



**CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING**

February 11, 2020

Wisconsin Department of Natural Resources

Attn: Daubchi Vang
1300 W Clairemont Ave.
Eau Claire, WI 54702



Subject:

Update Report
Former Schlinsog Dairy
N7701 Pelsdorf Avenue
Loyal, WI
BRRTS #03-10-554767
PECFA #54446-8368-01

Dear Ms. Vang:

Enclosed please find a copy of the above mentioned Update Report. This report documents the completion of a prior approved scope of services which included a temporary well installation, abandonment of former potables wells PW1 and PW2, four semi-annual rounds of groundwater sampling from select wells and single round of potable well sampling at the Kautzer and Hubing wells.

If you have any questions or comments, please contact our office at (715) 675-9784.

Sincerely,
REI Engineering, Inc.

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

CC: Bratcher Law Office, LLC, Attn: Will Bratcher, PO Box 388, Thorp, WI 54771



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REI

**CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING**

**UPDATE REPORT
FORMER SCHLINSOG DAIRY
N7701 PELSDORF AVENUE
LOYAL, WI 54446**

**BRRTS #03-10-554767
PECFA #54446-8368-01
REI PROJECT #5357**



**COMPREHENSIVE
SERVICES WITH
PRACTICAL
SOLUTIONS**



UPDATE REPORT

**FORMER SCHLINSOG DAIRY
N7701 PELSDORF AVENUE
LOYAL, WI 54446**

**BRRTS#03-10-554767
PECFA#54446-8368-01
REI #5357**



PREPARED FOR:

**Bratcher Law Office, LLC
Will Bratcher
PO Box 388
Thorp, WI 54771**

FEBRUARY 2020

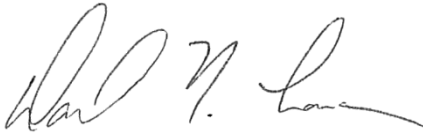
UPDATE REPORT

**FORMER SCHLINSOG DAIRY
N7701 PELSDORF AVENUE
LOYAL, WI 54446**

**BRRTS#03-10-554767
PECFA#54446-8368-01
REI #5357**

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

"I, David N. Larsen, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of Ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of Ch. GHSS 3, Wis. Admn. Code, and that to the best of my knowledge, all the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."



Hydrogeologist

February 10, 2020

Date

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



Environmental Scientist

February 10, 2020

Date

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UPDATE REPORT

**FORMER SCHLINSOG DAIRY
N7701 PELS DORF AVENUE
LOYAL, WI 54446**

**BRRTS#03-10-554767
PECFA#54446-8368-01
REI #5357**

1.0 WORK PERFORMED THIS PERIOD

REI is submitting an Update Report covering the site activities that have taken place at the above referenced location. Events that have taken place during this period include temporary well installation and sampling, four (4) groundwater sampling events at select environmental monitoring wells, abandonment of former potable wells PW1 and PW2 and sampling of the on-site potable and neighboring potable water supply wells. The location of the site is shown on Figure 1. The location of the monitoring wells are presented in Figure 2.

2.0 SUMMARY OF WORK

The Former Schlinsog Dairy site is located at the intersection of Mann Road and Pelsdorf Avenue in the SE¹/₄ of the SE ¹/₄ of Section 27, Township 26 North, Range 01 West, Town of Loyal, Clark County, Wisconsin (Figure 1). Site investigation activities began in 2010, a remedial excavation was completed in May 2011 and the engineered remedial system (groundwater pump and treat) was started in August 2013. The system operated until November 2013 when it was retrofitted and operated as a soil vapor extraction system until August 2014. Prior to system operation free product was observed in PW1 and MW2. Figure 2 presents the locations of the monitoring well network and site boundaries.

2.1 Temporary Well Installation and Groundwater Sampling

On October 16, 2017, REI was on site to oversee the installation of two (2) off-site temporary monitoring wells. Geiss Soil and Samples, LLC., Merrill, WI was subcontracted to complete the installation of the temporary monitoring wells. TW1 was advanced to a depth of forty-eight (48) feet and the well set at a depth of forty-eight (48) feet with a ten (10) foot screen. Drilling was very difficult as the soils were very tight. The second temporary well (TW-ROW) was advanced to a depth of only thirty (30) feet before refusal. The boring for temporary monitoring well TW-ROW was abandoned on October 16, 2017. Soil Boring Log (WDNR Form 4400-122), Monitoring Well Construction Form (WDNR Form 4400-133A) and Borehole Abandonment Form (WDNR Form 3300-005) are included in Appendix A.

2.2 Groundwater Monitoring and Analytical Results

Following the submittal of the 2017 report, four (4) groundwater sampling events (at select wells) was completed by REI personnel on October 16, 2017, April 25, 2018, June 6, 2019 and November 22, 2019. An excess of four (4) well volumes was removed from each well prior to sampling by REI personnel. All purge water waste generated during this scope of services was temporarily stored in 55-gallon WDOT approved drums before final disposal at either the City of Wausau wastewater treatment facility or through a waste disposal contractor. Measurable free product (0.28 feet) was only identified in MW2 on October 16, 2017.

Water elevation measurements from the REI sampling events are presented in Table 1. Water levels have increased significantly since the remedial system was shut down in 2013. Figure 3 presents a groundwater contour map from the data collected on November 22, 2019. Groundwater flow appears to be radially away from MW1. This calculated groundwater flow is not consistent with historical groundwater flow directions and is likely not an accurate depiction of the true flow directions. Groundwater flow has historically been to the south/southwest towards MW6. Groundwater contaminant concentrations in the well network also support the south, southwest flow direction. Groundwater samples were submitted to a state certified

laboratory for analysis. Groundwater analytical results are summarized in Tables 2a-k. The complete laboratory analytical reports are included as Appendix B.

Groundwater sample results document residual groundwater contamination in concentrations exceeding the NR 140.10 Groundwater Quality Enforcement Standards (ES) for petroleum compounds following the November 22, 2019 sample event at MW1 and MW2. Preventive Action Limit (PAL) exceedances were not reported in any of the sampled wells and MW3 and MW6 returned results that were either non-detect for all analyzed parameters, or had laboratory qualified detections below the PAL.

2.3 Potable Well Abandonment

Komarek Well Drilling, Ogema, WI was subcontracted to complete the abandonment former potable wells PW1 and PW2. PW1 was a five (5) inch diameter well with a total measured depth of ninety-four (94) feet. PW2 was a six (6) inch diameter well with a total measured depth of one hundred eighty-five (185) feet. Borehole abandonment forms are included in Appendix C.

3.0 CONCLUSIONS AND RECOMMENDATIONS

The groundwater contaminant concentrations appear to be decreasing and free product has not been reported in any of the monitoring wells after the October 16, 2017 sampling date. Water levels in 2017 were recorded at all time high levels and have remaining high through the November 2019 sampling event.

Due to the presence of pre-remedial free product on the water table at MW2, a significant layer of smear zone contamination likely remained post remediation. The increase in water level elevations has likely put groundwater in contact with the residual smear zone contamination resulting in increased contaminant concentrations in the collected groundwater samples.

While significant groundwater contamination remains in place at MW1 and MW2, contaminant concentrations at MW3 and MW6 have decreased following site remediation. The degree and extent of the groundwater contaminant plume have

been adequately defined. The 2011 soil excavation had removed any direct contact soil contamination from the subject property. A replacement potable well (PW3) was installed in 2010 to service the Kautzer residence. The neighboring Hubing potable, which had a history of low-level detections for benzene and 1,2-DCA, has a reverse osmosis water treatment system installed. The threat to human health and the environment has been adequately addressed and REI is recommending that this investigation be reviewed for case closure consideration at this time.

Table 1
Depth to Water and Water Table Elevations
Former Schlinsog Dairy
Loyal, Wisconsin

Depth to Water (feet) below Reference Elevation

Date	MW1	MW2	MW3	MW4	MW5	MW6	PZ1	PZ2	PW1
7/8/2010	49.03	48.98							
8/18/2010	47.82	48.12	47.73						
8/19/2010	47.61	47.83	47.56						
1/3/2011	45.32	46.61		44.37	43.84		64.31		
5/13/2011		45.09*	43.86						
5/31/2011	43.95	45.32*	43.96	43.15	42.75		64.21		45.27
10/7/2011	44.47	45.99*	44.55	43.00	42.65		65.25		46.47*
2/16/2012	45.86	48.8*	45.85	44.20	43.37		66.45		
8/27/2013	48.42	50.05*	47.66	45.99	45.98		67.69		
5/20/2014	46.04	46.66	47.06	45.73	46.04	45.50	64.74	44.81	
8/20/2014	46.24	46.54	46.38	44.87	45.13	45.01	70.70	45.54	
5/5/2016	40.52	40.61	40.73			39.42		40.13	42.39
4/13/2017	35.62	36.74	37.15			35.87		36.78	
10/16/2017	35.88	38.27*	38.13			36.93			
4/25/2018	40.84	40.43	40.40			40.82			
6/6/2019	39.50	41.10	39.65			38.45			
11/22/2019	35.19	37.84	36.70			37.60			

Measuring Point Elevations

Initial Survey (8-18-10)	99.99	100.24	99.26	97.76	100.30		99.98		99.98
Re-survey 5-20-14)						97.86		97.20	

Ground Surface Elevation

Initial Survey (8-18-10)	100.45	100.62	99.60	98.38	101.05		100.61		100.61
Re-survey 5-20-14)						98.17		97.36	

Depth to Water (feet) below Ground Surface

Average	43.73	44.15	43.50	45.09	45.00		66.82		44.46
Maximum	49.49	49.36	48.07	46.61	46.79		71.33		45.90
Minimum	35.65	37.12	37.04	43.62	43.40		64.84		43.02
Range	13.84	12.24	11.03	2.99	3.39		6.49		2.88

Water Level Elevation (feet MSL)

Date	MW1	MW2	MW3	MW4	MW5	MW6	PZ1	PZ2	PW1
7/8/2010	50.96	51.26							
8/18/2010	52.17	52.12	51.53						
8/19/2010	52.38	52.41	51.70						
1/3/2011	54.67	53.63		53.39	56.46		35.67		
5/13/2011		55.15*	55.40						
5/31/2011	56.04	54.92*	55.30	54.61	57.55		35.77		54.71
10/7/2011	55.52	54.25*	54.71	54.76	57.65		34.73		53.51*
2/16/2012	54.13	51.44*	53.41	53.56	56.93		33.53		
8/27/2013	51.57	50.19	51.60	51.77	54.32		32.29		
5/20/2014	53.95	53.58	52.20	52.03	54.26	52.36	35.24	52.39	
8/20/2014	53.75	53.70	52.88	52.89	55.17	52.85	29.28	51.66	99.98
5/5/2016	59.47	59.63	58.53			58.44		57.07	57.59
4/13/2017	64.37	63.50	62.11			61.99		60.42	
10/16/2017	64.11	61.97*	61.13			60.93			
4/25/2018	59.15	59.81	58.86			57.04			
6/6/2019	60.49	59.14	59.61			59.41			
11/22/2019	64.80	62.40	62.56			60.26			

Witness Mark as benchmark (assume 100')

* = Product in well

Table 2a
Summary of Groundwater Analytical Results
MW1
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	7/7/2010	1/3/2011	5/31/2011	10/7/2011	2/16/2012	8/14/2013	8/27/2013	11/20/2013	5/20/2014
VOC Parameters												
Benzene	5	0.5	µg/l	1,750	23,500	15,800	9,620	24,000	Initiate groundwater extraction system at PW1	18,500	Convert remedial system to SVE at MW1 and MW2	2,510
Toluene	800	160	µg/l	2,040	28,800	19,500	12,200	28,000		19,200		3,010
Ethylbenzene	700	140	µg/l	<i>200</i>	1,440	1,360	1,190	2,300		1,670		333
Xylenes (mixed isomers)	2,000	400	µg/l	<i>1,001</i>	9,730	6,320	5,690	10,000		8,120		4,110
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 15.2	< 152	< 152	< 47.6	< 18		< 46.4		< 4.8
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>198.3</i>	618	625	1,180	1,770		1,451		1,781
Naphthalene	100	10	µg/l	< 22.2	< 222	< 222	262	810		260		431
1,2-Dibromoethane	0.05	0.005	µg/l	38.2	872	672	NA	NA		NA		NA
1,2-Dichloroethane	5	0.5	µg/l	204	3,210	< 90	NA	NA		NA		NA
n-Propylbenzene			µg/l	23*	< 202	< 202	NA	NA		NA		NA

	ES	PAL	Units	8/20/2014	8/20/2014	5/5/2016	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters											
Benzene	5	0.5	µg/l	Remove SVE system from MW1 and MW2	13,400	8,990	1,490	7,690	2,430	5,510	999
Toluene	800	160	µg/l		15,500	13,400	2,980	13,000	7,090	7,970	6,050
Ethylbenzene	700	140	µg/l		1,770	<i>597</i>	<i>284</i>	2,980	1,110	999	1,360
Xylenes (mixed isomers)	2,000	400	µg/l		13,110	5,720	<i>1,813</i>	12,000	6,030	8,600	5,880
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 60.6	< 34.8	< 8.7	< 17.4	< 17.4	< 125	< 125
Trimethylbenzenes (mixed isomers)	480	96	µg/l		2,851	1,304	<i>286.3</i>	2,435	1,125	2,465	1,148
Naphthalene	100	10	µg/l		491	< 500	NA	NA	NA	NA	NA
1,2-Dibromoethane	0.05	0.005	µg/l		NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5	0.5	µg/l		NA	746	136	401	190	384	88.3^J
n-Propylbenzene			µg/l		NA	NA	NA	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

Table 2b
Summary of Groundwater Analytical Results
MW2
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	7/7/2010	1/3/2011**	5/31/2011**	10/7/2011**	2/16/2012**	8/14/2013	8/27/2013**	11/20/2013	5/20/2014
VOC Parameters												
Benzene	5	0.5	µg/l	1,650	Free	11,500	11,700	12,000	Initiate groundwater extraction system at PW1	6,820	Convert remedial system to SVE at MW1 and MW2	2,620
Toluene	800	160	µg/l	1,430	Product	22,700	20,600	21,000		9,830		5,140
Ethylbenzene	700	140	µg/l	<i>158</i>		2,650	2,770	3,000		2,270		769
Xylenes (mixed isomers)	2,000	400	µg/l	<i>805</i>	Not	12,740	12,440	14,000		10,200		7,280
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 6.1	Sampled	< 122	< 47.6	< 18		< 18.6		< 48.5
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>139.7</i>		2,199	2,370	2,620		2,627		2,130
Naphthalene	100	10	µg/l	<i>25.7^J</i>		425^J	526	920		511		271
1,2-Dibromoethane	0.05	0.005	µg/l	38.2		290	NA	NA		NA		NA
1,2-Dichloroethane	5	0.5	µg/l	141		< 72	NA	NA		NA		NA
n-Propylbenzene			µg/l	18.4		236	NA	NA		NA		NA

	ES	PAL	Units	8/20/2014	8/20/2014	5/5/2016	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters											
Benzene	5	0.5	µg/l	Remove SVE system from MW1 and MW2	7,580	7,030	8,530	11,100	6,950	6,890	4,020
Toluene	800	160	µg/l		11,700	15,100	12,200	27,600	11,500	10,500	9,960
Ethylbenzene	700	140	µg/l		2,140	2,550	2,720	3,230	2,990	3,140	2,830
Xylenes (mixed isomers)	2,000	400	µg/l		11,560	12,450	12,300	15,500	13,000	11,100	11,300
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		<i>30.8^J</i>	< 34.8	< 17.4	< 17.4	< 17.4	< 125	< 125
Trimethylbenzenes (mixed isomers)	480	96	µg/l		3,085	1,784	2,374	2,889	3,097	2,651	2,528
Naphthalene	100	10	µg/l		533	< 500	NA	NA	NA	NA	NA
1,2-Dibromoethane	0.05	0.005	µg/l		NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5	0.5	µg/l		NA	323	409	420	491	659	332
n-Propylbenzene			µg/l		NA	NA	NA	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

** = Free product in well - removed prior to sampling

Table 2c
Summary of Groundwater Analytical Results
MW3
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	8/18/2010	1/3/2011	5/31/2011	10/7/2011	2/16/2012	8/14/2013	8/27/2013	11/20/2013	5/20/2014
VOC Parameters												
Benzene	5	0.5	µg/l	2,310	Under 6 feet snow and ice, not sampled	86.8	125	340	Initiate groundwater extraction system at PW1	512	Convert remedial system to SVE at MW1 and MW2	2,070
Toluene	800	160	µg/l	<i>230</i>		7.9	31	66		73.9		<i>407</i>
Ethylbenzene	700	140	µg/l	<i>346</i>		3	72.3	<i>180</i>		<i>358</i>		<i>158</i>
Xylenes (mixed isomers)	2,000	400	µg/l	<i>748</i>		50.5	150.3	380		<i>479</i>		387.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 6.1		< 0.61	4.2	< 0.23		7.7 ^J		4.6 ^J
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>401</i>		22.2	<i>108.5</i>	<i>243</i>		605		<i>164.1</i>
Naphthalene	100	10	µg/l	<i>70.6</i>		7.7	<i>23.2</i>	53		117		<i>60.1</i>
1,2-Dibromoethane	0.05	0.005	µg/l	8.3^J		< 0.56	NA	NA		NA		NA
1,2-Dichloroethane	5	0.5	µg/l	251		14.3	NA	NA		NA		NA
n-Propylbenzene			µg/l	40.2		1.2	NA	NA		NA		NA

	ES	PAL	Units	8/20/2014	8/20/2014	5/5/2016	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters											
Benzene	5	0.5	µg/l	Remove SVE system from MW1 and MW2	1,230	3.8	20.4	29.2	< 0.50	571	< 0.25
Toluene	800	160	µg/l		41.9	4.1	2.3	4.8	< 0.50	12.7	< 0.17
Ethylbenzene	700	140	µg/l		108	35.0	37.4	59.6	< 0.50	30.8	< 0.22
Xylenes (mixed isomers)	2,000	400	µg/l		119	67.2	31.1	62.5	2.2 ^J	30.9	< 1.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 4.8	< 0.35	< 0.35	< 0.35	< 0.17	< 1.2	< 1.2
Trimethylbenzenes (mixed isomers)	480	96	µg/l		<i>100.2</i>	22.8	23.4	90.8	2.1	14.8	1.9 ^J
Naphthalene	100	10	µg/l		39.9	7.4 ^J	NA	NA	NA	NA	NA
1,2-Dibromoethane	0.05	0.005	µg/l		NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5	0.5	µg/l		NA	3.8	1.3 ^J	< 0.34	< 0.17	66.8	< 0.28
n-Propylbenzene			µg/l		NA	NA	NA	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded	BOLD
Preventive Action Limit exceeded	<i>Italics</i>

Table 2d
Summary of Groundwater Analytical Results
MW4
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	1/3/2011	5/31/2011	10/7/2011	2/16/2012	8/14/2013	8/27/2013	11/20/2013	5/20/2014
VOC Parameters											
Benzene	5	0.5	µg/l	< 0.41	< 0.41	< 0.39	< 0.25	Initiate groundwater extraction system at PW1	< 0.34	Convert remedial system to SVE at MW1 and MW2	< 0.40
Toluene	800	160	µg/l	< 0.67	< 0.67	< 0.42	< 0.25		< 0.34		< 0.39
Ethylbenzene	700	140	µg/l	< 0.54	< 0.54	< 0.41	0.37 ^J		< 0.34		< 0.39
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.8	< 1.8	< 0.87	0.72 ^J		< 0.71		< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.61	< 0.61	< 0.38	< 0.23		< 0.37		< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.97	< 0.97	< 0.43	0.87 ^J		< 0.36		< 0.42
Naphthalene	100	10	µg/l	< 0.89	< 0.89	< 0.40	3.8		< 0.37		< 0.42
1,2-Dibromoethane	0.05	0.005	µg/l	< 0.56	< 0.56	NA	NA		NA		NA
1,2-Dichloroethane	5	0.5	µg/l	< 0.57	< 0.57	NA	NA		NA		NA
n-Propylbenzene			µg/l	< 0.81	< 0.81	NA	NA		NA		NA

	ES	PAL	Units	8/20/2014	8/20/2014	5/5/2016	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters											
Benzene	5	0.5	µg/l	Remove SVE system from MW1 and MW2	< 0.40	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Toluene	800	160	µg/l		< 0.39						
Ethylbenzene	700	140	µg/l		< 0.39						
Xylenes (mixed isomers)	2,000	400	µg/l		< 0.80						
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 0.48						
Trimethylbenzenes (mixed isomers)	480	96	µg/l		< 0.42						
Naphthalene	100	10	µg/l		< 0.42						
1,2-Dibromoethane	0.05	0.005	µg/l		NA						
1,2-Dichloroethane	5	0.5	µg/l		NA						
n-Propylbenzene			µg/l		NA						

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
NA = Not Analyzed
^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded	BOLD
Preventive Action Limit exceeded	<i>Italics</i>

Table 2e
Summary of Groundwater Analytical Results
MW5
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	1/3/2011	5/31/2011	10/7/2011	2/16/2012	8/14/2013	8/27/2013	11/20/2013	11/20/2013
VOC Parameters											
Benzene	5	0.5	µg/l	< 0.41	< 0.41	< 0.39	< 0.25	Initiate groundwater extraction system at PW1	< 0.34	Convert remedial system to SVE at MW1 and MW2	< 0.40
Toluene	800	160	µg/l	< 0.67	< 0.67	< 0.42	< 0.25		< 0.34		< 0.39
Ethylbenzene	700	140	µg/l	< 0.54	< 0.54	< 0.41	< 0.22		< 0.34		< 0.39
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.8	< 1.8	< 0.87	< 0.39		< 0.71		< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.61	< 0.61	< 0.38	< 0.23		< 0.37		< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.97	< 0.97	< 0.43	< 0.25		< 0.36		< 0.42
Naphthalene	100	10	µg/l	< 0.89	< 0.89	< 0.40	0.59 ^J		< 0.37		< 0.42
1,2-Dibromoethane	0.05	0.005	µg/l	< 0.56	< 0.56	NA	NA		NA		NA
1,2-Dichloroethane	5	0.5	µg/l	< 0.57	< 0.57	NA	NA		NA		NA
n-Propylbenzene			µg/l	< 0.81	< 0.81	NA	NA		NA		NA

	ES	PAL	Units	8/20/2014	8/20/2014	5/5/2016	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters											
Benzene	5	0.5	µg/l	Remove SVE system from MW1 and MW2	< 0.40	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Toluene	800	160	µg/l		< 0.39						
Ethylbenzene	700	140	µg/l		< 0.39						
Xylenes (mixed isomers)	2,000	400	µg/l		< 0.80						
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 0.48						
Trimethylbenzenes (mixed isomers)	480	96	µg/l		< 0.42						
Naphthalene	100	10	µg/l		< 0.42						
1,2-Dibromoethane	0.05	0.005	µg/l		NA						
1,2-Dichloroethane	5	0.5	µg/l		NA						
n-Propylbenzene			µg/l		NA						

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded	BOLD
Preventive Action Limit exceeded	<i>Italics</i>

Table 2f
Summary of Groundwater Analytical Results
MW6
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	11/20/2013	5/20/2014	8/20/2014	8/20/2014	5/5/2016
VOC Parameters								
Benzene	5	0.5	µg/l	Convert remedial system to SVE at MW1 and MW2	4,350	Remove SVE system from MW1 and MW2	1,510	8.9
Toluene	800	160	µg/l		3,440		2,830	2.3
Ethylbenzene	700	140	µg/l		1,510		979	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l		4,880		7,220	5.2
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 7.0		< 4.4	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l		1,358		903	5.2
Naphthalene	100	10	µg/l		265		NA	3.5 ^J
1,2-Dichloroethane	5	0.5	µg/l		194		94.4	0.36 ^J

	ES	PAL	Units	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters								
Benzene	5	0.5	µg/l	1.8	<i>0.80^J</i>	< 0.50	98	< 0.25
Toluene	800	160	µg/l	< 0.50	< 0.50	< 0.50	7.8	< 0.17
Ethylbenzene	700	140	µg/l	< 0.50	< 0.50	< 0.50	26.7	< 0.22
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.5	< 1.5	< 1.5	19.0	< 1.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17	< 0.17	< 0.17	< 1.2	< 1.2
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50	< 0.50	< 0.50	9.4	< 0.87
Naphthalene	100	10	µg/l	NA	NA	NA	NA	NA
1,2-Dibromoethane	0.05	0.005	µg/l	< 0.17	NA	NA	NA	NA
1,2-Dichloroethane	5	0.5	µg/l	NA	< 0.17	< 0.17	8.3	< 0.28
n-Propylbenzene			µg/l	NA	NA	NA	NA	NA

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

Table 2g
Summary of Groundwater Analytical Results
PZ1
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	1/3/2011	5/31/2011	10/7/2011	2/16/2012	8/14/2013	8/27/2013	11/20/2013	5/20/2014
VOC Parameters											
Benzene	5	0.5	µg/l	< 0.41	< 0.41	< 0.39	< 0.25	Initiate groundwater extraction system at PW1	< 0.34	Convert remedial system to SVE at MW1 and MW2	< 0.40
Toluene	1,000	200	µg/l	< 0.67	< 0.67	< 0.42	< 0.25		< 0.34		< 0.39
Ethylbenzene	700	140	µg/l	< 0.54	< 0.54	< 0.41	< 0.22		< 0.34		< 0.39
Xylenes (mixed isomers)	10,000	1,000	µg/l	< 1.8	< 1.8	< 0.87	< 0.39		< 0.71		< 0.80
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.61	< 0.61	< 0.38	0.38 ^J		< 0.37		< 0.48
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.97	< 0.97	< 0.43	< 0.25		< 0.36		< 0.42
Naphthalene	100	10	µg/l	< 0.89	< 0.89	< 0.40	< 0.50		< 0.37		< 0.42
1,2-Dibromoethane	0.05	0.005	µg/l	< 0.56	< 0.56	NA	NA		NA		NA
1,2-Dichloroethane	5	0.5	µg/l	< 0.57	< 0.57	NA	NA		NA		NA
n-Propylbenzene			µg/l	< 0.81	< 0.81	NA	NA		NA		NA

	ES	PAL	Units	8/20/2014	8/20/2014	5/5/2016	4/13/2017	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters											
Benzene	5	0.5	µg/l	Remove SVE system from MW1 and MW2	< 0.40	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Toluene	800	160	µg/l		< 0.39						
Ethylbenzene	700	140	µg/l		< 0.39						
Xylenes (mixed isomers)	2,000	400	µg/l		< 0.80						
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 0.48						
Trimethylbenzenes (mixed isomers)	480	96	µg/l		< 0.42						
Naphthalene	100	10	µg/l		< 0.42						
1,2-Dibromoethane	0.05	0.005	µg/l		NA						
1,2-Dichloroethane	5	0.5	µg/l		NA						
n-Propylbenzene			µg/l		NA						

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
NA = Not Analyzed
^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Enforcement Standard exceeded	BOLD
Preventive Action Limit exceeded	<i>Italics</i>

Table 2h
Summary of Groundwater Analytical Results
PZ2
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	11/20/2013	5/20/2014	8/20/2014	8/20/2014	5/5/2016	4/13/2017
VOC Parameters									
Benzene	5	0.5	µg/l	Convert remedial system to SVE at MW1 and MW2	16.5	Remove SVE system from MW1 and MW2	< 0.50	< 0.50	< 0.50
Toluene	800	160	µg/l		43.9		< 0.50	< 0.50	< 0.50
Ethylbenzene	700	140	µg/l		4.5		< 0.50	< 0.50	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l		15.8		< 1.5	< 1.5	< 1.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 0.17		< 0.17	< 0.17	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l		< 0.55		< 0.50	< 0.50	< 0.50
Naphthalene	100	10	µg/l		< 2.5		< 2.5	< 2.5	NA
1,2-Dichloroethane	5	0.5	µg/l		0.84 ^J		< 0.17	< 0.17	< 0.17

	ES	PAL	Units	10/16/2017	4/25/2018	6/6/2019	11/22/2019
VOC Parameters							
Benzene	5	0.5	µg/l	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Toluene	800	160	µg/l				
Ethylbenzene	700	140	µg/l				
Xylenes (mixed isomers)	2,000	400	µg/l				
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l				
Trimethylbenzenes (mixed isomers)	480	96	µg/l				
Naphthalene	100	10	µg/l				
1,2-Dibromoethane	0.05	0.005	µg/l				
1,2-Dichloroethane	5	0.5	µg/l				
n-Propylbenzene			µg/l				

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

Table 2i
Summary of Groundwater Analytical Results
TW1
Former Schlinsog Dairy
Loyal, WI

	ES	PAL	Units	10/16/2017
VOC Parameters				
Benzene	5	0.5	µg/l	< 0.50
Toluene	800	160	µg/l	0.53 ^J
Ethylbenzene	700	140	µg/l	< 0.50
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.17
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.50
Naphthalene	100	10	µg/l	NA
1,2-Dichloroethane	5	0.5	µg/l	< 0.17

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded

Preventive Action Limit exceeded

BOLD

Italics

Table 2j
Summary of Groundwater Analytical Results
Potable Wells
Former Schlinsog Dairy
Loyal, WI

Parameter	ES	PAL	Units	PW1							
				8/18/2010	2/16/2012	8/14/2013	8/15/2013	8/19/2013	8/20/2013	8/27/2013	9/5/2013
VOC Parameters				during pump test							
Benzene	5	0.5	µg/l	522	4,300	Initiate groundwater extraction system at PW1	881	581	633	366	137
Toluene	800	160	µg/l	399	2,600		220	172	266	294	56
Ethylbenzene	700	140	µg/l	113	560		52.1	42	65.7	55.3	10.9
Xylenes (mixed isomers)	2,000	400	µg/l	692	4,600		228	198	328	543	139
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	3.6 ^J	< 2.3		< 2.5	< 2.5	< 2.5	< 2.5	< 0.49
Trimethylbenzenes (mixed isomers)	480	96	µg/l	255.5	3,120		142.9	36.2	219.2	737	138.8
Naphthalene	100	10	µg/l	31.5	1,100		19.2	0.0	24.7	41.3	10.4
1,2-Dibromoethane	0.05	0.005	µg/l	NA	NA		NA	NA	NA	NA	NA
1,2-Dichloroethane	5	0.5	µg/l	NA	NA		NA	NA	NA	NA	NA

Parameter	ES	PAL	Units	PW1							
				9/19/2013	10/15/2013	11/20/2013	8/20/2014	8/20/2014	5/5/2016	4/13/2017	
VOC Parameters											
Benzene	5	0.5	µg/l	116	116	Convert remedial system to SVE at MW1 and MW2	Remove SVE system from MW1 and MW2	Not Sampled	2,660	Not Sampled	Well Abandoned
Toluene	800	160	µg/l	32.7	29				897		
Ethylbenzene	700	140	µg/l	4.9	4.9				145		
Xylenes (mixed isomers)	2,000	400	µg/l	49.6	43.3				1,020		
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.49	< 0.49				< 7.0		
Trimethylbenzenes (mixed isomers)	480	96	µg/l	16.2	14.3				479		
Naphthalene	100	10	µg/l	NA	3.9				< 100		
1,2-Dibromoethane	0.05	0.005	µg/l	NA	NA				NA		
1,2-Dichloroethane	5	0.5	µg/l	NA	NA				111		

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded	BOLD
Preventive Action Limit exceeded	<i>Italics</i>

*** = samples collected and reported by WDNR

Table 2k
Summary of Groundwater Analytical Results
Potable Wells
Former Schlinsog Dairy
Loyal, WI

Parameter	ES	PAL	Units	PW2	Hubing			
				3/8/2010	***	2/16/2012	4/13/2017	11/22/2019
VOC Parameters								
Benzene	5	0.5	µg/l	14.4	<i>0.77</i>	<i>2.30</i>	< 0.50	Not Sampled - Access Denied
Toluene	800	160	µg/l	0.44 ^J		< 0.50	< 0.50	
Ethylbenzene	700	140	µg/l	<i>1.75</i>		< 0.50	< 0.50	
Xylenes (mixed isomers)	2,000	400	µg/l	3.51		< 0.50	< 1.5	
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.50		< 0.50	< 0.17	
Trimethylbenzenes (mixed isomers)	480	96	µg/l	3.37		< 0.20	< 0.50	
Naphthalene	100	10	µg/l	< 1.0		< 0.25	NA	
1,2-Dibromoethane	0.05	0.005	µg/l	< 0.80		< 0.20	NA	
1,2-Dichloroethane	5	0.5	µg/l	<i>1.34</i>	<i>0.56</i>	<i>0.63^J</i>	<i>0.36^J</i>	

Parameter	ES	PAL	Units	PW3 (Kautzer current potable well)						
				1/3/2011	5/31/2011	10/7/2011	2/16/2012	8/27/2013	4/13/2017	11/22/2019
VOC Parameters										
Benzene	5	0.5	µg/l	< 0.41	< 0.41	< 0.39	< 0.20	< 0.50	< 0.50	< 0.042
Toluene	800	160	µg/l	6.70	3.00	1.5	< 0.50	< 0.44	< 0.50	< 0.028
Ethylbenzene	700	140	µg/l	< 0.54	< 0.54	< 0.41	< 0.50	< 0.50	< 0.50	< 0.064
Xylenes (mixed isomers)	2,000	400	µg/l	< 1.8	< 1.8	< 0.87	< 0.50	< 0.82	< 1.5	< 0.074
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.61	< 0.61	< 0.38	< 0.50	< 0.49	< 0.17	< 0.900
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.97	< 0.97	< 0.43	< 0.20	< 2.5	< 0.50	NA
Naphthalene	100	10	µg/l	< 0.89	< 0.89	< 0.40	< 0.25	< 2.5	NA	< 0.171
1,2-Dibromoethane	0.05	0.005	µg/l	< 0.56	< 0.56	NA	< 0.20	< 0.38	NA	< 0.044
1,2-Dichloroethane	5	0.5	µg/l	< 0.57	< 0.57	NA	< 0.50	< 0.28	< 0.17	< 0.071

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NA = Not Analyzed

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

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

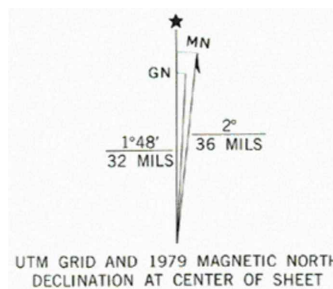
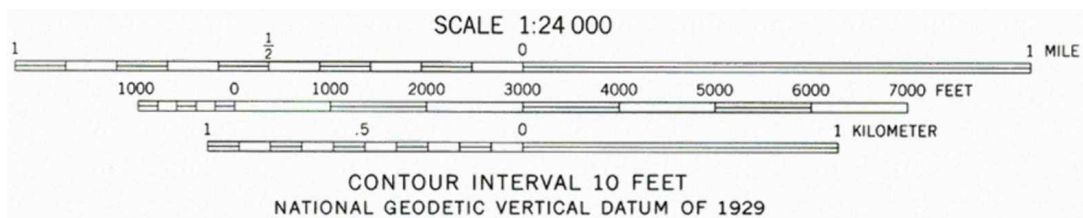
*** = samples collected and reported by WDNR

Table 3
Depth to Free Product and Free Product Thickness
Former Schlinsog Dairy
Loyal, WI

Depth To Free Product (feet) below Reference Elevation

Well Name	PW1				MW2			
Date	Depth to Product	Depth to Groundwater	Product Thickness (ft)	Product Removed (gal)	Depth to Product	Depth to Groundwater	Product Thickness (ft)	Product Removed (gal)
11-May-10	-	-	5.00	5.00				
18-May-10	50.00	51.00	1.00					
6-Jul-10	49.56	50.68	1.12					
18-Aug-10	48.40	49.56	1.16					
17-Nov-10	46.87	47.91	1.04					
1-Jan-11	NM	NM			46.01	46.61	0.60	1.00
13-May-11	45.06	45.07	0.01		44.02	45.09	1.07	
31-May-11	0.00	45.27	0.00		44.14	45.32	1.18	2.50
7-Oct-11	45.80	46.47	0.67		44.73	45.99	1.26	2.50
16-Feb-12	47.20	47.63	0.43		45.52	48.80	3.28	2.50
27-Aug-13	NM	NM			48.02	50.05	2.03	2.50
19-Sep-13	NM	NM			48.91	49.73	0.82	1.00
20-May-14	NM	NM			-	46.66	0.00	0.00
20-Aug-14	-	NM	0.00	0.00	-	46.54	0.00	0.00
16-Oct-17	NM	NM			37.99	38.27	0.28	0.50

NM = Not Measured



DMA 2973 III NW-SERIES V861

DATE:
4/20/2017

REI Engineering, INC.

DRAWING FILE: P:\5300-5399\5357-FORMER_SCHLINSOG.DWG\5357-SITE.DWG LAYOUT: ENV_HorZ-1x17 PLOTTED: FEB 10, 2020 - 9:31AM PLOTTED BY: NATHANP



LEGEND

0 50
SCALE: 1" = 50'

X ABANDONED

P POTABLE WELL

M MONITORING WELL

PZ PIEZOMETER

GP GEOPROBE SOIL BORINGS

U UTILITY POLE

W WATER LINE - BURIED

E ELECTRICAL LINE - BURIED

T TELECOMMUNICATION LINE - BURIED

OH OVERHEAD UTILITY LINE

U UTILITY POLE



FORMER SCHLINSOG DAIRY
N7701 PELSDORF AVENUE
LOYAL, WISCONSIN 54446

FIGURE 2 : DETAILED SITE MAP

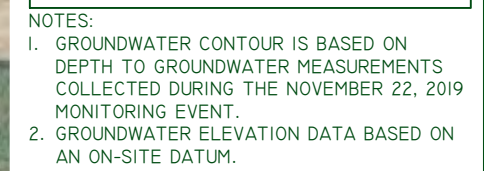
PROJECT No.
5357

DRAWN BY:
MCM

DATE:
1/30/2020



REI Engineering, INC.



FORMER SCHLINSOG DAIRY
N770I PELSDORF AVENUE
LOYAL, WISCONSIN 54446

PROJECT No.	DRAWN BY:	DATE:
5357	MCM	1/30/2020

APPENDIX A

WDNR SOIL BORING LOGS, WELL CONSTRUCTION FORMS AND BOREHOLE ABANDONMENT FORMS



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

Page 1 of 1

Facility/Project Name Former Schlinsog Dairy			License/Permit/Monitoring Number BRRS 03-10-554767		Boring Number TW-1	
Boring Drilled By: Name of crew chief (first, last) and Firm Darrin Prentice - Geiss Soil and Sample			Date Drilling Started 10/16/2017		Date Drilling Completed 10/16/2017	
					Drilling Method Geoprobe Hydraulic Push	
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation 0		Borehole Diameter 2.25" V-1
Local Grid Origin ☐ (estimated) ☐ or Boring Location ☒ W-1			Lat		Local Grid Location N ☐ E ☐	
State Plane			Long		S ☐ W ☐	
Facility ID		County Clark	County Code 10	Civil Town/City/or Village Loyal		

Sample				Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties					RQD/ Comments
Number	Type	Length Att. & Recovered (in)	Compressive Strength								Moisture Content	Liquid Limit	Plasticity Index	P 200		
1	SS	18			1	Red/brown clay w/ varying amounts of gravel/sand/cobble	CL					M				
					2											
					3											
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					26											
					27											
					28											
					29											
8	SS	20			30	Sand layer w/ clay	SC									
					31	Red/brown clay w/ varying amounts of sand/gravel	CL									
					32											
					33											
					34											
					35											
					36											
					37											
					38											
					39											
					40											
					41											
					42											
					43											
					44											
					45											
					46											
					47											
					48											
					49											
					50											
					1" Temporary well set at 48'											

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

Signature *Satt J. Black* Firm REI Engineering, Inc.
4080 North 20th Avenue, Wausau, WI

This form is authorized by Chapters 281,283,289,292,293,295, and 299, Wis. Stats. Completion of 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.

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

Facility/Project Name Former Schlinsog Dairy	Local Grid Location of Well Feet S. Feet W. Feet N. Feet E.	Well Name TW-1
Facility License Permit or Monitoring Number BRRTS#03-10-554767	Grid Origin Location	Wis. Unique Well Number DNR Well Number
Type of Well Water Table Observation Well ☒ 1 Piezometer ☐ 2	Section Location of Waste/Source ☐ E ☐ W	Date Well Installed 10/16/2017
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) Darrin Prentice - Geiss Soil & Sample
Is Well A Point of Enforcement Std. Application ☐ 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 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
Geoprobe ☒ 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 ft.
F. Fine sand, top _____ ft. MSL or 34 ft.
G. Filter pack, top _____ ft. MSL or 36 ft.
H. Screen joint, top _____ ft. MSL or 38 ft.
I. Well bottom _____ ft. MSL or 48 ft.
J. Filter pack, bottom _____ ft. MSL or 48 ft.
K. Borehole, bottom _____ ft. MSL or 48 ft.
L. Borehole, diameter 2.25 in.
M. O.D. well casing 1.4 in.
N. I.D. well casing 0.75 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 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 weight Bentonite-sand slurry ☐ 35
c. Lbs/gal mud weight Bentonite slurry ☐ 31
d. % Bentonite Bentonite-cement grout ☐ 50
e. 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. 3/8 in. 1/2 in. Bentonite pellets ☐ 32
c. Other ☐

7. Fine sand material Manufacturer, product name and mesh size
a. Red Flint Sand #15
b. Volume added _____ ft³

8. Filter pack material: Manufacturer, product name and mesh size
a. Red Flint Sand #40
b. Volume added _____ ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer Johnson Screen
c. Slot size: 0.10 in.
d. Slotted length: 10 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

Scott J. Block

Firm

REI Engineering, Inc.
4080 N. 20th Ave.
Wausau, WI 54401

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.

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

Page 1 of 1

Facility/Project Name Former Schlinsog Dairy			License/Permit/Monitoring Number BRRS 03-10-554767		Boring Number TW- ROW	
Boring Drilled By: Name of crew chief (first, last) and Firm Darrin Prentice - Geiss Soil and Sample			Date Drilling Started 10/16/2017		Date Drilling Completed 10/16/2017	
					Drilling Method Geoprobe Hydraulic Push	
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation 0	Borehole Diameter 2.25" V- ROW	
Local Grid Origin ☐ (estimated) ☐ or Boring Location ☒ V- ROW			Lat	Local Grid Location N ☐ E ☐ S ☐ W ☐		
State Plane			Long			
Facility ID		County Clark	County Code 10	Civil Town/City/or Village Loyal		

Sample			Blow Counts	Depth In Feet	Soil/ Rock Description And Geologic Origin For Each Major Unit	U.S.C.S.	Graphic	Well	PID/FID	Soil Properties					RQD/ Comments
Number	Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1	SS	24		1	Low plasticity brown/red clay w/ orange and gray mottling	OL					M				
				2	Organic										
				3	Sandy brown/red clay	CL									
				4	Red/brown sand/clay mix w/ some cobble										
2	SS	18		5											
				6											
				7		CL									
				8											
				9											
3	SS	30		10											
				11											
				12	Red/brown sand/clay mix w/ large intermittent cobble										
				13		CL									
				14											
				15											
5	SS	0		16	No recovery										
				17											
				18	Red/brown sand/clay mix, increasing angular gravel and cobble										
6	SS	18		19	seam of medium/coarse sand at ~19'	CL									
				20											
				21											
				22											
				23											
				24	Hard clay/silt/sand conglomerate										
				25	Angular gravel, cobble, virtually impassible	CL									
				26											
				27											
8	SS	18		28											
				29											
				30	Boring abandoned - drilling too difficult										
				31											
				32											

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

Signature <i>Jeff Blash</i>	Firm REI Engineering, Inc. 4080 North 20th Avenue, Wausau, WI
-----------------------------	--

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

☐ Verification Only of Fill and Seal

Route to DNR Bureau:

- ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information				2. Facility / Owner Information			
County Clark		WI Unique Well # of Removed Well TW-ROW		Hicap #		Facility Name Schlinsog Dairy	
Latitude / Longitude (see instructions) N W		Format Code ☐ DD ☐ DDM		Method Code ☐ GPS008 ☐ SCR002 ☐ OTH001		Facility ID (FID or PWS)	
1/4 / 1/4 or Gov't Lot #		Section		Township N		Range ☐ E ☐ W	
Well Street Address N7705 Pelsdorf Avenue				Original Well Owner Schlinsog Dairy			
Well City, Village or Town Loyal				Present Well Owner			
Subdivision Name				Mailing Address of Present Owner N7705 Pelsdorf Avenue			
Reason for Removal from Service				City of Present Owner Loyal			
WI Unique Well # of Replacement Well				State WI			
Well ZIP Code 54446				ZIP Code 54446			
Lot #							
3. Filled & Sealed Well / Drillhole / Borehole Information							
☐ Monitoring Well		Original Construction Date (mm/dd/yyyy) 10-16-17					
☐ Water Well		If a Well Construction Report is available, please attach.					
☒ Borehole / Drillhole							
Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe							
Formation Type: ☒ Unconsolidated Formation ☐ Bedrock							
Total Well Depth From Ground Surface (ft.) 30				Casing Diameter (in.)			
Lower Drillhole Diameter (in.)				Casing Depth (ft.)			
Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown							
If yes, to what depth (feet)?				Depth to Water (feet)			
4. Pump, Liner, Screen, Casing & Sealing Material							
Pump and piping removed? ☐ Yes ☐ No ☒ N/A							
Liner(s) removed? ☐ Yes ☐ No ☒ N/A							
Liner(s) perforated? ☐ Yes ☐ No ☒ N/A							
Screen removed? ☐ Yes ☐ No ☒ N/A							
Casing left in place? ☐ Yes ☐ No ☒ N/A							
Was casing cut off below surface? ☐ Yes ☐ No ☒ N/A							
Did sealing material rise to surface? ☒ Yes ☐ No ☐ N/A							
Did material settle after 24 hours? ☐ Yes ☒ No ☐ N/A							
If yes, was hole retopped? ☐ Yes ☐ No ☒ N/A							
If bentonite chips were used, were they hydrated with water from a known safe source? ☐ Yes ☒ No ☐ N/A							
Required Method of Placing Sealing Material ☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped ☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____							
Sealing Materials ☐ Neat Cement Grout ☐ Concrete ☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips							
For Monitoring Wells and Monitoring Well Boreholes Only: ☐ Bentonite Chips ☐ Bentonite - Cement Grout ☒ Granular Bentonite ☐ Bentonite - Sand Slurry							
5. Material Used to Fill Well / Drillhole				From (ft.) To (ft.) No. Yards, Sacks Sealant or Volume (circle one) Mix Ratio or Mud Weight			
Granular bentonite				Surface 30 1/4 bag			
6. Comments							
7. Supervision of Work						DNR Use Only	
Name of Person or Firm Doing Filling & Sealing REI Engineering, Inc./Geiss Soil and Sample				License #		Date Received	
Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/16/17				Telephone Number (715) 675-9784		Noted By	
Street or Route 4080 N. 20th Ave.				Comments			
City Wausau		State WI		ZIP Code 54401		Date Signed 11/9/2017	

APPENDIX B

LABORATORY ANALYTICAL REPORTS



October 19, 2017

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

RE: Project: 5357AXUC SCHLINSOG DAIRY
Pace Project No.: 40158761

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on October 17, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40158761001	MW-1	Water	10/16/17 12:40	10/17/17 08:45
40158761002	MW-2	Water	10/16/17 13:00	10/17/17 08:45
40158761003	MW-3	Water	10/16/17 11:20	10/17/17 08:45
40158761004	MW-6	Water	10/16/17 12:15	10/17/17 08:45
40158761005	TW-1	Water	10/16/17 14:30	10/17/17 08:45

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SAMPLE ANALYTE COUNT

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40158761001	MW-1	EPA 8260	LAP	13
40158761002	MW-2	EPA 8260	LAP	13
40158761003	MW-3	EPA 8260	LAP	13
40158761004	MW-6	EPA 8260	LAP	13
40158761005	TW-1	EPA 8260	LAP	13

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ANALYTICAL RESULTS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

Sample: MW-1		Lab ID: 40158761001		Collected: 10/16/17 12:40		Received: 10/17/17 08:45		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Benzene	7690	ug/L	100	50.0	100		10/18/17 12:30	71-43-2	
1,2-Dichloroethane	401	ug/L	100	16.8	100		10/18/17 12:30	107-06-2	
Ethylbenzene	2980	ug/L	100	50.0	100		10/18/17 12:30	100-41-4	
Methyl-tert-butyl ether	<17.4	ug/L	100	17.4	100		10/18/17 12:30	1634-04-4	
Toluene	13000	ug/L	100	50.0	100		10/18/17 12:30	108-88-3	
1,2,4-Trimethylbenzene	1930	ug/L	100	50.0	100		10/18/17 12:30	95-63-6	
1,3,5-Trimethylbenzene	505	ug/L	100	50.0	100		10/18/17 12:30	108-67-8	
Xylene (Total)	12000	ug/L	300	150	100		10/18/17 12:30	1330-20-7	
m&p-Xylene	8690	ug/L	200	100	100		10/18/17 12:30	179601-23-1	
o-Xylene	3340	ug/L	100	50.0	100		10/18/17 12:30	95-47-6	
Surrogates									
Dibromofluoromethane (S)	102	%	67-130		100		10/18/17 12:30	1868-53-7	
Toluene-d8 (S)	101	%	70-130		100		10/18/17 12:30	2037-26-5	
4-Bromofluorobenzene (S)	93	%	61-130		100		10/18/17 12:30	460-00-4	

Sample: MW-2		Lab ID: 40158761002		Collected: 10/16/17 13:00		Received: 10/17/17 08:45		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Benzene	11100	ug/L	100	50.0	100		10/18/17 12:07	71-43-2	
1,2-Dichloroethane	420	ug/L	100	16.8	100		10/18/17 12:07	107-06-2	
Ethylbenzene	3230	ug/L	100	50.0	100		10/18/17 12:07	100-41-4	
Methyl-tert-butyl ether	<17.4	ug/L	100	17.4	100		10/18/17 12:07	1634-04-4	
Toluene	27600	ug/L	100	50.0	100		10/18/17 12:07	108-88-3	
1,2,4-Trimethylbenzene	2300	ug/L	100	50.0	100		10/18/17 12:07	95-63-6	
1,3,5-Trimethylbenzene	589	ug/L	100	50.0	100		10/18/17 12:07	108-67-8	
Xylene (Total)	15500	ug/L	300	150	100		10/18/17 12:07	1330-20-7	
m&p-Xylene	10600	ug/L	200	100	100		10/18/17 12:07	179601-23-1	
o-Xylene	4930	ug/L	100	50.0	100		10/18/17 12:07	95-47-6	
Surrogates									
Dibromofluoromethane (S)	111	%	67-130		100		10/18/17 12:07	1868-53-7	
Toluene-d8 (S)	99	%	70-130		100		10/18/17 12:07	2037-26-5	
4-Bromofluorobenzene (S)	93	%	61-130		100		10/18/17 12:07	460-00-4	

Sample: MW-3		Lab ID: 40158761003		Collected: 10/16/17 11:20		Received: 10/17/17 08:45		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Benzene	29.2	ug/L	2.0	1.0	2		10/18/17 12:51	71-43-2	
1,2-Dichloroethane	<0.34	ug/L	2.0	0.34	2		10/18/17 12:51	107-06-2	
Ethylbenzene	59.6	ug/L	2.0	1.0	2		10/18/17 12:51	100-41-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357AXUC SCHLINSOG DAIRY
Pace Project No.: 40158761

Sample: MW-3 Lab ID: 40158761003 Collected: 10/16/17 11:20 Received: 10/17/17 08:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Methyl-tert-butyl ether	<0.35	ug/L	2.0	0.35	2		10/18/17 12:51	1634-04-4	
Toluene	4.8	ug/L	2.0	1.0	2		10/18/17 12:51	108-88-3	
1,2,4-Trimethylbenzene	51.6	ug/L	2.0	1.0	2		10/18/17 12:51	95-63-6	
1,3,5-Trimethylbenzene	29.2	ug/L	2.0	1.0	2		10/18/17 12:51	108-67-8	
Xylene (Total)	62.5	ug/L	6.0	3.0	2		10/18/17 12:51	1330-20-7	
m&p-Xylene	62.5	ug/L	4.0	2.0	2		10/18/17 12:51	179601-23-1	
o-Xylene	<1.0	ug/L	2.0	1.0	2		10/18/17 12:51	95-47-6	
Surrogates									
Dibromofluoromethane (S)	98	%	67-130		2		10/18/17 12:51	1868-53-7	D3
Toluene-d8 (S)	97	%	70-130		2		10/18/17 12:51	2037-26-5	
4-Bromofluorobenzene (S)	94	%	61-130		2		10/18/17 12:51	460-00-4	

Sample: MW-6 Lab ID: 40158761004 Collected: 10/16/17 12:15 Received: 10/17/17 08:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	0.80J	ug/L	1.0	0.50	1		10/18/17 18:00	71-43-2	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/18/17 18:00	107-06-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/18/17 18:00	100-41-4	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/18/17 18:00	1634-04-4	
Toluene	<0.50	ug/L	1.0	0.50	1		10/18/17 18:00	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/18/17 18:00	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/18/17 18:00	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/18/17 18:00	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/18/17 18:00	179601-23-1	
o-Xylene	1.2	ug/L	1.0	0.50	1		10/18/17 18:00	95-47-6	
Surrogates									
Dibromofluoromethane (S)	107	%	67-130		1		10/18/17 18:00	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		10/18/17 18:00	2037-26-5	
4-Bromofluorobenzene (S)	91	%	61-130		1		10/18/17 18:00	460-00-4	

Sample: TW-1 Lab ID: 40158761005 Collected: 10/16/17 14:30 Received: 10/17/17 08:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		10/18/17 16:10	71-43-2	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		10/18/17 16:10	107-06-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		10/18/17 16:10	100-41-4	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		10/18/17 16:10	1634-04-4	
Toluene	0.53J	ug/L	1.0	0.50	1		10/18/17 16:10	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/18/17 16:10	95-63-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

Sample: TW-1		Lab ID: 40158761005		Collected: 10/16/17 14:30		Received: 10/17/17 08:45		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		10/18/17 16:10	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/18/17 16:10	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		10/18/17 16:10	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		10/18/17 16:10	95-47-6	
Surrogates									
Dibromofluoromethane (S)	107	%	67-130		1		10/18/17 16:10	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		10/18/17 16:10	2037-26-5	
4-Bromofluorobenzene (S)	91	%	61-130		1		10/18/17 16:10	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

QC Batch:	270966	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	40158761001, 40158761002, 40158761003, 40158761004, 40158761005		

METHOD BLANK:	1593061	Matrix:	Water
Associated Lab Samples:	40158761001, 40158761002, 40158761003, 40158761004, 40158761005		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	10/18/17 08:28	
1,2-Dichloroethane	ug/L	<0.17	1.0	10/18/17 08:28	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	10/18/17 08:28	
Benzene	ug/L	<0.50	1.0	10/18/17 08:28	
Ethylbenzene	ug/L	<0.50	1.0	10/18/17 08:28	
m&p-Xylene	ug/L	<1.0	2.0	10/18/17 08:28	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	10/18/17 08:28	
o-Xylene	ug/L	<0.50	1.0	10/18/17 08:28	
Toluene	ug/L	<0.50	1.0	10/18/17 08:28	
Xylene (Total)	ug/L	<1.5	3.0	10/18/17 08:28	
4-Bromofluorobenzene (S)	%	90	61-130	10/18/17 08:28	
Dibromofluoromethane (S)	%	103	67-130	10/18/17 08:28	
Toluene-d8 (S)	%	102	70-130	10/18/17 08:28	

LABORATORY CONTROL SAMPLE: 1593062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	49.6	53.9	109	70-131	
Benzene	ug/L	49.6	57.6	116	73-145	
Ethylbenzene	ug/L	49.6	54.2	109	87-129	
m&p-Xylene	ug/L	99.2	108	108	70-130	
Methyl-tert-butyl ether	ug/L	49.6	50.7	102	66-143	
o-Xylene	ug/L	49.6	52.7	106	70-130	
Toluene	ug/L	49.6	53.0	107	82-130	
Xylene (Total)	ug/L	149	160	108	70-130	
4-Bromofluorobenzene (S)	%			97	61-130	
Dibromofluoromethane (S)	%			111	67-130	
Toluene-d8 (S)	%			100	70-130	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40158761

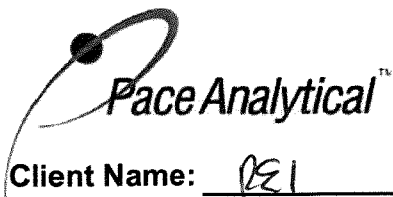
Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40158761001	MW-1	EPA 8260	270966		
40158761002	MW-2	EPA 8260	270966		
40158761003	MW-3	EPA 8260	270966		
40158761004	MW-6	EPA 8260	270966		
40158761005	TW-1	EPA 8260	270966		

REPORT OF LABORATORY ANALYSIS

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PACE Project No.	
40158761	
Receipt Temp =	201 °C
Sample Receipt pH	
OK / Adjusted	
<u>Cooler Custody Seal</u>	
Present / Not Present	
Intact / Not Intact	

[illegible][illegible]



Sample Condition Upon Receipt

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

Project # **WO# : 40158761**

Client Name: PEI

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

Tracking #: 1521203-1



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

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

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

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

Cooler Temperature Uncorr: /Corr: 20 Biological Tissue is Frozen: ☐ yes

Temp Blank Present: ☐ yes ☒ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C.

Comments:

Person examining contents:

Date: 10/17/17

Initials: RM

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. <u>NO ms/msd</u> <u>RM 10/17/17</u>
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: <u>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐ Yes ☐ No ☒ N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐ Yes ☐ No ☒ N/A	
exceptions: <u>VOA</u> coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER: <u> </u>	☒ 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):	<u> </u>	

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review:

Date: 10-17-17

April 30, 2018

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

RE: Project: 5357AXUC SCHLINSOG DAIRY
Pace Project No.: 40168015

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on April 26, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40168015

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40168015

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40168015001	MW-1	Water	04/25/18 12:00	04/26/18 08:30
40168015002	MW-2	Water	04/25/18 12:15	04/26/18 08:30
40168015003	MW-3	Water	04/25/18 11:30	04/26/18 08:30
40168015004	MW-6	Water	04/25/18 11:00	04/26/18 08:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40168015

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40168015001	MW-1	EPA 8260	LAP	11
40168015002	MW-2	EPA 8260	LAP	11
40168015003	MW-3	EPA 8260	LAP	11
40168015004	MW-6	EPA 8260	LAP	11

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357AXUC SCHLINSOG DAIRY
Pace Project No.: 40168015

Sample: MW-1 Lab ID: 40168015001 Collected: 04/25/18 12:00 Received: 04/26/18 08:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	2430	ug/L	100	50.0	100		04/27/18 22:46	71-43-2	
1,2-Dichloroethane	190	ug/L	100	16.8	100		04/27/18 22:46	107-06-2	
Ethylbenzene	1110	ug/L	100	50.0	100		04/27/18 22:46	100-41-4	
Methyl-tert-butyl ether	<17.4	ug/L	100	17.4	100		04/27/18 22:46	1634-04-4	
Toluene	7090	ug/L	100	50.0	100		04/27/18 22:46	108-88-3	
1,2,4-Trimethylbenzene	903	ug/L	100	50.0	100		04/27/18 22:46	95-63-6	
1,3,5-Trimethylbenzene	222	ug/L	100	50.0	100		04/27/18 22:46	108-67-8	
Xylene (Total)	6030	ug/L	300	150	100		04/27/18 22:46	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	99	%	67-130		100		04/27/18 22:46	1868-53-7	
Toluene-d8 (S)	95	%	70-130		100		04/27/18 22:46	2037-26-5	
4-Bromofluorobenzene (S)	94	%	61-130		100		04/27/18 22:46	460-00-4	

Sample: MW-2 Lab ID: 40168015002 Collected: 04/25/18 12:15 Received: 04/26/18 08:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	6950	ug/L	100	50.0	100		04/27/18 23:09	71-43-2	
1,2-Dichloroethane	491	ug/L	100	16.8	100		04/27/18 23:09	107-06-2	
Ethylbenzene	2990	ug/L	100	50.0	100		04/27/18 23:09	100-41-4	
Methyl-tert-butyl ether	<17.4	ug/L	100	17.4	100		04/27/18 23:09	1634-04-4	
Toluene	11500	ug/L	100	50.0	100		04/27/18 23:09	108-88-3	
1,2,4-Trimethylbenzene	2490	ug/L	100	50.0	100		04/27/18 23:09	95-63-6	
1,3,5-Trimethylbenzene	607	ug/L	100	50.0	100		04/27/18 23:09	108-67-8	
Xylene (Total)	13000	ug/L	300	150	100		04/27/18 23:09	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	98	%	67-130		100		04/27/18 23:09	1868-53-7	
Toluene-d8 (S)	96	%	70-130		100		04/27/18 23:09	2037-26-5	
4-Bromofluorobenzene (S)	95	%	61-130		100		04/27/18 23:09	460-00-4	

Sample: MW-3 Lab ID: 40168015003 Collected: 04/25/18 11:30 Received: 04/26/18 08:30 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:17	71-43-2	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		04/27/18 18:17	107-06-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:17	100-41-4	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		04/27/18 18:17	1634-04-4	
Toluene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:17	108-88-3	
1,2,4-Trimethylbenzene	2.1	ug/L	1.0	0.50	1		04/27/18 18:17	95-63-6	
1,3,5-Trimethylbenzene	0.97J	ug/L	1.0	0.50	1		04/27/18 18:17	108-67-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40168015

Sample: MW-3		Lab ID: 40168015003		Collected: 04/25/18 11:30		Received: 04/26/18 08:30		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Xylene (Total)	2.2J	ug/L	3.0	1.5	1		04/27/18 18:17	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	103	%	67-130		1		04/27/18 18:17	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		04/27/18 18:17	2037-26-5	
4-Bromofluorobenzene (S)	96	%	61-130		1		04/27/18 18:17	460-00-4	

Sample: MW-6		Lab ID: 40168015004		Collected: 04/25/18 11:00		Received: 04/26/18 08:30		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:39	71-43-2	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		04/27/18 18:39	107-06-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:39	100-41-4	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		04/27/18 18:39	1634-04-4	
Toluene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:39	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:39	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		04/27/18 18:39	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		04/27/18 18:39	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	99	%	67-130		1		04/27/18 18:39	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		04/27/18 18:39	2037-26-5	
4-Bromofluorobenzene (S)	91	%	61-130		1		04/27/18 18:39	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 5357AXUC SCHLINSOG DAIRY
Pace Project No.: 40168015

QC Batch: 287155 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 40168015001, 40168015002, 40168015003, 40168015004

METHOD BLANK: 1679874 Matrix: Water
Associated Lab Samples: 40168015001, 40168015002, 40168015003, 40168015004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	04/27/18 14:54	
1,2-Dichloroethane	ug/L	<0.17	1.0	04/27/18 14:54	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	04/27/18 14:54	
Benzene	ug/L	<0.50	1.0	04/27/18 14:54	
Ethylbenzene	ug/L	<0.50	1.0	04/27/18 14:54	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	04/27/18 14:54	
Toluene	ug/L	<0.50	1.0	04/27/18 14:54	
Xylene (Total)	ug/L	<1.5	3.0	04/27/18 14:54	
4-Bromofluorobenzene (S)	%	84	61-130	04/27/18 14:54	
Dibromofluoromethane (S)	%	111	67-130	04/27/18 14:54	
Toluene-d8 (S)	%	96	70-130	04/27/18 14:54	

LABORATORY CONTROL SAMPLE: 1679875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.9	100	70-131	
Benzene	ug/L	50	52.7	105	73-145	
Ethylbenzene	ug/L	50	58.3	117	87-129	
Methyl-tert-butyl ether	ug/L	50	45.4	91	66-143	
Toluene	ug/L	50	54.4	109	82-130	
Xylene (Total)	ug/L	150	183	122	70-130	
4-Bromofluorobenzene (S)	%			102	61-130	
Dibromofluoromethane (S)	%			99	67-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1679876 1679877

Parameter	Units	40168051009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	<0.17	50	50	49.5	50.3	99	101	70-131	1	20	
Benzene	ug/L	11.8	50	50	64.1	64.0	105	104	73-145	0	20	
Ethylbenzene	ug/L	6.3	50	50	63.1	65.0	114	117	87-129	3	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	46.1	48.6	92	97	66-143	5	20	
Toluene	ug/L	<0.50	50	50	52.8	54.0	106	108	82-131	2	20	
Xylene (Total)	ug/L	4.4	150	150	179	184	116	120	70-130	3	20	
4-Bromofluorobenzene (S)	%						101	101	61-130			
Dibromofluoromethane (S)	%						101	100	67-130			
Toluene-d8 (S)	%						99	98	70-130			

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40168015

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5357AXUC SCHLINSOG DAIRY

Pace Project No.: 40168015

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40168015001	MW-1	EPA 8260	287155		
40168015002	MW-2	EPA 8260	287155		
40168015003	MW-3	EPA 8260	287155		
40168015004	MW-6	EPA 8260	287155		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)	
Company Name:	REI
Branch/Location:	Wassam
Project Contact:	Dave Lawton
Phone:	715-675-9784
Project Number:	53574XUC
Project Name:	Schluskey Dairy
Project State:	WI
Sampled By (Print):	Jed Kosch
Sampled By (Sign):	Jed Kosch
PO #:	
	Regulatory Program:



CHAIN OF CUSTODY

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

FILTERED?
(YES/NO)

***PRESERVATION**
(CODE)*

[illegible][illegible]

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:		Relinquished By: <i>Matthew W. Park</i> Date/Time: <i>4/25/18 14:40</i>	Received By: _____ Date/Time: _____	PACE Project No. <i>40168015</i> Receipt Temp = <i>ROT</i> °C Sample Receipt pH OK / Adjusted Cooler Custody Seal Present / <u>Not Present</u> Intact / <u>Not Intact</u>		
Transmit Prelim Rush Results by (complete what you want):		Relinquished By: <i>Walsh</i> Date/Time: <i>4-26-18 0830</i>	Received By: <i>Susan Kyle</i> Date/Time: <i>0830 4-26-18</i>			
Email #1:		Relinquished By:	Date/Time:		Received By:	Date/Time:
Email #2:		Relinquished By:	Date/Time:		Received By:	Date/Time:
Telephone:		Relinquished By:	Date/Time:		Received By:	Date/Time:
Fax:		Relinquished By:	Date/Time:	Received By:	Date/Time:	
Samples on HOLD are subject to special pricing and release of liability		Relinquished By:	Date/Time:	Received By:	Date/Time:	

Client Name: REI Project # 40168015

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

Lab Lot# of pH paper:

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

Initial when completed:

Date/Time:

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

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

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

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

Sample Condition Upon Receipt Form (SCUR)

Client Name: REI

Project #

WO#: 40168015

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

☐ Client ☐ Pace Other: _____

Tracking #: 1702196



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

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

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

Thermometer Used SR - N/A

Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None

☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: RDT / Corr: _____

Temp Blank Present: ☐ yes ☒ no

Biological Tissue is Frozen: ☐ yes ☐ no

Person examining contents

Date: 4-26-18
Initials: SCU

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

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

Client Notification/ Resolution:

Person Contacted: _____

Date/Time: _____

If checked, see attached form for additional comments ☐

Comments/ Resolution: _____

Project Manager Review: RR

Date: 4-26-18

June 11, 2019

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

RE: Project: 5357 SCHLINSOG DAIRY
Pace Project No.: 40189033

Dear DAVID LARSEN:

Enclosed are the analytical results for sample(s) received by the laboratory on June 07, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Steven Mleczko for
Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40189033001	MW1	Water	06/06/19 12:00	06/07/19 09:15
40189033002	MW2	Water	06/06/19 12:15	06/07/19 09:15
40189033003	MW3	Water	06/06/19 11:45	06/07/19 09:15
40189033004	MW6	Water	06/06/19 11:30	06/07/19 09:15

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SAMPLE ANALYTE COUNT

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40189033001	MW1	EPA 8260	LAP	11
40189033002	MW2	EPA 8260	LAP	11
40189033003	MW3	EPA 8260	LAP	11
40189033004	MW6	EPA 8260	LAP	11

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

Sample: MW1 Lab ID: 40189033001 Collected: 06/06/19 12:00 Received: 06/07/19 09:15 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	5510	ug/L	100	24.6	100		06/11/19 03:12	71-43-2	
1,2-Dichloroethane	384	ug/L	100	28.0	100		06/11/19 03:12	107-06-2	
Ethylbenzene	999	ug/L	100	21.8	100		06/11/19 03:12	100-41-4	
Methyl-tert-butyl ether	<125	ug/L	415	125	100		06/11/19 03:12	1634-04-4	
Toluene	7970	ug/L	500	17.2	100		06/11/19 03:12	108-88-3	
1,2,4-Trimethylbenzene	1850	ug/L	280	84.1	100		06/11/19 03:12	95-63-6	
1,3,5-Trimethylbenzene	615	ug/L	291	87.3	100		06/11/19 03:12	108-67-8	
Xylene (Total)	8600	ug/L	300	150	100		06/11/19 03:12	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	111	%	70-130		100		06/11/19 03:12	1868-53-7	
Toluene-d8 (S)	99	%	70-130		100		06/11/19 03:12	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		100		06/11/19 03:12	460-00-4	

Sample: MW2 Lab ID: 40189033002 Collected: 06/06/19 12:15 Received: 06/07/19 09:15 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	6890	ug/L	100	24.6	100		06/11/19 03:34	71-43-2	
1,2-Dichloroethane	659	ug/L	100	28.0	100		06/11/19 03:34	107-06-2	
Ethylbenzene	3140	ug/L	100	21.8	100		06/11/19 03:34	100-41-4	
Methyl-tert-butyl ether	<125	ug/L	415	125	100		06/11/19 03:34	1634-04-4	
Toluene	10500	ug/L	500	17.2	100		06/11/19 03:34	108-88-3	
1,2,4-Trimethylbenzene	2150	ug/L	280	84.1	100		06/11/19 03:34	95-63-6	
1,3,5-Trimethylbenzene	501	ug/L	291	87.3	100		06/11/19 03:34	108-67-8	
Xylene (Total)	11100	ug/L	300	150	100		06/11/19 03:34	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	111	%	70-130		100		06/11/19 03:34	1868-53-7	
Toluene-d8 (S)	94	%	70-130		100		06/11/19 03:34	2037-26-5	
4-Bromofluorobenzene (S)	110	%	70-130		100		06/11/19 03:34	460-00-4	

Sample: MW3 Lab ID: 40189033003 Collected: 06/06/19 11:45 Received: 06/07/19 09:15 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	571	ug/L	5.0	1.2	5		06/11/19 07:50	71-43-2	HS,M1
1,2-Dichloroethane	66.8	ug/L	1.0	0.28	1		06/10/19 21:13	107-06-2	M1
Ethylbenzene	30.8	ug/L	1.0	0.22	1		06/10/19 21:13	100-41-4	M1
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		06/10/19 21:13	1634-04-4	
Toluene	12.7	ug/L	5.0	0.17	1		06/10/19 21:13	108-88-3	
1,2,4-Trimethylbenzene	11.7	ug/L	2.8	0.84	1		06/10/19 21:13	95-63-6	
1,3,5-Trimethylbenzene	3.1	ug/L	2.9	0.87	1		06/10/19 21:13	108-67-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

Sample: MW3		Lab ID: 40189033003		Collected: 06/06/19 11:45		Received: 06/07/19 09:15		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Xylene (Total)	30.9	ug/L	3.0	1.5	1		06/10/19 21:13	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	113	%	70-130		1		06/10/19 21:13	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		06/10/19 21:13	2037-26-5	
4-Bromofluorobenzene (S)	105	%	70-130		1		06/10/19 21:13	460-00-4	

Sample: MW6		Lab ID: 40189033004		Collected: 06/06/19 11:30		Received: 06/07/19 09:15		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Benzene	98.0	ug/L	1.0	0.25	1		06/11/19 00:35	71-43-2	
1,2-Dichloroethane	8.3	ug/L	1.0	0.28	1		06/11/19 00:35	107-06-2	
Ethylbenzene	26.7	ug/L	1.0	0.22	1		06/11/19 00:35	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		06/11/19 00:35	1634-04-4	
Toluene	7.8	ug/L	5.0	0.17	1		06/11/19 00:35	108-88-3	
1,2,4-Trimethylbenzene	6.4	ug/L	2.8	0.84	1		06/11/19 00:35	95-63-6	
1,3,5-Trimethylbenzene	3.0	ug/L	2.9	0.87	1		06/11/19 00:35	108-67-8	
Xylene (Total)	19.0	ug/L	3.0	1.5	1		06/11/19 00:35	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	113	%	70-130		1		06/11/19 00:35	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		06/11/19 00:35	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		06/11/19 00:35	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 5357 SCHLINSOG DAIRY
Pace Project No.: 40189033

QC Batch: 323797 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 40189033001, 40189033002, 40189033003, 40189033004

METHOD BLANK: 1880602 Matrix: Water
Associated Lab Samples: 40189033001, 40189033002, 40189033003, 40189033004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	06/10/19 17:29	
1,2-Dichloroethane	ug/L	<0.28	1.0	06/10/19 17:29	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	06/10/19 17:29	
Benzene	ug/L	<0.25	1.0	06/10/19 17:29	
Ethylbenzene	ug/L	<0.22	1.0	06/10/19 17:29	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	06/10/19 17:29	
Toluene	ug/L	<0.17	5.0	06/10/19 17:29	
Xylene (Total)	ug/L	<1.5	3.0	06/10/19 17:29	
4-Bromofluorobenzene (S)	%	105	70-130	06/10/19 17:29	
Dibromofluoromethane (S)	%	111	70-130	06/10/19 17:29	
Toluene-d8 (S)	%	102	70-130	06/10/19 17:29	

LABORATORY CONTROL SAMPLE: 1880603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	60.6	121	75-140	
Benzene	ug/L	50	55.0	110	70-130	
Ethylbenzene	ug/L	50	57.5	115	80-124	
Methyl-tert-butyl ether	ug/L	50	47.5	95	54-137	
Toluene	ug/L	50	53.3	107	80-126	
Xylene (Total)	ug/L	150	163	109	70-130	
4-Bromofluorobenzene (S)	%			111	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1881177 1881178

Parameter	Units	40189033003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	66.8	50	50	104	100	74	67	75-140	4	20	M1
Benzene	ug/L	571	50	50	402	357	-338	-428	70-130	12	20	E, M1
Ethylbenzene	ug/L	30.8	50	50	76.0	68.2	90	75	80-125	11	20	M1
Methyl-tert-butyl ether	ug/L	<1.2	50	50	56.1	57.2	112	114	51-145	2	20	
Toluene	ug/L	12.7	50	50	61.4	58.9	97	92	80-131	4	20	
Xylene (Total)	ug/L	30.9	150	150	187	181	104	100	70-130	3	20	
4-Bromofluorobenzene (S)	%						113	113	70-130			
Dibromofluoromethane (S)	%						113	115	70-130			
Toluene-d8 (S)	%						103	101	70-130			

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5357 SCHLINSOG DAIRY

Pace Project No.: 40189033

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40189033001	MW1	EPA 8260	323797		
40189033002	MW2	EPA 8260	323797		
40189033003	MW3	EPA 8260	323797		
40189033004	MW6	EPA 8260	323797		

REPORT OF LABORATORY ANALYSIS

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Client Name:

REI

Sample Preservation Receipt Form

Project #

40189033

Pace Analytical Services, LLC

1241 Bellevue Street, Suite 8

Green Bay, WI 54302

All containers needing preservation have been checked and noted below: ☐ Yes ☐ No ☒ N/AInitial when
completed:Date/
Time:

Lab Lot# of pH paper:

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

Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T
001																															2.5 / 5 / 10
002																															2.5 / 5 / 10
003																															2.5 / 5 / 10
004																															2.5 / 5 / 10
005																															2.5 / 5 / 10
006																															2.5 / 5 / 10
007																															2.5 / 5 / 10
008																															2.5 / 5 / 10
009																															2.5 / 5 / 10
010																															2.5 / 5 / 10
011																															2.5 / 5 / 10
012																															2.5 / 5 / 10
013																															2.5 / 5 / 10
014																															2.5 / 5 / 10
015																															2.5 / 5 / 10
016																															2.5 / 5 / 10
017																															2.5 / 5 / 10
018																															2.5 / 5 / 10
019																															2.5 / 5 / 10
020																															2.5 / 5 / 10

Exceptions to preservation check: (VOA) Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm): ☐ Yes ☒ No ☐ N/A *If yes look in headspace column

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

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

Sample Condition Upon Receipt Form (SCUR)

Client Name: REI Project #: WO#: 40189033
 Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Walco
☐ Client ☐ Pace Other: _____
 Tracking #: 2078296
 Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no
 Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no
 Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____
 Thermometer Used SR - N/A Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☒ Samples on ice, cooling process has begun
 Cooler Temperature Uncorr: ROT ICorr: _____
 Temp Blank Present: ☐ yes ☒ no Biological Tissue is Frozen: ☐ yes ☐ no
 Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

Person examining contents:
 Date: 6-7-19
 Initials: SW

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

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

Project Manager Review: [Signature] Date: 6-7-19

December 10, 2019

Ryan Resch
REI
4080 North 20th Ave
Wausau, WI 54401

RE: Project: 5357 FORMER SCHLINSOG DAIRY
Pace Project No.: 40199835

Dear Ryan Resch:

Enclosed are the analytical results for sample(s) received by the laboratory on November 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,



Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199835001	MW1	Water	11/22/19 11:30	11/23/19 09:20
40199835002	MW2	Water	11/22/19 11:45	11/23/19 09:20
40199835003	MW3	Water	11/22/19 11:00	11/23/19 09:20
40199835004	MW6	Water	11/22/19 10:45	11/23/19 09:20
40199835005	KAUTZER WELL	Water	11/22/19 12:15	11/23/19 09:20

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SAMPLE ANALYTE COUNT

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199835001	MW1	EPA 8260	LAP	13	PASI-G
40199835002	MW2	EPA 8260	LAP	13	PASI-G
40199835003	MW3	EPA 8260	LAP	13	PASI-G
40199835004	MW6	EPA 8260	LAP	13	PASI-G

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ANALYTICAL RESULTS

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Sample: MW1 Lab ID: 40199835001 Collected: 11/22/19 11:30 Received: 11/23/19 09:20 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	990	ug/L	100	24.6	100		11/26/19 09:50	71-43-2	
1,2-Dichloroethane	88.3J	ug/L	100	28.0	100		11/26/19 09:50	107-06-2	
Ethylbenzene	1360	ug/L	100	21.8	100		11/26/19 09:50	100-41-4	
Methyl-tert-butyl ether	<125	ug/L	415	125	100		11/26/19 09:50	1634-04-4	
Toluene	6050	ug/L	500	17.2	100		11/26/19 09:50	108-88-3	
1,2,4-Trimethylbenzene	932	ug/L	280	84.1	100		11/26/19 09:50	95-63-6	
1,3,5-Trimethylbenzene	216J	ug/L	291	87.3	100		11/26/19 09:50	108-67-8	
Xylene (Total)	5880	ug/L	300	150	100		11/26/19 09:50	1330-20-7	
m&p-Xylene	3960	ug/L	200	46.5	100		11/26/19 09:50	179601-23-1	
o-Xylene	1930	ug/L	100	26.2	100		11/26/19 09:50	95-47-6	
Surrogates									
Dibromofluoromethane (S)	88	%	70-130		100		11/26/19 09:50	1868-53-7	
Toluene-d8 (S)	100	%	70-130		100		11/26/19 09:50	2037-26-5	
4-Bromofluorobenzene (S)	114	%	70-130		100		11/26/19 09:50	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Sample: MW2		Lab ID: 40199835002		Collected: 11/22/19 11:45		Received: 11/23/19 09:20		Matrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST		Analytical Method: EPA 8260							
Benzene	4020	ug/L	100	24.6	100		11/26/19 09:26	71-43-2	
1,2-Dichloroethane	332	ug/L	100	28.0	100		11/26/19 09:26	107-06-2	
Ethylbenzene	2830	ug/L	100	21.8	100		11/26/19 09:26	100-41-4	
Methyl-tert-butyl ether	<125	ug/L	415	125	100		11/26/19 09:26	1634-04-4	
Toluene	9960	ug/L	500	17.2	100		11/26/19 09:26	108-88-3	
1,2,4-Trimethylbenzene	2130	ug/L	280	84.1	100		11/26/19 09:26	95-63-6	
1,3,5-Trimethylbenzene	498	ug/L	291	87.3	100		11/26/19 09:26	108-67-8	
Xylene (Total)	11300	ug/L	300	150	100		11/26/19 09:26	1330-20-7	
m&p-Xylene	7660	ug/L	200	46.5	100		11/26/19 09:26	179601-23-1	
o-Xylene	3630	ug/L	100	26.2	100		11/26/19 09:26	95-47-6	
Surrogates									
Dibromofluoromethane (S)	89	%	70-130		100		11/26/19 09:26	1868-53-7	
Toluene-d8 (S)	106	%	70-130		100		11/26/19 09:26	2037-26-5	
4-Bromofluorobenzene (S)	116	%	70-130		100		11/26/19 09:26	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Sample: MW3 Lab ID: 40199835003 Collected: 11/22/19 11:00 Received: 11/23/19 09:20 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/27/19 08:08	71-43-2	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		11/27/19 08:08	107-06-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/27/19 08:08	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/27/19 08:08	1634-04-4	
Toluene	<0.17	ug/L	5.0	0.17	1		11/27/19 08:08	108-88-3	
1,2,4-Trimethylbenzene	1.9J	ug/L	2.8	0.84	1		11/27/19 08:08	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/27/19 08:08	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		11/27/19 08:08	1330-20-7	
m&p-Xylene	0.54J	ug/L	2.0	0.47	1		11/27/19 08:08	179601-23-1	
o-Xylene	0.61J	ug/L	1.0	0.26	1		11/27/19 08:08	95-47-6	
Surrogates									
Dibromofluoromethane (S)	83	%	70-130		1		11/27/19 08:08	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/27/19 08:08	2037-26-5	
4-Bromofluorobenzene (S)	116	%	70-130		1		11/27/19 08:08	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Sample: MW6 Lab ID: 40199835004 Collected: 11/22/19 10:45 Received: 11/23/19 09:20 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		11/26/19 08:13	71-43-2	
1,2-Dichloroethane	<0.28	ug/L	1.0	0.28	1		11/26/19 08:13	107-06-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		11/26/19 08:13	100-41-4	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		11/26/19 08:13	1634-04-4	
Toluene	<0.17	ug/L	5.0	0.17	1		11/26/19 08:13	108-88-3	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		11/26/19 08:13	95-63-6	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		11/26/19 08:13	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		11/26/19 08:13	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		11/26/19 08:13	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		11/26/19 08:13	95-47-6	
Surrogates									
Dibromofluoromethane (S)	88	%	70-130		1		11/26/19 08:13	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/26/19 08:13	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		11/26/19 08:13	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

QC Batch: 341667 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 40199835001, 40199835002, 40199835003, 40199835004

METHOD BLANK: 1984960 Matrix: Water
Associated Lab Samples: 40199835001, 40199835002, 40199835003, 40199835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	11/25/19 13:41	
1,2-Dichloroethane	ug/L	<0.28	1.0	11/25/19 13:41	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	11/25/19 13:41	
Benzene	ug/L	<0.25	1.0	11/25/19 13:41	
Ethylbenzene	ug/L	<0.22	1.0	11/25/19 13:41	
m&p-Xylene	ug/L	<0.47	2.0	11/25/19 13:41	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	11/25/19 13:41	
o-Xylene	ug/L	<0.26	1.0	11/25/19 13:41	
Toluene	ug/L	<0.17	5.0	11/25/19 13:41	
Xylene (Total)	ug/L	<1.5	3.0	11/25/19 13:41	
4-Bromofluorobenzene (S)	%	114	70-130	11/25/19 13:41	
Dibromofluoromethane (S)	%	83	70-130	11/25/19 13:41	
Toluene-d8 (S)	%	100	70-130	11/25/19 13:41	

LABORATORY CONTROL SAMPLE: 1984961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	51.1	102	75-140	
Benzene	ug/L	50	42.0	84	70-130	
Ethylbenzene	ug/L	50	59.7	119	80-124	
m&p-Xylene	ug/L	100	115	115	70-130	
Methyl-tert-butyl ether	ug/L	50	33.1	66	54-137	
o-Xylene	ug/L	50	56.9	114	70-130	
Toluene	ug/L	50	54.7	109	80-126	
Xylene (Total)	ug/L	150	172	115	70-130	
4-Bromofluorobenzene (S)	%			119	70-130	
Dibromofluoromethane (S)	%			83	70-130	
Toluene-d8 (S)	%			104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985914 1985915

Parameter	Units	40199783014	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike Conc.	Spike Conc.							
1,2-Dichloroethane	ug/L	<0.28	50	50	53.3	53.4	107	107	75-140	0	20
Benzene	ug/L	<0.25	50	50	42.5	42.6	85	85	70-130	0	20
Ethylbenzene	ug/L	<0.22	50	50	59.9	59.4	120	119	80-125	1	20
m&p-Xylene	ug/L	<0.47	100	100	114	112	114	112	70-130	2	20
Methyl-tert-butyl ether	ug/L	<1.2	50	50	33.7	34.4	67	69	51-145	2	20

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

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QUALITY CONTROL DATA

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985914 1985915												
Parameter	Units	40199783014		MS		MSD		MS		MSD		Max
		Result	Conc.	Spike	Conc.	Result	Conc.	% Rec	% Rec	% Rec	RPD	RPD
o-Xylene	ug/L	<0.26	50	50	50	56.6	55.7	113	111	70-130	2	20
Toluene	ug/L	<0.17	50	50	50	55.8	56.5	112	113	80-131	1	20
Xylene (Total)	ug/L	<1.5	150	150	150	171	168	114	112	70-130	2	20
4-Bromofluorobenzene (S)	%							117	117	70-130		
Dibromofluoromethane (S)	%							83	82	70-130		
Toluene-d8 (S)	%							105	102	70-130		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5357 FORMER SCHLINSOG DAIRY

Pace Project No.: 40199835

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199835001	MW1	EPA 8260	341667		
40199835002	MW2	EPA 8260	341667		
40199835003	MW3	EPA 8260	341667		
40199835004	MW6	EPA 8260	341667		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name:	REI
Branch/Location:	Wausau
Project Contact:	Ryan Resch
Phone:	715-675-9784
Project Number:	5357
Project Name:	Former Schlitz Dairy
Project State:	WI
Sampled By (Print):	Ryan Resch
Sampled By (Sign):	<i>Ryan Resch</i>
PO #:	
Regulatory Program:	



UPPER MIDWEST REGION

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

Page 1 of 1

Page 13 of 30

CHAIN OF CUSTODY

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

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

Y/N	N	N	N																	
Pick Letter	B	B	B																	
Analyses Requested	PVOC	1-2 DCA	VOC (524.2)																	

Quote #:		
Mail To Contact:	Ryan Resch	
Mail To Company:	REI	
Mail To Address:	Rrscher@legmccomg.com	
Invoice To Contact:	SAA	
Invoice To Company:	L	
Invoice To Address:	GR	
Invoice To Phone:		
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	DATE	TIME	ANALYSES REQUESTED	Y/N	N	N	N									
		DATE	TIME																	
001	MW1	11/22/14	11:30	GW			X	X												
002	MW2		11:45				X	X												
003	MW3		11:00				X	X												
004	MW6		10:45				X	X												
005	Kautzer Well		12:15	DW																

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By: <i>Ryan Resch</i>	Date/Time: 11/22/17 3:22p	Received By:	Date/Time:	PACE Project No. 40199835
	Relinquished By: <i>Waitco</i>	Date/Time: 11/23/17 09:20	Received By: <i>Waitco</i>	Date/Time: 11/23/17 09:20	
Transmit Prelim Rush Results by (complete what you want):	Relinquished By:	Date/Time:	Received By:	Date/Time:	Receipt Temp = 121 °C
Email #1:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH OK / Adjusted
Email #2:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Cooler Custody Seal Present / Not Present
Telephone:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Intact / Not Intact
Fax:	Relinquished By:	Date/Time:	Received By:	Date/Time:	
Samples on HOLD are subject to special pricing and release of liability	Relinquished By:	Date/Time:	Received By:	Date/Time:	

Version 6.0 06/14/06

Sample Preservation Receipt Form

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

Client Name: REI

Project # 4619835

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

Lab Lot# of pH paper:

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

Initial when
completed:

Date/
Time:

Page 14 of 30

Pace Lab #	Glass						Plastic						Vials					Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU							
001																		W												2.5 / 5 / 10
002																		W												2.5 / 5 / 10
003																		W												2.5 / 5 / 10
004																		W												2.5 / 5 / 10
005															W															2.5 / 5 / 10
006																														2.5 / 5 / 10
007																														2.5 / 5 / 10
008																														2.5 / 5 / 10
009																														2.5 / 5 / 10
010																														2.5 / 5 / 10
011																														2.5 / 5 / 10
012																														2.5 / 5 / 10
013																														2.5 / 5 / 10
014																														2.5 / 5 / 10
015																														2.5 / 5 / 10
016																														2.5 / 5 / 10
017																														2.5 / 5 / 10
018																														2.5 / 5 / 10
019																														2.5 / 5 / 10
020																														2.5 / 5 / 10

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm) : ☐ Yes ☒ No ☐ N/A *If yes look in headspace column

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

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

Sample Condition Upon Receipt Form (SCUR)

Client Name: REI Project #: _____

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

Tracking #: 2255496

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

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

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

Cooler Temperature Uncorr: 201 /Corr: _____

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

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

Person examining contents:
 Date: 11/23/19
 Initials: AB

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 11/24/19

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LABORATORY ANALYSIS REPORT

Pace Analytical-Green Bay
Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Sample No: 19K0809-01
Sample Site: Kautzer Well

Sample Collected: 22-Nov-19 12:15

Sample Received: 26-Nov-19 11:57

Parameter	Result	Units	LOD	LOQ/RL	Dilution	Prepared	Analyzed	Method	Qualifier
Laboratory Results									
Acetone	<0.220	µg/L	0.220	0.700	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Benzene	<0.042	µg/L	0.042	0.132	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Bromodichloromethane	<0.067	µg/L	0.067	0.214	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Bromoform	<0.048	µg/L	0.048	0.154	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Bromomethane	<0.089	µg/L	0.089	0.284	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Carbon disulfide	<0.072	µg/L	0.072	0.230	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Carbon tetrachloride	<0.061	µg/L	0.061	0.194	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Chlorobenzene	<0.105	µg/L	0.105	0.335	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Chlorodibromomethane	<0.098	µg/L	0.098	0.313	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Chloroethane	<0.050	µg/L	0.050	0.160	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Chloroform	<0.057	µg/L	0.057	0.182	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Chloromethane	<0.335	µg/L	0.335	1.06	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,2-Dibromo-3-chloropropane	<0.051	µg/L	0.051	0.162	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,2-Dibromoethane (EDB)	<0.044	µg/L	0.044	0.140	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Dibromomethane	<0.053	µg/L	0.053	0.167	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,2-Dichlorobenzene	<0.077	µg/L	0.077	0.243	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,3-Dichlorobenzene	<0.055	µg/L	0.055	0.176	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,4-Dichlorobenzene	<0.090	µg/L	0.090	0.287	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	

Submitted by:
Davy Laboratories

Jennifer M. Buchholz

Jennifer M. Buchholz, Laboratory Director

The laboratory analyses reported were determined in accordance with methods from approved authoritative sources. Approved authoritative sources are defined and listed within the respective state certification codes. The results are representative of the samples only; conditions can be expected to vary at different times and under different sampling conditions. This report may not be reproduced, except in full, without the written approval of the laboratory. WI Certification 632021390 and WI DATCP 105-216, MN NELAC Certification 055-999-151, IA Certification 304.

Revision #2 -07/29/2019

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LABORATORY ANALYSIS REPORT

Pace Analytical-Green Bay
Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Sample No: 19K0809-01
Sample Site: Kautzer Well

Sample Collected: 22-Nov-19 12:15

Sample Received: 26-Nov-19 11:57

Parameter	Result	Units	LOD	LOQ/RL	Dilution	Prepared	Analyzed	Method	Qualifier
Laboratory Results									
Dichlorodifluoromethane	<0.139	µg/L	0.139	0.442	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,1-Dichloroethane	<0.042	µg/L	0.042	0.135	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,2-Dichloroethane	<0.071	µg/L	0.071	0.226	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,1-Dichloroethene	<0.065	µg/L	0.065	0.206	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
cis-1,2-Dichloroethene	<0.052	µg/L	0.052	0.166	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
trans-1,2-Dichloroethene	<0.064	µg/L	0.064	0.203	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,2-Dichloropropane	<0.066	µg/L	0.066	0.210	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
cis-1,3-Dichloropropene	<0.013	µg/L	0.013	0.041	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
trans-1,3-Dichloropropene	<0.018	µg/L	0.018	0.059	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Ethylbenzene	<0.064	µg/L	0.064	0.204	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Methylene chloride	<0.084	µg/L	0.084	0.266	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Methyl Ethyl Ketone	<0.258	µg/L	0.258	0.820	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Methyl tert-Butyl Ether	<0.900	µg/L	0.900	2.86	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Naphthalene	<0.171	µg/L	0.171	0.545	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Styrene	<0.090	µg/L	0.090	0.288	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Tetrachloroethene	<0.085	µg/L	0.085	0.271	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Tetrahydrofuran	<0.662	µg/L	0.662	2.11	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Toluene	<0.028	µg/L	0.028	0.091	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	

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Pace Analytical-Green Bay
Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Sample No: 19K0809-01
Sample Site: Kautzer Well

Sample Collected: 22-Nov-19 12:15

Sample Received: 26-Nov-19 11:57

Parameter	Result	Units	LOD	LOQ/RL	Dilution	Prepared	Analyzed	Method	Qualifier
Laboratory Results									
1,1,1-Trichloroethane	<0.048	µg/L	0.048	0.154	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
1,1,2-Trichloroethane	<0.129	µg/L	0.129	0.410	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Trichloroethene	<0.118	µg/L	0.118	0.376	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Trichlorofluoromethane	<0.052	µg/L	0.052	0.166	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Vinyl chloride	<0.019	µg/L	0.019	0.060	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
m-Xylene/p-Xylene	<0.068	µg/L	0.068	0.218	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
o-Xylene	<0.074	µg/L	0.074	0.236	1	29-Nov-19 17:06	29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Surrogate: 4-Bromofluorobenzene			74.9 %	70-130			29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	
Surrogate: 1,2-Dichlorobenzene-d4			74.7 %	70-130			29-Nov-19 17:06	EPA 524.2 Rev. 4.1 1995	

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Pace Analytical-Green Bay
Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch D19L029 - Default Prep VOC

Blank (D19L029-BLK1)

Prepared & Analyzed: 29-Nov-19 15:40

Acetone	ND	0.700	µg/L
Benzene	ND	0.132	"
Bromodichloromethane	ND	0.214	"
Bromoform	ND	0.154	"
Bromomethane	ND	0.284	"
Carbon disulfide	ND	0.230	"
Carbon tetrachloride	ND	0.194	"
Chlorobenzene	ND	0.335	"
Chlorodibromomethane	ND	0.313	"
Chloroethane	ND	0.160	"
Chloroform	ND	0.182	"
Chloromethane	ND	1.06	"

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Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch D19L029 - Default Prep VOC

Blank (D19L029-BLK1)

Prepared & Analyzed: 29-Nov-19 15:40

1,2-Dibromo-3-chloropropane	ND	0.162	µg/L
1,2-Dibromoethane (EDB)	ND	0.140	"
Dibromomethane	ND	0.167	"
1,2-Dichlorobenzene	ND	0.243	"
1,3-Dichlorobenzene	ND	0.176	"
1,4-Dichlorobenzene	ND	0.287	"
Dichlorodifluoromethane	ND	0.442	"
1,1-Dichloroethane	ND	0.135	"
1,2-Dichloroethane	ND	0.226	"
1,1-Dichloroethene	ND	0.206	"
cis-1,2-Dichloroethene	ND	0.166	"
trans-1,2-Dichloroethene	ND	0.203	"
1,2-Dichloropropane	ND	0.210	"
cis-1,3-Dichloropropene	ND	0.041	"

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Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch D19L029 - Default Prep VOC

Blank (D19L029-BLK1)

Prepared & Analyzed: 29-Nov-19 15:40

trans-1,3-Dichloropropene	ND	0.059	µg/L
Ethylbenzene	ND	0.204	"
Methylene chloride	ND	0.266	"
Methyl Ethyl Ketone	ND	0.820	"
Methyl tert-Butyl Ether	ND	2.86	"
Naphthalene	ND	0.545	"
Styrene	ND	0.288	"
Tetrachloroethene	ND	0.271	"
Tetrahydrofuran	ND	2.11	"
Toluene	ND	0.091	"
1,1,1-Trichloroethane	ND	0.154	"
1,1,2-Trichloroethane	ND	0.410	"
Trichloroethene	ND	0.376	"
Trichlorofluoromethane	ND	0.166	"

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Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch D19L029 - Default Prep VOC

Blank (D19L029-BLK1)

Prepared & Analyzed: 29-Nov-19 15:40

Vinyl chloride	ND	0.060	µg/L
m-Xylene/p-Xylene	ND	0.218	"
o-Xylene	ND	0.236	"

Surrogate: 4-Bromofluorobenzene	3.73	"	5.00	74.5	70-130
Surrogate: 1,2-Dichlorobenzene-d4	4.02	"	5.00	80.5	70-130

LCS (D19L029-BS1)

Prepared & Analyzed: 29-Nov-19 14:49

Acetone	20.9372	0.700	µg/L	20.0	105	70-130
Benzene	23.7716	0.132	"	20.0	119	70-130
Bromodichloromethane	21.8636	0.214	"	20.0	109	70-130
Bromoform	19.8688	0.154	"	20.0	99.3	70-130
Bromomethane	21.8875	0.284	"	20.0	109	70-130
Carbon disulfide	18.9483	0.230	"	20.0	94.7	70-130
Carbon tetrachloride	23.7215	0.194	"	20.0	119	70-130

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Pace Analytical-Green Bay
Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch D19L029 - Default Prep VOC

LCS (D19L029-BS1)

Prepared & Analyzed: 29-Nov-19 14:49

Chlorobenzene	23.446	0.335	µg/L	20.0		117	70-130			
Chlorodibromomethane	19.9899	0.313	"	20.0		99.9	70-130			
Chloroethane	21.4322	0.160	"	20.0		107	70-130			
Chloroform	24.1282	0.182	"	20.0		121	70-130			
Chloromethane	22.8094	1.06	"	20.0		114	70-130			
1,2-Dibromo-3-chloropropane	18.2701	0.162	"	20.0		91.4	70-130			
1,2-Dibromoethane (EDB)	21.5059	0.140	"	20.0		108	70-130			
Dibromomethane	21.3269	0.167	"	20.0		107	70-130			
1,2-Dichlorobenzene	22.5945	0.243	"	20.0		113	70-130			
1,3-Dichlorobenzene	22.4548	0.176	"	20.0		112	70-130			
1,4-Dichlorobenzene	21.8325	0.287	"	20.0		109	70-130			
Dichlorodifluoromethane	20.2681	0.442	"	20.0		101	70-130			
1,1-Dichloroethane	24.6368	0.135	"	20.0		123	70-130			
1,2-Dichloroethane	22.6487	0.226	"	20.0		113	70-130			

DAVY LABORATORIES

A Division of Davy Engineering Co., Inc.
115 6th Street South
La Crosse, WI 54601
(608) 782-3130
www.davyinc.com



LABORATORY ANALYSIS REPORT

Pace Analytical-Green Bay
Attn: Brian Basten
1241 Bellevue St. Suite 9
Green Bay, WI 54302

Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch D19L029 - Default Prep VOC										
LCS (D19L029-BS1)										
Prepared & Analyzed: 29-Nov-19 14:49										
1,1-Dichloroethene	22.3619	0.206	µg/L	20.0		112	70-130			
cis-1,2-Dichloroethene	21.8688	0.166	"	20.0		109	70-130			
trans-1,2-Dichloroethene	22.8757	0.203	"	20.0		114	70-130			
1,2-Dichloropropane	22.4626	0.210	"	20.0		112	70-130			
cis-1,3-Dichloropropene	21.0576	0.041	"	20.0		105	70-130			
trans-1,3-Dichloropropene	21.7511	0.059	"	20.0		109	70-130			
Ethylbenzene	23.2178	0.204	"	20.0		116	70-130			
Methylene chloride	23.5547	0.266	"	20.0		118	70-130			
Methyl Ethyl Ketone	16.9508	0.820	"	20.0		84.8	70-130			
Methyl tert-Butyl Ether	23.072	2.86	"	20.0		115	70-130			
Naphthalene	16.7239	0.545	"	20.0		83.6	70-130			
Styrene	20.9955	0.288	"	20.0		105	70-130			
Tetrachloroethene	23.505	0.271	"	20.0		118	70-130			
Tetrahydrofuran	17.6142	2.11	"	20.0		88.1	70-130			

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Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch D19L029 - Default Prep VOC

LCS (D19L029-BS1)

Prepared & Analyzed: 29-Nov-19 14:49

Toluene	22.4436	0.091	µg/L	20.0		112	70-130			
1,1,1-Trichloroethane	24.0281	0.154	"	20.0		120	70-130			
1,1,2-Trichloroethane	21.7487	0.410	"	20.0		109	70-130			
Trichloroethene	22.6059	0.376	"	20.0		113	70-130			
Trichlorofluoromethane	23.1318	0.166	"	20.0		116	70-130			
Vinyl chloride	20.5321	0.060	"	20.0		103	70-130			
m-Xylene/p-Xylene	22.9436	0.218	"	20.0		115	70-130			
o-Xylene	21.9898	0.236	"	20.0		110	70-130			

Surrogate: 4-Bromofluorobenzene	5.21		"	5.00		104	70-130			
Surrogate: 1,2-Dichlorobenzene-d4	5.44		"	5.00		109	70-130			

Duplicate (D19L029-DUP1)

Source: 19K0755-01

Prepared & Analyzed: 29-Nov-19 16:38

Acetone	ND	0.700	µg/L		ND				200	
Benzene	ND	0.132	"		ND				200	

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Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch D19L029 - Default Prep VOC

Duplicate (D19L029-DUP1)		Source: 19K0755-01		Prepared & Analyzed: 29-Nov-19 16:38						
Bromodichloromethane	ND	0.214	µg/L		ND				200	
Bromoform	ND	0.154	"		ND				200	
Bromomethane	ND	0.284	"		ND				200	
Carbon disulfide	ND	0.230	"		ND				200	
Carbon tetrachloride	ND	0.194	"		ND				200	
Chlorobenzene	ND	0.335	"		ND				200	
Chlorodibromomethane	ND	0.313	"		ND				200	
Chloroethane	ND	0.160	"		ND				200	
Chloroform	ND	0.182	"		ND				200	
Chloromethane	ND	1.06	"		ND				200	
1,2-Dibromo-3-chloropropane	ND	0.162	"		ND				200	
1,2-Dibromoethane (EDB)	ND	0.140	"		ND				200	
Dibromomethane	ND	0.167	"		ND				200	
1,2-Dichlorobenzene	ND	0.243	"		ND				200	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch D19L029 - Default Prep VOC

Duplicate (D19L029-DUP1)		Source: 19K0755-01		Prepared & Analyzed: 29-Nov-19 16:38						
1,3-Dichlorobenzene	ND	0.176	µg/L		ND				200	
1,4-Dichlorobenzene	ND	0.287	"		ND				200	
Dichlorodifluoromethane	ND	0.442	"		ND				200	
1,1-Dichloroethane	ND	0.135	"		ND				200	
1,2-Dichloroethane	ND	0.226	"		ND				200	
1,1-Dichloroethene	ND	0.206	"		ND				200	
cis-1,2-Dichloroethene	ND	0.166	"		ND				200	
trans-1,2-Dichloroethene	ND	0.203	"		ND				200	
1,2-Dichloropropane	ND	0.210	"		ND				200	
cis-1,3-Dichloropropene	ND	0.041	"		ND				200	
trans-1,3-Dichloropropene	ND	0.059	"		ND				200	
Ethylbenzene	ND	0.204	"		ND				200	
Methylene chloride	ND	0.266	"		ND				200	
Methyl Ethyl Ketone	ND	0.820	"		ND				200	

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Laboratory Results - Quality Control

Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch D19L029 - Default Prep VOC										
Duplicate (D19L029-DUP1)		Source: 19K0755-01		Prepared & Analyzed: 29-Nov-19 16:38						
Methyl tert-Butyl Ether	ND	2.86	µg/L		ND				200	
Naphthalene	ND	0.545	"		ND				200	
Styrene	ND	0.288	"		ND				200	
Tetrachloroethene	ND	0.271	"		ND				200	
Tetrahydrofuran	ND	2.11	"		ND				200	
Toluene	ND	0.091	"		ND				200	
1,1,1-Trichloroethane	ND	0.154	"		ND				200	
1,1,2-Trichloroethane	ND	0.410	"		ND				200	
Trichloroethene	ND	0.376	"		ND				200	
Trichlorofluoromethane	ND	0.166	"		ND				200	
Vinyl chloride	ND	0.060	"		ND				200	
m-Xylene/p-Xylene	ND	0.218	"		ND				200	
o-Xylene	ND	0.236	"		ND				200	
Surrogate: 4-Bromofluorobenzene	3.74		"	5.00		74.8	70-130			

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Date: December 10, 2019
Client No: 11128

Laboratory Results - Quality Control
Davy Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch D19L029 - Default Prep VOC										
Duplicate (D19L029-DUP1)		Source: 19K0755-01		Prepared & Analyzed: 29-Nov-19 16:38						
Surrogate: 1,2-Dichlorobenzene-d4	3.95		µg/L	5.00		79.0	70-130			

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Date: December 10, 2019
Client No: 11128

Notes and Definitions

LOD Limit of Detection, adjusted for the dilution factor
LOQ/RL Limit of Quantitation/Reporting Limit, adjusted for the dilution factor
Total metals are equivalent to total recoverable metals.

Cooler Information

Temperature	0.10 °C	
Received on Ice		Yes
Required COC information completed		Yes
Sample labels match COC		Yes
All samples received in the appropriate containers		Yes
All samples received with sufficient volume		Yes
All samples received with sufficient holding time		Yes
All sample bottles received with H2SO4 were pH <2		No
All sample bottles received with HNO3 were pH <2		No
All sample bottles received with HCl were pH <2		No
All sample bottles received with NaOH were pH >12		No
All sample bottles for cyanide confirmed Sulfide absent		No
All sample bottles for cyanide confirmed Residual Cl absent		No
Preservation of VOC samples checked by the analyst.		
Preservation of FOG samples checked by the analyst.		
Residual Chlorine absent checked by the analyst unless noted above.		

Case Narrative

APPENDIX C

POTABLE WELL ABANDONMENT FORMS



Wisconsin Department of Natural Resources

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005

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.

Date of Filling & Sealing: 01/14/2020

Rec #: 164022

Verification. Check only if well filling & sealing was done previously and you are just verifying that work.: No

1. Well Location Information

County: Clark		WI Unique Well #:		DNR Hicap Well #:	
Latitude: (DD.DDDDD°) 44.698 °N		Longitude: (DD.DDDDD°) 90.4763 °W		GPS Method Code: GPS008	
Gov't Lot #:	Qtr/Qtr:	Quarter:	Section #:	Township #: North	Range #:
Well Street Address: N7705 PELSDORF RD				Subdivision Name:	
Well City/Village/Town: Town of LOYAL		Well Zip Code:	Lot #:	Does a new well replace this well? No	
Reason for Filling & Sealing: WELL NOT NEEDED				WI Unique Well # of Replacement Well:	

2. Facility / Owner Information

Facility Name:		FID #:	License/Permit/Monitoring #:	
Original Well Owner:		Service Category:		
Present Well Owner: STEVEN KAUTZER		Mailing Address of Present Owner: N7705 PELSDORF RD		
		City: LOYAL	State: WI	Zip Code: 54446

3. Well / Drillhole / Borehole Information

Well Type: Water Well	Original Construction Date: (mm/dd/yyyy)	Construction Type: Drilled
Formation Type:	Total Well Depth From Ground Surface (ft.): 94.00	(specify Other):
Casing Diameter (in.): 5.00	Lower Drillhole Diameter (in.):	Casing Depth (ft.):
Was well annular space grouted?	If yes, to what depth (ft.):	Depth to Water (ft.):

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

Pump and piping removed?	Yes	Liner(s) removed?	N/A	If no, was liner perforated?	
Screen removed?	N/A	Casing/Loop left in place?	N/A	Was casing cut off below surface?	Yes
Did sealing material rise to surface?	Yes	Did material settle after 24 hours?	No	If yes, was hole retopped?	
If bentonite chips were used, were they hydrated with water from a known water source?					Yes
Method of Placing Sealing Material: Screened & Poured (Bentonite Chips)			(Explain Other):		
Water Well Sealing Materials: Bentonite Chips			Monitoring Wells & other Drillholes:		

5. Material Used to Fill Well / Drillhole

Material:	From (ft.):	To (ft.):	# and Units of Sealant:	Mix Ratio or Mud Weight:
BENTONITE	Surface	94.00	20.5	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: THEODORE KOMAREK	License #: 7003	Phone: 715-767-5469
KOMAREK WELL DRILLING N1690 ST HWY 13 OGEMA WI 54459	Email Address: TEDKOMAREK5@GMAIL.COM	

8. DNR Use Only

Signed On: 01/16/2020	Submitted By: tedkomarek5	Received On: 01/16/2020	Approved On:
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The Official Internet site for the Wisconsin Department of Natural Resources
101 S. Webster Street . PO Box 7921 . Madison, Wisconsin 53707-7921 . 608.266.2621

Wisconsin Department of Natural Resources

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005

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.

Date of Filling & Sealing: 01/14/2020

Rec #: 164020

Verification. Check only if well filling & sealing was done previously and you are just verifying that work.: No

1. Well Location Information

County: Clark		WI Unique Well #:		DNR Hicap Well #:	
Latitude: (DD.DDDDD°) 44.6981 °N		Longitude: (DD.DDDDD°) 90.4763 °W		GPS Method Code: GPS008	
Gov't Lot #:	Qtr/Qtr:	Quarter:	Section #:	Township #: North	Range #:
Well Street Address: N7705 PELSDORF RD				Subdivision Name:	
Well City/Village/Town: Town of LOYAL		Well Zip Code:	Lot #:	Does a new well replace this well? No	
Reason for Filling & Sealing: WELL NOT NEEDED				WI Unique Well # of Replacement Well:	

2. Facility / Owner Information

Facility Name:		FID #:	License/Permit/Monitoring #:	
Original Well Owner:		Service Category:		
Present Well Owner: STEVEN KAUTZER		Mailing Address of Present Owner: N7705 PELSDORF RD		
		City: LOYAL	State: WI	Zip Code: 54446

3. Well / Drillhole / Borehole Information

Well Type: Water Well	Original Construction Date: (mm/dd/yyyy)	Construction Type: Drilled
Formation Type:	Total Well Depth From Ground Surface (ft.): 185.00	(specify Other):
Casing Diameter (in.): 6.00	Lower Drillhole Diameter (in.):	Casing Depth (ft.):
Was well annular space grouted?	If yes, to what depth (ft.):	Depth to Water (ft.):

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

Pump and piping removed?	Yes	Liner(s) removed?	N/A	If no, was liner perforated?	
Screen removed?	N/A	Casing/Loop left in place?	N/A	Was casing cut off below surface?	Yes
Did sealing material rise to surface?	Yes	Did material settle after 24 hours?	No	If yes, was hole retopped?	
If bentonite chips were used, were they hydrated with water from a known water source?					Yes
Method of Placing Sealing Material: Screened & Poured (Bentonite Chips)			(Explain Other):		
Water Well Sealing Materials: Bentonite Chips			Monitoring Wells & other Drillholes:		

5. Material Used to Fill Well / Drillhole

Material:	From (ft.):	To (ft.):	# and Units of Sealant:	Mix Ratio or Mud Weight:
BENTONITE CHIPS	Surface	185.00	56	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: THEODORE KOMAREK	License #: 7003	Phone: 715-767-5469
KOMAREK WELL DRILLING N1690 ST HWY 13 OGEMA WI 54459	Email Address: TEDKOMAREK5@GMAIL.COM	

8. DNR Use Only

Signed On: 01/16/2020	Submitted By: tedkomarek5	Received On: 01/16/2020	Approved On:
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