

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Ken Shimko
Firm: Meridian Env. Cs Hy, LLC

NOTE: See instructions for more information including a list of county codes and well type codes.

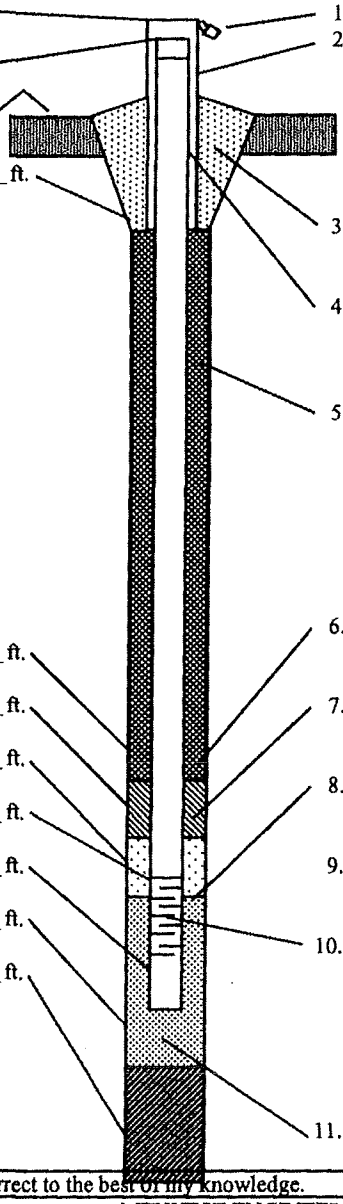
State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 4-90

Facility/Project Name Jim & Cindy's Bar - Jump River, WI	Local Grid Location of Well ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name MW-9B
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number DNR Well Number
Type of Well: Water Table Observation Well ☐ 11 Piezometer ☒ 12	Section Location of Waste/Source NW 1/4 of SW of Sec. 7, T 33 N, R. 3 ☐ E. ☒ W.	Date Well Installed 10-29-13
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) Joe Black Midwest Engineering Services, Inc.
Is Well A Point of Enforcement Std. Applic. ? ☐ Yes ☐ No		



A. Protective pipe, top elevation _____.__ ft. MSL

B. Well casing, top elevation _____.__ ft. MSL

C. Land surface elevation _____.__ ft. MSL

D. Surface seal, bottom _____.__ ft. MSL or 1.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☐ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top _____.__ ft. MSL or 1.0 ft.

F. Fine sand, top _____.__ ft. MSL or 30.0 ft.

G. Filter pack, top _____.__ ft. MSL or 33.0 ft.

H. Screen joint, top _____.__ ft. MSL or 35.0 ft.

I. Well bottom _____.__ ft. MSL or 40.5 ft.

J. Filter pack, bottom _____.__ ft. MSL or 40.5 ft.

K. Borehole, bottom _____.__ ft. MSL or 40.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.48 in.

N. I.D. well casing 2.07 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☒ No
if yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
_____ Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. _____ Lbs/gal mud wt. Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight Bentonite slurry ☒ 31
d. _____ % Bentonite Bentonite-cement grout ☐ 50
e. 9.5 Ft^3 volume added for any of the above
f. How installed: Tremie ☒ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 1/2 in. ☒ 3/8 in. Bentonite pellets ☒ 32
c. _____ Other ☐
7. Fine sand material:
a. Red Flint No. 45-55
b. Volume added 1.0 ft^3
8. Filter pack material:
a. Red Flint No. 40 RFWS - 34
b. Volume added 2.8 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer Diedrich Drill
c. Slot size: 0.010 in.
d. Slotted length: 5.0 ft.
11. Backfill material (below filter pack): None ☒ 14
Other ☐

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

Signature Suzane Giebel Firm MIDWEST ENGINEERING SERVICES, INC.

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Jim + Cindy's Bar		MW-9B

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Joe Last Name: Black Firm: Midwest	10/29/2013 (m m / d d / y y y y)	10/29/2013 (m m / d d / y y y y)	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "
Local Grid Location
_____ Feet ☐ N ☐ E _____ Feet ☐ S ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Taylor		Jump River

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				gravel roadbase										
☐			5	gray clayey silt				0		m				
☐			10	brown coarse sand + gravel				0		dry				
☐			15	gray coarse sand + gravel difficult drilling - cobbles				1		dry				
☐			20	brown sand + gravel			4" PVC	1		wet				
☐			25	blow-up in augers. Had to flush out. no sample										
☐			30	brown clayey silt w/ sand				0						
☐			35	same				0						
☐			40	reddish brown clayey silt w/ sand + gravel (till) EOB = 42 Ft.				0						

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

Signature _____ Firm Meridian Environmental Co Ltd, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
Jim + Cindy's Bar	Taylor	9B
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	__	_____ / ___

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

2. Well development method

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

3. Time spent developing well 160 min.

4. Depth of well (from top of well casisng) 40.5 ft.

5. Inside diameter of well 2 in.

6. Volume of water in filter pack and well casing ~2 gal.

7. Volume of water removed from well ~8 gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 19.02 ft.	38.__ ft.
Date	b. 11/20/13 (m m / d d / y y y y)	11/20/13 (m m / d d / y y y y)
Time	c. __:__ ☐ a.m. ☐ p.m.	__:__ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)

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

14. Total suspended solids ____.__ mg/l ____.__ mg/l

15. COD ____.__ mg/l ____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Ken Last Name: Shimko
Firm: Meridian Env. Cs Hy, LLC

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Ken Last Name: Shimko
Facility/Firm: Meridian Env. Cs Hy. LLC
Street: 2711 N. Elca Rd
City/State/Zip: Fall Creek, WI 54742

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Ken Shimko
Firm: Meridian Env. Cs Hy, LLC

NOTE: See instructions for more information including a list of county codes and well type codes.