April 15, 2021

FRIESS ENVIRONMENTAL CONSULTING, INC.

Mr. Joesph Martinez
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212-3128

RE: Results of Additional Environmental Services for the Former Saukville Fabricare Property Located at 144 South Foster Street in Saukville, Wisconsin — FEC Project No. 041101; DNR FID No. 246061640; BRRTS No. 02-46-448965

Dear Mr. Martinez:

As requested, ***Friess Environmental Consulting (FEC)*** has prepared this letter to document the results of additional environmental services, including additional groundwater sampling, indoor air sampling, and a remedial action evaluation.

Project Background

As you are aware, site investigation activities have been conducted for a release of chlorinated volatile organic compounds (CVOCs) from the above referenced site. FEC submitted a site investigation and closure request to the DNR. The DNR reviewed the closure and requested additional actions (below) in their letter dated December 9, 2019.

- Define the degree and extent of groundwater impacts for natural attenuation.
- Conduct indoor air sampling.
- Provide justification how NR 726.05(8) has been met.
- Provide a PFAS evaluation.

A scope of work and cost approval was submitted and approved by the DNR in June 2020. The results of the additional actions are presented below.

Project Results

Groundwater Impacts

The DNR requested additional groundwater monitoring from the downgradient monitoring wells (MW-9 and MW-10) to confirm plume stability and/or illustrate that groundwater at or above the ES will not migrate beyond the property boundary to demonstrate that natural attenuation is an appropriate remedy for the residual groundwater impacts. As such, monitoring wells MW-9 and MW-10 were sampled in July 2020. No CVOCs were detected in MW-9 and only concentrations of tetrachloroethylene (PCE) and trichloroethylene (TCE) were detected above their respective PALs at MW-10.

6637 North Sidney Pl., Milwaukee, WI 53209 | WWW.FECINC.US Phone 414.228.9815 Fax 414.228.9816

The results of the groundwater sampling indicate low levels of CVOCs are present at MW-10; however, the historical trends at the downgradient monitoring wells and along the north and central flow paths of the plume indicate continued decreases in concentration over time and distance from the former drycleaners. These trends are illustrated on the attached graphs.

Based on the groundwater sampling results and continued decreasing groundwater concentrations within the plume, natural attenuation is an appropriate remedy for the residual groundwater impacts. In addition, groundwater monitoring well MW-10 is approximately 175 feet downgradient of the former drycleaners and the property boundary is another approximately 140 feet downgradient from MW-10. No groundwater impacts above ESs have migrated the 175 feet to MW-10 since monitoring began at the site in 2003 and the groundwater concentrations upgradient of MW-10 continue to decrease. As such, it would appear unlikely that groundwater concentrations above ESs would migrate the additional 140 feet to reach the property boundary.

Indoor Air Sampling

The indoor air samples collected in 2011 indicated vapor TCE concentrations above indoor air vapor action limits (VALs) within the building. In order to determine current indoor air quality and further document the effectiveness of the vapor mitigation system (VMS), the DNR required the collection of indoor air samples. Indoor air samples were collected at the site in July 2020.

Indoor air samples (IA-1 to IA-9) were collected from within the building, a background sample was collected from outside the building, and the locations are depicted on the attached diagram. Based on the commercial use of the property, the indoor air samples were collected over an 8-hour period during normal business hours utilizing laboratory supplied summa canisters and flow controllers.

The results of the indoor air sampling indicate no concentrations within the indoor air above the residential vapor action limits (VALs). In addition, the previously collected sub-slab vapor sampling results indicate that the sub-slab concentrations have decreased significantly since VMS install. The results would indicate that the VMS has effectively mitigated the vapor intrusion pathway for the on-site building. The results of the vapor sampling are presented on the attached tables.

NR 726 Evaluation

NR 726.08 requires that the vapor exposure pathway has been interrupted or mitigated and a remedial action has been conducted to reduce the contaminant mass to the extent practicable at sites with vapor impacts. As discussed above, the vapor analytical results would indicate that the VMS has effectively mitigated the vapor intrusion pathway for the on-site building.

FEC estimates approximately 2,000 cubic yards (3,000 tons) of low-level impacted soils remain below the building or along the eastern exterior of the building. The existing building will be effective at eliminating precipitation infiltrating the ground surface resulting in potential partitioning of residual soil contamination to the groundwater. The soil impacts do not exceed the direct contact RCLs and do not appear to be adversely affecting the groundwater at a rate that natural attenuation is not able to contain, control, and eventually eliminate the contaminants. Active remediation of such a limited mass from beneath a usable structure would be considered impractical and beneficially limited.

Although not considered a remedial system, the VMS has been operational at the Site since November 2009 (over 10 years) with success at mitigating the vapor intrusion risk at the site. Based on the run-time and characteristics of the VMS (operational flow) and vapor concentrations detected in the off-gas (sampled in July 2010), we calculate that the VMS has removed approximately 20 pounds of PCE from beneath the building since start up and has therefore significantly reduced the contaminant mass remaining at the site. The calculations are included.

As such, no further remedial actions are warranted and would be considered impractical and beneficially limited. The residual soil impacts will require placement of the Site on the DNR's geographic information system (GIS) registry.

Perfluorinated Alkylated Substances (PFAS) Evaluation

Based on review of the SIR, the DNR identified the site as a potential source for per- and polyfluoroalkyl substances (PFAS). The DNR believes this emerging contaminant may be present in soil and groundwater on the site as the use of PFAS has been associated with dry-cleaning and fabricare operations both nationally and in Wisconsin. As such, a groundwater sample was proposed to be collected from MW-4 (near the former dry cleaning equipment location). Due to interior remodeling occurring at the time of the sampling, MW-4 was inaccessible. As such, a groundwater sample was collected from MW-2 (directly downgradient of the former dry cleaners) for laboratory analysis for PFAS.

The results of the PFAS groundwater sampling indicate no concentrations of PFAS detected in the groundwater with the exception of Perfluorobutyrate (PFBA), Perfluorohexanoic acid (PFHxA), and Perfluoro-n-pentanoic acid (PFPeA) at very low levels. PFBA is a breakdown product of other PFAS used in stain-resistant fabrics, paper food packaging, and carpets. PFHxA is a primary impurity, degradant, and metabolite associated with the transition to short-chain fluorotelomer-based products as a cornerstone in replacement fluorochemistry. PFPeA is a breakdown product of stain- and grease-proof coatings on food packaging, couches, and carpets.

There are currently no established groundwater standards for PFBA, PFHxA, or PFPeA; however, the concentrations detected are significantly less than the standards proposed by the DNR in November 2020. As such, the results would indicate that this site does not pose a risk as a potential source of PFAS. The results of the PFAS groundwater sampling are presented on the attached table.

Conclusions and Recommendations

The groundwater analytical data indicates that the groundwater plume is stable and natural attenuation is an appropriate and effective remedy for the residual impacts.

The indoor air sampling results indicate no concentrations above VALs and that the VMS has effectively mitigated the vapor intrusion pathway.

The VMS has removed approximately 20 pounds of PCE from beneath the building over the past ten years. As such, no further remedial actions are warranted as they would be considered impractical and beneficially limited.

The groundwater PFAS analytical testing results indicate no concentrations above established or proposed standards and that this site would not be considered a PFAS source.

As such, we request approval to complete the updated closure for DNR review and re-evaluation of the site for closure.

Please call us at (414) 228-9815 if you have any questions.

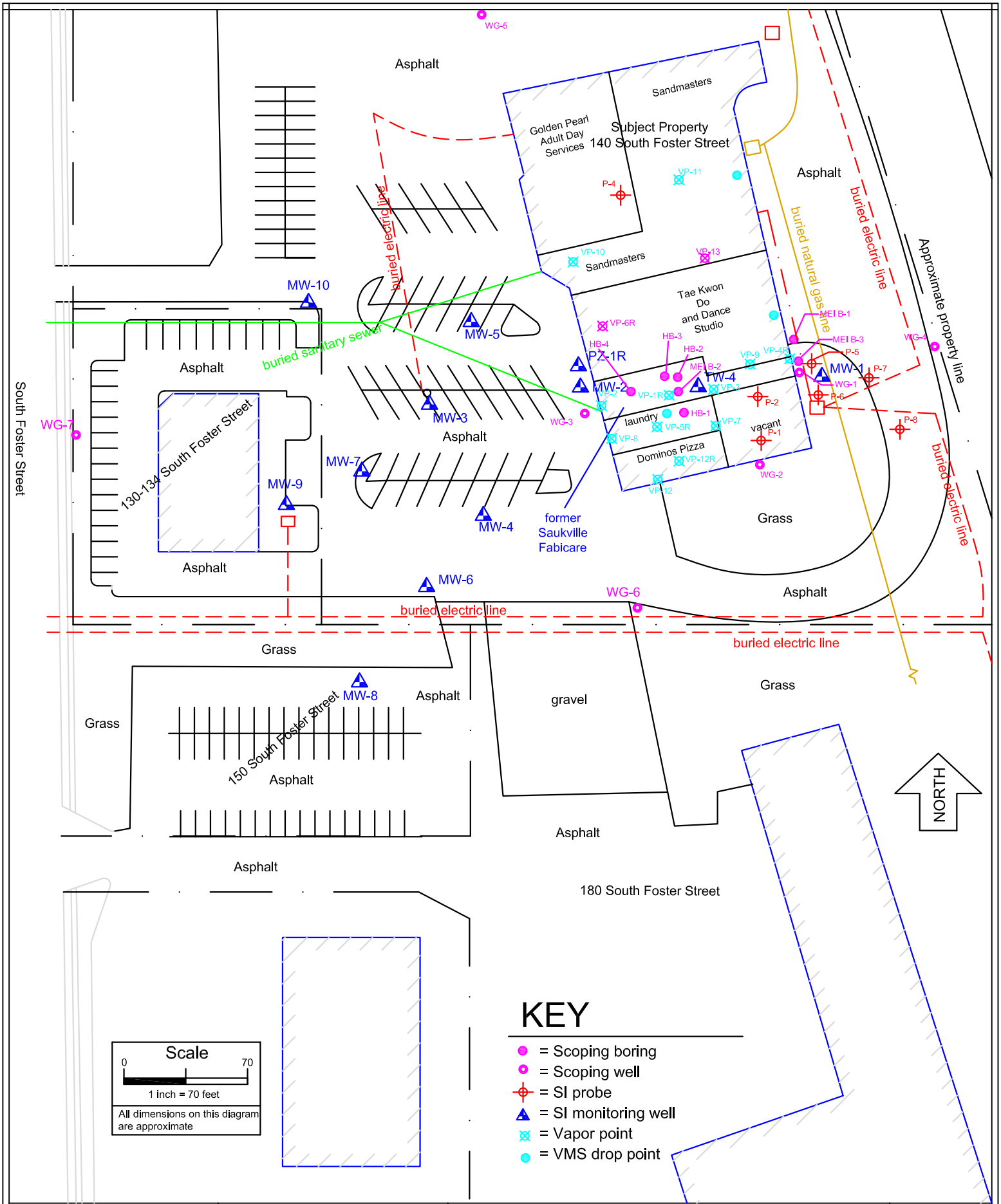
Respectfully,

FRIESS ENVIRONMENTAL CONSULTING, INC.

Trenton J. Ott
Project Manager

Richard W. Frieseke, P.E.
President

041101zk



FRIESS ENVIRONMENTAL CONSULTING, INC.

File No.:	041101NEW
DWG Date:	1-2-2014
Rev Date:	
Drawn By:	MJR
Checked By (PM):	TJO

B.1.b. Site Features Diagram
Former Saukville Fabricare Property
140 South Foster Street
Saukville, Wisconsin

Figure
B.1.b.

A.1. Groundwater Analytical Table (Page 1 of 4)
Former Saukville Fabricare Property
Saukville, Wisconsin

Well ID	Sampling Date	cis-1,2-DCE (ppb)	trans-1,2-DCE (ppb)	PCE (ppb)	TCE (ppb)	Vinyl chloride (ppb)
MW-1	12/5/2003	2.02	<0.50	**36.1**	*3.94*	<0.17
	4/13/2004	*7.08*	<5.0	**124**	**11.3**	<0.217
	8/5/2004	*30.6*	<5.0	**501**	**31.1**	<0.312
	12/28/2004	<5.00	<5.0	**115**	*4.97*	<0.217
	10/3/2007	<0.83	<0.89	**120**	**5.30**	<0.18
	4/17/2009	1.20	<0.89	**44.0**	*1.80*	<0.18
	7/12/2010	<0.83	<0.89	**34.4**	*1.30*	<0.18
	4/11/2011	2.00	<0.89	**59.8**	*2.30*	<0.18
	4/13/2012	<0.83	<0.89	**28.9**	*1.40*	<0.18
	7/18/2012	<0.83	<0.89	**13.1**	<0.48	<0.18
	10/1/2013	<0.42	<0.37	*4.70*	<0.36	<0.18
	5/14/2014	<0.26	<0.24	**19.5**	*0.75*	<0.18
	8/13/2014	<0.26	<0.26	**6.90**	<0.33	<0.18
MW-2	12/5/2003	*46.4*	1.85	**366**	**24.5**	<0.17
	4/13/2004	*11.6*	<5.0	**198**	**15.9**	<0.217
	8/5/2004	*10.0*	<5.0	**282**	**15.6**	<0.312
	12/28/2004	*32.2*	<5.0	**366**	**15.2**	<0.217
	10/3/2007	*14.0*	<0.89	**160**	**11.0**	<0.18
	4/17/2009	2.70	<0.89	**96.5**	*4.30*	<0.18
	7/12/2010	2.20	<0.89	**107**	*5.00*	<0.18
	4/11/2011	3.60	<0.89	**71.1**	*3.30*	<0.18
	4/13/2012	2.10	<0.89	**65.4**	*2.50*	<0.18
	7/18/2012	3.10	<0.89	**66.6**	*0.76*	<0.18
	10/1/2013	2.20	<0.37	**76.2**	*4.60*	<0.18
	2/11/2014	4.10	<0.37	**63.9**	*4.80*	<0.18
	5/14/2014	2.90	<0.24	**58.2**	*4.80*	<0.18
	8/13/2014	2.10	<0.26	**84.0**	**6.40**	<0.18
	2/24/2015	1.30	<0.26	**76.9**	*4.80*	<0.18
	6/3/2015	3.10	<0.26	**84.2**	**5.90**	<0.18
	8/19/2015	1.80	<0.26	**94.9**	**6.30**	<0.18
	10/12/2017	0.54 J	<0.26	**104**	*2.30*	<0.18
	6/20/2018	0.56 J	<0.34	**112**	*3.70*	<0.20
MW-3	12/5/2003	*30.2*	3.04	<0.50	<0.50	<0.17
	4/13/2004	*20.3*	<5.0	*0.50*	<0.50	<0.217
	8/5/2004	*20.6*	<5.0	*1.51*	<0.232	<0.312
	12/28/2004	*10.7*	<5.0	<0.50	<0.50	<0.217
	10/3/2007	2.90	<0.89	<0.45	**35.0**	<0.18
	4/17/2009	1.40	<0.89	**31.4**	**9.40**	<0.18
	7/12/2010	1.20	<0.89	**84.0**	**10.9**	<0.18
	4/11/2011	<0.83	<0.89	**74.6**	**6.50**	<0.18
	4/13/2012	<0.83	<0.89	**59.5**	**5.70**	<0.18
	7/18/2012	<0.83	<0.89	**71.8**	**7.40**	<0.18
	10/1/2013	<0.42	<0.37	**36.1**	**6.50**	<0.18
	2/11/2014	0.98	<0.37	**26.1**	*3.50*	<0.18
	5/14/2014	1.40	<0.24	**33.9**	*3.50*	<0.18
	8/13/2014	1.80	<0.26	**71.9**	*4.10*	<0.18
	2/24/2015	1.70	<0.26	**37.8**	*4.20*	<0.18
	6/3/2015	1.50	<0.26	**46.7**	*3.10*	<0.18
	8/19/2015	1.80	<0.26	**70.6**	*4.10*	<0.18
	10/12/2017	<0.26	<0.26	**93.9**	**5.60**	<0.18
	6/20/2018	<0.37	<0.34	**54.0**	*4.00*	<0.20
ES (ppb)	-	*70*	*100*	*5*	*5*	*0.2*
PAL (ppb)	-	*7*	*20*	*0.5*	*0.5*	*0.02*

Notes:
1.) Concentrations in **red bold** exceed their respective enforcement standard (ES)
2.) Concentrations in *blue italics* exceed their respective preventive action limit (PAL).

A.1. Groundwater Analytical Table (Page 2 of 4)
Former Saukville Fabricare Property
Saukville, Wisconsin

Well ID	Sampling Date	cis-1,2-DCE (ppb)	trans-1,2-DCE (ppb)	PCE (ppb)	TCE (ppb)	Vinyl chloride (ppb)
MW-4	4/17/2009	<0.83	<0.89	**48.0**	*2.40*	<0.18
	7/12/2010	<0.83	<0.89	**105**	*2.50*	<0.18
	4/11/2011	<0.83	<0.89	**13.7**	<0.48	<0.18
	4/13/2012	<0.83	<0.89	**36.8**	*0.78*	<0.18
	7/18/2012	<0.83	<0.89	**43.9**	**7.10**	<0.18
	10/1/2013	<0.42	<0.37	**83.4**	*1.40*	<0.18
	2/11/2014	<0.42	<0.37	**41.0**	*2.40*	<0.18
	5/14/2014	<0.26	<0.24	**8.70**	<0.33	<0.18
	8/13/2014	<0.26	<0.26	**53.3**	*2.80*	<0.18
	2/24/2015	0.38	<0.26	**26.1**	**5.40**	<0.18
	6/3/2015	<0.26	<0.26	**49.1**	*0.74*	<0.18
	8/19/2015	<0.26	<0.26	**50.1**	*0.98 J*	<0.18
	10/12/2017	<0.26	<0.26	**57.2**	*0.85 J*	<0.18
	6/20/2018	<0.37	<0.34	**38.0**	*0.93 J*	<0.20
MW-5	4/17/2009	*25.5*	1.20	<0.45	**32.6**	<0.18
	7/12/2010	*48.5*	4.60	**19.4**	**44.1**	<0.18
	4/11/2011	*33.9*	1.30	**33.3**	**30.6**	<0.18
	4/13/2012	*39.2*	1.50	**42.0**	**25.9**	<0.18
	7/18/2012	4.60	<0.89	**62.1**	**12.9**	<0.18
	10/1/2013	*9.40*	0.62	**18.3**	**22.7**	<0.18
	2/11/2014	3.30	<0.37	**31.9**	**7.60**	<0.18
	5/14/2014	6.20	0.35	**29.3**	**8.50**	<0.18
	8/13/2014	*7.40*	<0.26	**61.2**	**21.4**	<0.18
	2/24/2015	3.10	<0.26	**48.8**	**9.90**	<0.18
	6/3/2015	1.30	<0.26	**7.40**	*3.40*	<0.18
	8/19/2015	0.56 J	1.00	*0.54 J*	**5.20**	<0.18
	6/20/2018	1.48	<0.34	**16.1**	**7.20**	<0.20
MW-6	4/11/2011	<0.83	<0.89	**8.20**	**5.00**	<0.18
	4/13/2012	<0.83	<0.89	**12.9**	**8.30**	<0.18
	7/18/2012	<0.83	<0.89	**15.3**	**17.1**	<0.18
	10/1/2013	<0.42	<0.37	**21.6**	**13.3**	<0.18
	2/11/2014	<0.42	<0.37	**11.1**	*4.40*	<0.18
	5/14/2014	<0.26	<0.24	**9.30**	**6.20**	<0.18
	8/13/2014	0.52	0.26	*3.80*	**10.9**	<0.18
	2/24/2015	0.61	1.30	*1.40*	**18.8**	<0.18
	6/3/2015	<0.26	<0.26	**10.2**	**7.90**	<0.18
	8/19/2015	0.29 J	<0.26	**17.5**	**11.2**	<0.18
	10/12/2017	<0.26	<0.26	**6.40**	**12.4**	<0.18
	6/20/2018	<0.37	<0.34	**16.5**	**9.40**	<0.20
MW-7	4/11/2011	<0.83	<0.89	*1.90*	<0.48	<0.18
	4/13/2012	<0.83	<0.89	*2.50*	*1.10*	<0.18
	7/18/2012	<0.83	<0.89	**11.6**	**6.10**	<0.18
	10/1/2013	<0.42	<0.37	*1.40*	**8.80**	<0.18
	2/11/2014	<0.42	<0.37	*2.70*	**6.30**	<0.18
	5/14/2014	<0.26	<0.24	*1.20*	*0.99*	<0.18
	8/13/2014	<0.26	<0.26	<0.50	**6.20**	<0.18
	2/24/2015	<0.26	<0.26	*0.52*	**7.70**	<0.18
	6/3/2015	<0.26	<0.26	<0.50	*4.20*	<0.18
	8/19/2015	0.26 J	<0.26	<0.50	**6.50**	<0.18
	10/12/2017	<0.26	0.46 J	<0.50	**6.20**	<0.18
	6/20/2018	<0.37	<0.34	<0.38	**6.50**	<0.20
ES (ppb)	-	*70*	*100*	*5*	*5*	*0.2*
PAL (ppb)	-	*7*	*20*	*0.5*	*0.5*	*0.02*

Notes:
1.) Concentrations in **red bold** exceed their respective enforcement standard (ES)
2.) Concentrations in *blue italics* exceed their respective preventive action limit (PAL).

A.1. Groundwater Analytical Table (Page 3 of 4)
Former Saukville Fabricare Property
Saukville, Wisconsin

Well ID	Sampling Date	cis-1,2-DCE (ppb)	trans-1,2-DCE (ppb)	PCE (ppb)	TCE (ppb)	Vinyl chloride (ppb)
MW-8	2/11/2014	0.50	0.69	<0.47	*3.70*	<0.18
	5/14/2014	<0.26	<0.24	<0.50	*0.50*	<0.18
	8/13/2014	<0.26	<0.26	<0.50	<0.33	<0.18
	6/3/2015	<0.26	<0.26	<0.50	<0.33	<0.18
	8/19/2015	0.51 J	0.57 J	<0.50	**5.70**	<0.18
	10/12/2017	<0.26	<0.26	<0.50	*0.64 J*	<0.18
	6/20/2018	<0.37	<0.34	<0.38	<0.30	<0.20
MW-9	2/11/2014	1.40	4.10	<0.47	*0.52*	<0.18
	5/14/2014	1.80	5.10	<0.50	*0.68*	<0.18
	8/13/2014	3.30	10.5	<0.50	*1.80*	<0.18
	2/24/2015	2.40	8.20	<0.50	*0.95*	<0.18
	6/3/2015	2.10	5.60	<0.50	*0.65*	<0.18
	8/19/2015	4.70	11.2	<0.50	*1.30*	<0.18
	10/12/2017	1.40	5.00	<0.50	<0.33	<0.18
	6/20/2018	2.11	5.90	<0.38	0.38 J	<0.20
	7/16/2020	<0.39	<0.37	<0.33	<0.37	<0.20
MW-10	2/11/2014	1.40	<0.37	<0.47	*3.40*	<0.18
	5/14/2014	1.80	<0.24	<0.50	*3.10*	<0.18
	8/13/2014	2.70	0.28	<0.50	**6.30**	<0.18
	2/24/2015	0.97	<0.26	<0.50	*1.70*	<0.18
	6/3/2015	1.80	<0.26	<0.50	*2.90*	<0.18
	8/19/2015	1.70	<0.26	<0.50	*3.60*	<0.18
	10/12/2017	0.32 J	<0.26	*3.80*	**5.20**	<0.18
	6/20/2018	1.27	<0.34	**5.20**	*4.80*	<0.20
	7/16/2020	0.63 J	<0.37	*3.70*	*2.70*	<0.20
TW-4	12/5/2003	*22.2*	1.43	**290**	**20.7**	<0.17
	4/13/2004	*17.1*	<5.0	**320**	**24.1**	<0.217
	8/5/2004	*10.2*	<5.0	**289**	**16.0**	<0.312
	12/28/2004	*18.6*	<5.0	**494**	**20.7**	<0.217
	10/3/2007	*31.0*	<4.4	**400**	**27.0**	<0.90
	4/17/2009	5.70	<0.89	**181**	**9.50**	<0.18
	7/12/2010	2.40	<0.89	**178**	**8.80**	<0.18
	4/11/2011	3.70	<0.89	**216**	**8.90**	<0.18
	4/13/2012	<0.83	<0.89	**132**	**6.80**	<0.18
	7/18/2012	<0.83	<0.89	**119**	*3.30*	<0.18
	10/1/2013	2.20	<0.37	**140**	**5.50**	<0.18
	2/11/2014	<0.42	<0.37	**54.6**	*2.70*	<0.18
	5/14/2014	<0.26	<0.24	**54.9**	*4.50*	<0.18
	8/13/2014	<0.26	<0.26	**132**	*4.10*	<0.18
PZ-1R	12/30/2003	<0.50	<0.50	**5.90**	<0.50	<0.17
	4/13/2004	<5.0	<5.0	*2.59*	<0.50	<0.217
	8/5/2004	<5.0	<5.0	*3.11*	<0.232	<0.312
	12/28/2004	<5.0	<5.0	*1.15*	<0.50	<0.217
	10/3/2007	<0.83	<0.89	*2.50*	<0.48	<0.18
	4/17/2009	<0.83	<0.89	*1.70*	<0.48	<0.18
	7/12/2010	<0.83	<0.89	*3.80*	<0.48	<0.18
	4/11/2011	<0.83	<0.89	*1.40*	<0.48	<0.18
ES (ppb)	-	*70*	*100*	*5*	*5*	*0.2*
PAL (ppb)	-	*7*	*20*	*0.5*	*0.5*	*0.02*

Notes:
1.) Concentrations in **red bold** exceed their respective enforcement standard (ES)
2.) Concentrations in *blue italics* exceed their respective preventive action limit (PAL).

A.1. Groundwater Analytical Table (Page 4 of 4)
Former Saukville Fabricare Property
Saukville, Wisconsin

Well ID	Sampling Date	cis-1,2-DCE (ppb)	trans-1,2-DCE (ppb)	PCE (ppb)	TCE (ppb)	Vinyl chloride (ppb)
WG-1	6/12/2003	*13.0*	NR	**230**	**11.0**	NR
WG-2	6/12/2003	<0.83	NR	<0.45	<0.48	NR
	12/5/2003	<0.50	<0.50	*1.15*	<0.5	<0.17
	4/13/2004	<5.0	<5.0	<0.50	<0.50	<0.217
	8/5/2004	<5.0	<5.0	*2.01*	<5.0	<0.312
	12/28/2004	<5.0	<5.0	*0.98*	<0.5	<0.217
	4/11/2011	<0.83	<0.89	0.45	<0.48	<0.18
WG-3	6/12/2003	*16.0*	NR	**63.0**	**19.0**	NR
WG-4	8/15/2003	<0.83	NR	<0.45	<0.48	NR
WG-5	8/15/2003	<0.83	NR	<0.45	<0.48	NR
WG-6	8/15/2003	<0.83	NR	<0.45	<0.48	NR
	7/12/2010	<0.83	<0.89	<0.45	<0.48	<0.18
	4/11/2011	<0.83	<0.89	<0.45	<0.48	<0.18
	5/14/2014	<0.26	<0.24	<0.50	<0.33	<0.18
	8/13/2014	<0.26	<0.26	<0.50	<0.33	<0.18
WG-7	8/15/2003	<0.83	NR	<0.45	<0.48	NR
	12/28/2004	<5.0	<5.0	<0.50	<0.50	<0.217
ES (ppb)	-	*70*	*100*	*5*	*5*	*0.2*
PAL (ppb)	-	*7*	*20*	*0.5*	*0.5*	*0.02*

Notes:
1.) Concentrations in **red bold** exceed their respective enforcement standard (ES)
2.) Concentrations in *blue italics* exceed their respective preventive action limit (PAL).

Table A.4.a.
Indoor Air Sample VOC Analytical Results (µg/m^3)
Former Saukville Fabricare Property
Saukville, Wisconsin

Sample Location		Sampling Date	cis-1,2-DCE (µg/m^3)	trans-1,2-DCE (µg/m^3)	PCE (µg/m^3)	TCE (µg/m^3)	Vinyl Chloride (µg/m^3)
Background		4/16/09	<2.77	<5.15	<4.75	<3.76	<1.74
		7/11/10	<5.94	<5.94	12.88	<8.06	<3.83
		4/20/11	<1.10	<1.10	<1.90	**18.3**	<0.70
		7/10/20	<0.197	<0.231	<0.278	<0.237	<0.148
IA-1	south vacant space	4/15/09	<2.77	<5.15	**2,183**	<3.76	<1.74
		1/31/10	<2.58	<4.76	<4.41	<3.49	<1.64
		3/15/10	<2.58	<4.76	<4.41	<3.49	<1.64
		7/11/10	<2.77	<2.77	<4.75	<3.76	<1.79
		4/20/11	<1.10	<1.10	<1.90	<1.50	<0.70
		7/10/20	<0.197	<0.231	<0.278	<0.237	<0.148
IA-2	dance studio front desk	4/15/09	674	<5.15	**3,593**	**17.73**	<1.74
		1/31/10	<2.77	<5.15	<4.75	<3.76	<1.74
		3/15/10	<2.58	<4.76	<4.41	<3.49	<1.64
		7/11/10	<1.66	<1.66	<2.85	<2.26	<1.07
		4/20/11	<1.10	<1.10	<1.90	<1.50	<0.70
		7/10/20	<0.197	<0.231	<0.278	<0.237	<0.148
IA-3	coin-op laundromat	4/15/09	<3.88	<7.53	**26,712**	<5.26	<2.45
		1/31/10	<2.77	<5.15	<4.75	<3.76	<1.74
		3/15/10	<2.77	<5.15	<4.75	<3.76	<1.74
		7/11/10	<1.66	<1.66	3.32J	<2.26	<1.07
		4/20/11	<1.10	<1.10	<1.90	**9.70**	<0.72
		7/10/20	<0.197	<0.231	<0.278	<0.237	<0.148
IA-4	restaurant	4/15/09	<2.77	<5.15	**402**	<3.76	<1.74
		1/31/10	<2.77	<5.15	<4.75	<3.76	<1.74
		3/15/10	26.55	<5.15	52.88	**81.4**	<1.74
		7/11/10	<1.66	<1.66	3.66J	<2.26	<1.07
		4/20/11	<1.20	<1.20	<2.00	**12.4**	<0.74
		7/10/20	<0.197	<0.231	1.09	<0.237	<0.148
IA-5	flooring company	1/31/10	<2.77	<5.15	<4.75	<3.76	<1.74
		3/15/10	<2.85	<5.55	4.95	<3.87	<1.79
		7/11/10	<2.77	<2.77	69.83	<3.76	<1.79
		4/20/11	<1.10	<1.10	<0.95	<0.76	<0.36
		7/10/20	<0.197	<0.231	0.68 J	<0.237	<0.148
IA-6	dance studio A (north)	1/31/10	<2.77	<5.15	<4.75	<3.76	<1.74
		3/15/10	<2.85	<5.55	10.85	<3.87	<1.79
		7/11/10	<1.66	<1.66	35.93	<2.26	<1.07
		4/20/11	<1.10	<1.10	<1.90	<1.50	<0.72
		7/10/20	<0.197	<0.231	0.54 J	<0.237	<0.148
IA-7	dance studio C (south)	1/31/10	<37.25	<71.73	<63.73	<50.49	<23.51
		3/15/10	<2.58	<4.76	<4.41	<3.49	<1.64
		7/11/10	<7.53	<7.53	<12.88	<10.21	<4.85
		4/20/11	<1.10	<1.10	<1.90	4.40	<0.72
		7/10/20	<0.197	<0.231	3.20	<0.237	<0.148
IA-8	north vacant space	1/31/10	Not analyzed due to summa canister issue.				
		3/15/10	<2.77	<5.15	<4.75	<3.76	<1.74
		7/11/10	<1.66	<1.66	6.10	<2.26	<1.07
		4/20/11	<1.20	<1.20	<2.10	**29.8**	<0.77
		7/10/20	<0.197	<0.231	0.81 J	<0.237	<0.148
IA-9	dry cleaners	4/20/11	<1.10	<1.10	37.7	<1.50	<0.72
		7/10/20	<0.197	<0.231	<0.278	<0.237	<0.148
Intake 1	restaurant	7/11/10	<3.45	<3.45	<5.90	<4.67	<2.22
		4/20/11	<1.20	<1.20	<2.00	<1.60	<0.74
Intake 2	dance studio	4/20/11	<1.10	<1.10	<1.90	<1.50	<0.72
Intake 3	flooring company	4/20/11	<1.10	<1.10	<1.90	1.50	<0.70
SSDS Main Drop "A" Exhaust		7/12/10	<3.45	<3.45	**3,797**	**11.82**	<2.22
SSDS Drop "B" Exhaust		4/20/11	Not analyzed due to laboratory error.				
SSDS Drop "C" Exhaust		4/20/11	<1.10	<1.10	7.00	2.40	<0.36
DNR Residential Vapor Action Level (µg/m^3)			*NS*	*NS*	*42*	*2.1*	*1.7*

DNR Commercial Vapor Action Level (µg/m^3)	*NS*	*NS*	*180*	*8.8*	*28*

Notes:

1. DNR Vapor Action Levels are based, in part, on standard U.S. EPA risk calculation methods as defined in the DNR Vapor Intrusion Guidance (updated November 2017).
2. Concentrations that exceed their respective DNR residential vapor action levels are in red.
3. Concentrations that exceed their respective DNR commercial vapor action levels are in **red bold**.
4. "J" qualifier indicates an estimated concentration between the method detection limit and the reporting limit.
5. The VMS was operational from November 17, 2009, to February 28, 2017, and restarted on June 20, 2018.

A.1. Groundwater Analytical Table
PFAS
Former Saukville Fabricare Property
Saukville, Wisconsin

Well ID Sampling Date Analyte PFAS (ppt)	MW-2 7/16/2020	NR 140 ES	NR 140 PAL
9Cl-PF3ONS	<7.40	NS	NS
11Cl-PF3ONS	<7.40	NS	NS
8:2 FTS	<3.70	NS	NS
6:2 FTS	<3.70	NS	NS
10:2 FTS	<7.40	NS	NS
4:2 FTS	<7.40	NS	NS
GenX	<7.40	*300	*30
ADONA	<7.40	*3,000	*600
EtFOSA	<3.70	*20	*2
EtFOSAA	<7.40	*20	*2
EtFOSE	<7.40	*20	*2
MeFOSAA	<7.40	NS	NS
MeFOSAA	<7.40	NS	NS
MeFOSE	<7.40	NS	NS
PFBS	<3.70	*450,000	*90,000
PFDS	<3.70	NS	NS
PFHpS	<3.70	NS	NS
PFNS	<7.40	NS	NS
PFOSA	<3.70	NS	NS
PFPeS	<3.70	NS	NS
PFDOS	<7.40	NS	NS
PFHxS	<3.70	*40	*4
PFBA	18.0	*10,000	*2,000
PFDA	<3.70	*300	*60
PFDoA	<3.70	*500	*100
PFHpA	<3.70	NS	NS
PFHxDA	<7.40	NS	NS
PFHxA	19.0	*150,000	*30,000
PFNA	<3.70	*30	*3
PFODA	<7.40	*400,000	*80,000
PFOA	<1.80	20	2
PFPeA	26.0	NS	NS
PFTeDA	<3.70	NS	NS
PFTrDA	<3.70	NS	NS
PFUdA	<3.70	NS	NS
PFOS	<3.70	20	2

*** indicates recommended standards November 2020.**
Notes:
1.) Concentrations in **red bold** exceed their respective enforcement standard (ES)
2.) Concentrations in *blue italics* exceed their respective preventive action limit (PAL).

Mass formula

Mass (ug) = Flow (ft3/min)*Concentration (ug/m3)*Time (min)

Flow based on fan performance graph, inline pressure, and two stacked fans in the main system
14.86 cfm

Concentration based on stack sampling conducted from main exhaust stack July 12, 2010
PCE - 3,797 ug/m3
TCE - 11.82 ug/m3

Time of system operation from November 17, 2009 to February 28, 2017 and from June 20, 2018 to April 15, 2021.
2,660 days and 1,030 days

M=(14.86 ft3/min)(1 m3/ 35.31 ft3)(3,797 ug/m3)(1kg/1,000,000,000 ug)(3,690 days)(1,440 min/ 1 day)
M= 8.49 kg
M= 18.68 pounds PCE

M=(14.86 ft3/min)(1 m3/ 35.31 ft3)(11.82 ug/m3)(1 kg/ 1,000,000,000 ug)(3690 days)(1,440 min/ 1 day)
M= .026 kg
M= 0.058 pounds TCE

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

TRENTON OTT
FEC, INC.
6635 N. SIDNEY PLACE
MILWAUKEE, WI 53209

Report Date *23-Jul-20*

Project Name SAUKVILLE
Project # 041101

Invoice # E38189

Lab Code 5038189A
Sample ID MW-9
Sample Matrix Water
Sample Date 7/16/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		7/21/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		7/21/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		7/21/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		7/21/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		7/21/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/21/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		7/21/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		7/21/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		7/21/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		7/21/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		7/21/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		7/21/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		7/21/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		7/21/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		7/21/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		7/21/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		7/21/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		7/21/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		7/21/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		7/21/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		7/21/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		7/21/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		7/21/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		7/21/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		7/21/2020	CJR	1

Project Name SAUKVILLE **Invoice #** E38189
Project # 041101

Lab Code 5038189A
Sample ID MW-9
Sample Matrix Water
Sample Date 7/16/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		7/21/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		7/21/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		7/21/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		7/21/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		7/21/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		7/21/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/21/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		7/21/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/21/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		7/21/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		7/21/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		7/21/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		7/21/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		7/21/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		7/21/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		7/21/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		7/21/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		7/21/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		7/21/2020	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		7/21/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		7/21/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		7/21/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		7/21/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		7/21/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		7/21/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/21/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		7/21/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		7/21/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		7/21/2020	CJR	1
SUR - Dibromofluoromethane	110	REC %			1	8260B		7/21/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		7/21/2020	CJR	1
SUR - 4-Bromofluorobenzene	122	REC %			1	8260B		7/21/2020	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		7/21/2020	CJR	1

Project Name SAUKVILLE **Invoice #** E38189
Project # 041101

Lab Code 5038189B
Sample ID MW-10
Sample Matrix Water
Sample Date 7/16/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		7/22/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		7/22/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		7/22/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		7/22/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		7/22/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/22/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		7/22/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		7/22/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		7/22/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		7/22/2020	CJR	1
Chloroform	< 0.33	ug/l	0.44	1.4	1	8260B		7/22/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		7/22/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		7/22/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		7/22/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		7/22/2020	CJR	1
Dibromochloromethane	< 0.33	ug/l	0.23	0.74	1	8260B		7/22/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		7/22/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		7/22/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		7/22/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		7/22/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		7/22/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		7/22/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		7/22/2020	CJR	1
cis-1,2-Dichloroethene	0.63 "J"	ug/l	0.39	1.2	1	8260B		7/22/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		7/22/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		7/22/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		7/22/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		7/22/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		7/22/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		7/22/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		7/22/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/22/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		7/22/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/22/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		7/22/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		7/22/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		7/22/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		7/22/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		7/22/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		7/22/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		7/22/2020	CJR	1
Tetrachloroethene	3.7	ug/l	0.33	1	1	8260B		7/22/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		7/22/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		7/22/2020	CJR	1

Project Name SAUKVILLE
Project # 041101

Invoice # E38189

Lab Code 5038189B
Sample ID MW-10
Sample Matrix Water
Sample Date 7/16/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		7/22/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		7/22/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		7/22/2020	CJR	1
Trichloroethene (TCE)	2.7	ug/l	0.47	1.5	1	8260B		7/22/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		7/22/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		7/22/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		7/22/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		7/22/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		7/22/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		7/22/2020	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		7/22/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		7/22/2020	CJR	1
SUR - 4-Bromofluorobenzene	120	REC %			1	8260B		7/22/2020	CJR	1
SUR - Dibromofluoromethane	114	REC %			1	8260B		7/22/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy
Environmental Lab, Inc.

www.synergy-lab.net
1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • mrsynergy@wi.twcbc.com

Chain # No 40868

Page 1 of 1

Lab I.D. #	
QUOTE # :	
Project #:	041101
Sampler: (signature)	Trenton J. Ott

Sample Handling Request

____ Rush Analysis Date Required: ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Project (Name / Location):	Sawkville		
Reports To:	Trenton Ott	Invoice To:	Same
Company	FEC, Inc.	Company	
Address	6635 N. Sidney Place	Address	
City State Zip	Milwaukee, WI 53209	City State Zip	
Phone	(414) 228-9815	Phone	
Email	(414) 228-9816	Email	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	VOC AIR (TO - 15)	8-RCRA METALS	PID/ FID
5038189 A	MW-9	7/16/20	AM	N	3	GW	HCL													X			
B	MW-10	↓	↓	↓	↓	↓	↓													X			

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Car

Temp. of Temp. Blank: ____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Trenton J. Ott	100pm	7/16/20			

Received in Laboratory By: [signature] Time: 8:00 Date: 7/17/20

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

TRENTON OTT
FEC. INC.
6635 N. SIDNEY PLACE
MILWAUKEE. WI 53209

Report Date *17-Jul-20*

Project Name SAUKVILLE **Invoice #** E38170
Project # 041101

Lab Code 5038170A
Sample ID IA-1
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170B
Sample ID IA-2
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Project Name SAUKVILLE **Invoice #** E38170
Project # 041101

Lab Code 5038170C
Sample ID IA-3
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170D
Sample ID IA-4
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	1.09	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170E
Sample ID IA-5
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	0.68 "J"	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170F
Sample ID IA-6
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	0.54 "J"	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Project Name SAUKVILLE **Invoice #** E38170
Project # 041101

Lab Code 5038170G
Sample ID IA-7
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	3.2	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170H
Sample ID IA-8
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	0.81 "J"	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170I
Sample ID IA-9
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

Lab Code 5038170J
Sample ID BACKGROUND
Sample Matrix Air
Sample Date 7/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		7/14/2020	CJR	1
trans-1,2-Dichloroethene	< 0.231	ug/m3	0.231	0.734	1	TO-15		7/14/2020	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		7/14/2020	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		7/14/2020	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		7/14/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF CUSTODY RECORD

Synergy
Environmental Lab, Inc.

www.synergy-lab.net
1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • mrsynergy@wi.twcbc.com

Chain # No 40867

Page 1 of 1

Lab I.D. #	
QUOTE # :	
Project #:	041101
Sampler: (signature)	Trenton J. Ott

Sample Handling Request

___ Rush Analysis Date Required: ___
(Rushes accepted only with prior authorization)
X Normal Turn Around

Project (Name / Location):	Slinkville		
Reports To:	Trenton Ott	Invoice To:	Same
Company	FEC, Inc.	Company	
Address	6635 N. Sidney Place	Address	
City State Zip	Milwaukee, WI 53209	City State Zip	
Phone	(414) 228-9815	Phone	
Email	(414) 228-9816	Email	

Analysis Requested | **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	VOC AIR (TO - 15)	8-RCRA METALS	TO-15 Short List						PID/ FID
5038170 A	IA-1	7/10/20	PM	N	1	Air	None																X						
B	IA-2																						X						
C	IA-3																						X						
D	IA-4																						X						
E	IA-5																						X						
F	IA-6																						X						
G	IA-7																						X						
H	IA-8																						X						
I	IA-9																						X						
J	Background																						X						

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

* TO-15 Short - PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, Vinyl Chloride.

Sample Integrity - To be completed by receiving lab.

Method of Shipment: GC

Temp. of Temp. Blank: ____ °C On Ice: ____

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Trenton J. Ott	1030	7/13/20			

Received in Laboratory By: [signature] Time: 8:00 Date: 7/14/20

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

August 03, 2020

TRENT OTT
Friess Environmental Consulting, Inc
6637 NORTH SIDNEY PLACE
Milwaukee, WI 53209

RE: Project: 04110 SAUKVILLE
Pace Project No.: 40211370

Dear TRENT OTT:

Enclosed are the analytical results for sample(s) received by the laboratory on July 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

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

SAMPLE SUMMARY

Project: 04110 SAUKVILLE
Pace Project No.: 40211370

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40211370001	**MW-2**	Water	07/16/20 00:00	07/18/20 08:15

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

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	FEC, Inc.
Branch/Location:	Milwaukee
Project Contact:	Trenton Ott
Phone:	(414) 228-9815
Project Number:	041101
Project Name:	Sawkville
Project State:	WI
Sampled By (Print):	Trenton Ott
Sampled By (Sign):	Trenton Ott
PO #:	Regulatory Program:

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

Quote #:	
Mail To Contact:	Trenton Ott
Mail To Company:	FEC, Inc.
Mail To Address:	1035 N. Sidney Place Milwaukee WI 53209
Invoice To Contact:	Same
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	(414) 228-9815

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: PFAS	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
01	MW-2	7/16/20	AM	GW	N	A	X			

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Trenton Ott	7/17/20 10:26	Mary Jannin	7/17/20 10:26
Mary Jannin	7/17/20 1322		
CS Logistics	7-18-20 0815	Madelin Y RM Pace	7-18-20 0815

PACE Project No.: 40211370
Receipt Temp = ROL °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal (Present / Not Present) Intact / Not Intact

Sample Preservation Receipt Form

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

Client Name: FEC, Inc. Project # 40211370

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:

	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)
Pace Lab #	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN						
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										MLK																						2.5 / 5 / 10
011										7-15-20																						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
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: WO# : 40211370

40211370

Client Name: FEC, Inc.

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

Tracking #: _____

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: RCT /Corr: _____

Person examining contents:

Date: 7-15-20 /Initials: MCR

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 if shipped on Dry Ice.

Labeled By Initials: MP

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. Time "AM" MCR 7-15-20
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: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
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: -Includes date/time/ID/Analysis Matrix: W	☒Yes ☐No ☐N/A	12.
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: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Report of Analysis

Pace Analytical Services, LLC
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Attention: Brian Basten

Project Name: 04110 SAUKVILLE

Project Number: 40211370

Lot Number:**VG22014**

Date Completed:07/31/2020

08/03/2020 12:01 AM
Approved and released by:
Project Manager II: **Cathy S. Dover**

Case Narrative
Pace Analytical Services, LLC
Lot Number: VG22014

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Pace Analytical Services, LLC ("Pace") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Pace policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

PFAS 537 ID (WI)
Insufficient sample volume was provided to perform matrix spike/matrix spike duplicate (MS/MSD) for prep batch 61470. An LCS/LCSD was run in lieu of an MS/MSD.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample Summary
Pace Analytical Services, LLC
Lot Number: VG22014
Project Name: 04110 SAUKVILLE
Project Number: 40211370

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-2	Aqueous	07/16/2020	07/22/2020

(1 sample)

Detection Summary

Pace Analytical Services, LLC

Lot Number: VG22014

Project Name: 04110 SAUKVILLE

Project Number: 40211370

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-2	Aqueous	PFBA	PFAS by ID	18		ng/L	5
001	MW-2	Aqueous	PFHxA	PFAS by ID	19		ng/L	6
001	MW-2	Aqueous	PFPeA	PFAS by ID	26		ng/L	6

(3 detections)

PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **VG22014-001**

Description: **MW-2** Matrix: **Aqueous**

Date Sampled: **07/16/2020** Project Name: **04110 SAUKVILLE**

Date Received: **07/22/2020** Project Number: **40211370**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP QSM B-15	1	07/29/2020 1753	MMM	07/28/2020 1138	61470

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		3.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		3.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		3.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		7.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		7.4	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**18**		**3.7**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**19**		**3.7**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.8	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**26**		**3.7**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150
13C2_6:2FTS		91	25-150
13C2_8:2FTS		96	25-150
13C2_PFDoA		82	25-150
13C2_PFHxDA		80	25-150
13C2_PFTeDA		82	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the LOQ
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **VG22014-001**

Description: **MW-2** Matrix: **Aqueous**

Date Sampled: **07/16/2020** Project Name: **04110 SAUKVILLE**

Date Received: **07/22/2020** Project Number: **40211370**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		92	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBA		95	25-150
13C4_PFHpA		92	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		97	25-150
13C6_PFDA		95	25-150
13C7_PFUdA		88	25-150
13C8_PFOA		91	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		94	10-150
13C9_PFNA		93	25-150
d-EtFOSA		72	10-150
d5-EtFOSAA		97	25-150
d9-EtFOSE		84	10-150
d-MeFOSA		74	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		87	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
ND = Not detected at or above the LOQ
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: VQ61470-001
Batch: 61470
Analytical Method: PFAS by ID SOP QSM B-15

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 07/28/2020 1138

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	ng/L	07/29/2020 1721
11Cl-PF3OUdS	ND		1	8.0	ng/L	07/29/2020 1721
8:2 FTS	ND		1	4.0	ng/L	07/29/2020 1721
6:2 FTS	ND		1	4.0	ng/L	07/29/2020 1721
10:2 FTS	ND		1	8.0	ng/L	07/29/2020 1721
4:2 FTS	ND		1	8.0	ng/L	07/29/2020 1721
GenX	ND		1	8.0	ng/L	07/29/2020 1721
ADONA	ND		1	8.0	ng/L	07/29/2020 1721
EtFOSA	ND		1	4.0	ng/L	07/29/2020 1721
EtFOSAA	ND		1	8.0	ng/L	07/29/2020 1721
EtFOSE	ND		1	8.0	ng/L	07/29/2020 1721
MeFOSA	ND		1	8.0	ng/L	07/29/2020 1721
MeFOSAA	ND		1	8.0	ng/L	07/29/2020 1721
MeFOSE	ND		1	8.0	ng/L	07/29/2020 1721
PFBS	ND		1	4.0	ng/L	07/29/2020 1721
PFDS	ND		1	4.0	ng/L	07/29/2020 1721
PFHpS	ND		1	4.0	ng/L	07/29/2020 1721
PFNS	ND		1	8.0	ng/L	07/29/2020 1721
PFOSA	ND		1	4.0	ng/L	07/29/2020 1721
PFPeS	ND		1	4.0	ng/L	07/29/2020 1721
PFDOS	ND		1	8.0	ng/L	07/29/2020 1721
PFHxS	ND		1	4.0	ng/L	07/29/2020 1721
PFBA	ND		1	4.0	ng/L	07/29/2020 1721
PFDA	ND		1	4.0	ng/L	07/29/2020 1721
PFDoA	ND		1	4.0	ng/L	07/29/2020 1721
PFHpA	ND		1	4.0	ng/L	07/29/2020 1721
PFHxDA	ND		1	8.0	ng/L	07/29/2020 1721
PFHxA	ND		1	4.0	ng/L	07/29/2020 1721
PFNA	ND		1	4.0	ng/L	07/29/2020 1721
PFODA	ND		1	8.0	ng/L	07/29/2020 1721
PFOA	ND		1	2.0	ng/L	07/29/2020 1721
PFPeA	ND		1	4.0	ng/L	07/29/2020 1721
PFTeDA	ND		1	4.0	ng/L	07/29/2020 1721
PFTrDA	ND		1	4.0	ng/L	07/29/2020 1721
PFUdA	ND		1	4.0	ng/L	07/29/2020 1721
PFOS	ND		1	4.0	ng/L	07/29/2020 1721

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		101	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		107	25-150
13C2_PFDoA		98	25-150
13C2_PFHxDA		96	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the LOQ

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: VQ61470-001
Batch: 61470
Analytical Method: PFAS by ID SOP QSM B-15

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 07/28/2020 1138

Surrogate	Q	% Rec	Acceptance Limit
13C2_PFTeDA		94	25-150
13C3_PFBS		102	25-150
13C3_PFHxS		103	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBA		103	25-150
13C4_PFHpA		98	25-150
13C5_PFHxA		103	25-150
13C5_PFPeA		106	25-150
13C6_PFDA		103	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		99	25-150
13C8_PFOS		92	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		103	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		103	25-150
d9-EtFOSE		88	10-150
d-MeFOSA		66	10-150
d3-MeFOSAA		98	25-150
d7-MeFOSE		86	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the LOQ

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: VQ61470-002
Batch: 61470
Analytical Method: PFAS by ID SOP QSM B-15

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 07/28/2020 1138

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
9Cl-PF3ONS	15	14		1	97	50-150	07/29/2020 1732
11Cl-PF3OUdS	15	14		1	93	50-150	07/29/2020 1732
8:2 FTS	15	15		1	101	50-150	07/29/2020 1732
6:2 FTS	15	16		1	107	50-150	07/29/2020 1732
10:2 FTS	15	15		1	100	50-150	07/29/2020 1732
4:2 FTS	15	14		1	95	50-150	07/29/2020 1732
GenX	32	32		1	100	50-150	07/29/2020 1732
ADONA	15	17		1	110	50-150	07/29/2020 1732
EtFOSA	16	17		1	104	50-150	07/29/2020 1732
EtFOSAA	16	15		1	97	50-150	07/29/2020 1732
EtFOSE	16	17		1	106	50-150	07/29/2020 1732
MeFOSA	16	19		1	117	50-150	07/29/2020 1732
MeFOSAA	16	18		1	110	50-150	07/29/2020 1732
MeFOSE	16	16		1	99	50-150	07/29/2020 1732
PFBS	14	14		1	97	50-150	07/29/2020 1732
PFDS	15	14		1	89	50-150	07/29/2020 1732
PFHpS	15	16		1	103	50-150	07/29/2020 1732
PFNS	15	16		1	101	50-150	07/29/2020 1732
PFOSA	16	16		1	102	50-150	07/29/2020 1732
PFPeS	15	14		1	94	50-150	07/29/2020 1732
PFDOS	15	15		1	94	50-150	07/29/2020 1732
PFHxS	15	14		1	97	50-150	07/29/2020 1732
PFBA	16	16		1	102	50-150	07/29/2020 1732
PFDA	16	16		1	101	50-150	07/29/2020 1732
PFDoA	16	16		1	101	50-150	07/29/2020 1732
PFHpA	16	17		1	105	50-150	07/29/2020 1732
PFHxDA	16	17		1	105	50-150	07/29/2020 1732
PFHxA	16	17		1	103	50-150	07/29/2020 1732
PFNA	16	17		1	104	50-150	07/29/2020 1732
PFODA	16	17		1	106	50-150	07/29/2020 1732
PFOA	16	16		1	97	50-150	07/29/2020 1732
PFPeA	16	16		1	99	50-150	07/29/2020 1732
PFTeDA	16	17		1	104	50-150	07/29/2020 1732
PFTrDA	16	16		1	100	50-150	07/29/2020 1732
PFUdA	16	16		1	102	50-150	07/29/2020 1732
PFOS	15	14		1	96	50-150	07/29/2020 1732

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		90	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		95	25-150
13C2_PFDoA		92	25-150
13C2_PFHxDA		86	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the LOQ
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: VQ61470-002
Batch: 61470
Analytical Method: PFAS by ID SOP QSM B-15

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 07/28/2020 1138

Surrogate	Q	% Rec	Acceptance Limit
13C2_PFTeDA		90	25-150
13C3_PFBS		93	25-150
13C3_PFHxS		95	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBA		100	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		103	25-150
13C6_PFDA		94	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		98	25-150
13C8_PFOS		84	25-150
13C8_PFOSA		95	10-150
13C9_PFNA		95	25-150
d-EtFOSA		68	10-150
d5-EtFOSAA		94	25-150
d9-EtFOSE		84	10-150
d-MeFOSA		67	10-150
d3-MeFOSAA		95	25-150
d7-MeFOSE		87	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the LOQ

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCSD

Sample ID: VQ61470-003
Batch: 61470
Analytical Method: PFAS by ID SOP QSM B-15

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 07/28/2020 1138

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
9Cl-PF3ONS	15	15		1	100	3.4	50-150	30	07/29/2020 1743
11Cl-PF3OUdS	15	14		1	96	3.2	50-150	30	07/29/2020 1743
8:2 FTS	15	14		1	88	13	50-150	30	07/29/2020 1743
6:2 FTS	15	16		1	107	0.74	50-150	30	07/29/2020 1743
10:2 FTS	15	15		1	95	4.9	50-150	30	07/29/2020 1743
4:2 FTS	15	14		1	95	0.29	50-150	30	07/29/2020 1743
GenX	32	29		1	92	8.7	50-150	30	07/29/2020 1743
ADONA	15	17		1	111	0.64	50-150	30	07/29/2020 1743
EtFOSA	16	18		1	115	9.5	50-150	30	07/29/2020 1743
EtFOSAA	16	17		1	108	11	50-150	30	07/29/2020 1743
EtFOSE	16	17		1	106	0.46	50-150	30	07/29/2020 1743
MeFOSA	16	20		1	125	7.0	50-150	30	07/29/2020 1743
MeFOSAA	16	17		1	106	3.2	50-150	30	07/29/2020 1743
MeFOSE	16	16		1	98	1.7	50-150	30	07/29/2020 1743
PFBS	14	15		1	105	7.3	50-150	30	07/29/2020 1743
PFDS	15	15		1	98	8.8	50-150	30	07/29/2020 1743
PFHpS	15	15		1	97	5.4	50-150	30	07/29/2020 1743
PFNS	15	15		1	95	6.6	50-150	30	07/29/2020 1743
PFOSA	16	17		1	104	1.7	50-150	30	07/29/2020 1743
PFPeS	15	15		1	103	8.7	50-150	30	07/29/2020 1743
PFDOS	15	14		1	91	3.6	50-150	30	07/29/2020 1743
PFHxS	15	15		1	100	2.8	50-150	30	07/29/2020 1743
PFBA	16	16		1	102	0.24	50-150	30	07/29/2020 1743
PFDA	16	15		1	94	6.6	50-150	30	07/29/2020 1743
PFDoA	16	16		1	99	1.8	50-150	30	07/29/2020 1743
PFHpA	16	16		1	101	4.5	50-150	30	07/29/2020 1743
PFHxDA	16	16		1	99	6.2	50-150	30	07/29/2020 1743
PFHxA	16	16		1	98	5.7	50-150	30	07/29/2020 1743
PFNA	16	16		1	97	6.8	50-150	30	07/29/2020 1743
PFODA	16	17		1	108	1.7	50-150	30	07/29/2020 1743
PFOA	16	17		1	105	7.7	50-150	30	07/29/2020 1743
PFPeA	16	15		1	97	2.6	50-150	30	07/29/2020 1743
PFTeDA	16	16		1	103	0.88	50-150	30	07/29/2020 1743
PFTrDA	16	16		1	98	2.2	50-150	30	07/29/2020 1743
PFUdA	16	16		1	100	2.4	50-150	30	07/29/2020 1743
PFOS	15	14		1	93	3.2	50-150	30	07/29/2020 1743

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		109	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		108	25-150
13C2_PFDoA		98	25-150
13C2_PFHxDA		93	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the LOQ
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCSD

Sample ID: VQ61470-003
Batch: 61470
Analytical Method: PFAS by ID SOP QSM B-15

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 07/28/2020 1138

Surrogate	Q	% Rec	Acceptance Limit
13C2_PFTeDA		93	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		99	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBA		103	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		111	25-150
13C5_PFPeA		107	25-150
13C6_PFDA		104	25-150
13C7_PFUdA		97	25-150
13C8_PFOA		98	25-150
13C8_PFOS		91	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		104	25-150
d-EtFOSA		67	10-150
d5-EtFOSAA		97	25-150
d9-EtFOSE		86	10-150
d-MeFOSA		67	10-150
d3-MeFOSAA		100	25-150
d7-MeFOSE		93	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the LOQ

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Internal Transfer Chain of Custody

Pace Analytical® www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: WI
Cert. Needed: [x] Yes [ ] No

Workorder: 40211370 Workorder Name: 04110 SAUKVILLE
Owner Received Date: 7/18/2020 Results Requested By: 8/3/2020

Report To	Subcontract To
Brian Basten Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436	Pace Gulf Coast 7979 Innovation Park Dr Baton Rouge, LA 70820 Phone (255)769-4900

VG22014
CSD

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved						Requested Analysis: PFAS 36 COMPOUNDS BY ID	LAB USE ONLY
1	MW-2	PS	7/16/2020 00:00	40211370001	Water	1						X	
2													
3													
4													
5													

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/20/20 1400		
2	FedEx	7/21/20 9:00	[signature]	7/21/20 9:00
3	FEDEX 1025	7/22/20	[signature]	7/22/20 1025

Comments: 4278 - 9135 - 0279

Cooler Temperature on Receipt 4.8 °C — Custody Seal Y or (N) — Received on Ice (Y) or N — Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

T-4.3°C

Saturday, July 18, 2020 11:42:04 AM FMT-ALL-C-002rev.00 24March2009 Page 1 of 1

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

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

Page 1 of 1

(Please Print Clearly)

Company Name:	FEC, Inc.
Branch/Location:	@ Milwaukee
Project Contact:	Trenton Ott
Phone:	(414) 228-9815
Project Number:	04101
Project Name:	Saukville
Project State:	WI
Sampled By (Print):	Trenton Ott
Sampled By (Sign):	Trenton J. Ott
PO #:	
Regulatory Program:	

Quote #:	
Mail To Contact:	Trenton Ott
Mail To Company:	FEC, Inc.
Mail To Address:	6635 N. Sidney Place Milwaukee, WI 53209
Invoice To Contact:	Same
Invoice To Company:	↓
Invoice To Address:	↓
Invoice To Phone:	(414) 228-9815

*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): N
PRESERVATION (CODE)*: Pick Letter: A
Analyses Requested: PFAS

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	PFAS	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW-2	7/16/20	AM	GW	X			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Trenton J. Ott	7/17/20 10:26	Mary Fanning	7/17/20 10:26
Mary Fanning	7/17/20 1322		
CS Logistics	7-18-20 0815	Madeline Pace	7-18-20 0815

PACE Project No. 40211370
Receipt Temp = ROI °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Pace Analytical® 1241 Bellevue Street Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: WO#: 40211370

40211370

Client Name: FEC, Inc.

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

Tracking #:

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: N/A /Corr:

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

Person examining contents: Date: 7-15-20 Initials: MLR

Labeled By Initials:

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. Time "AM" MLR 7-15-20
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: For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		8.
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: -Includes date/time/ID/Analysis Matrix: W	☒ Yes ☐ No ☐ N/A	12.
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:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page 2 of 2

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: PACE Cooler Inspected by/date: RMG / 7/22/20 Lot #: VG 22014

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☐ Yes	☒ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: _____ Chlorine Strip ID: _____ Tested by: _____

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: _____

4.3 / 4.3 °C / °C / °C / °C

Method: ☒ ~~Temperature Blank~~ ☒ Against: Bottles IR Gun ID: _____ IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☒ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☒ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☒ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☒ Yes	☐ No		6. Were sample IDs listed on the COC?
☒ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☒ Yes	☐ No		8. Was collection date & time listed on the COC?
☒ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☒ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☒ Yes	☐ No		11. Were tests to be performed listed on the COC?
☒ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☐ Yes	☒ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☒ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☒ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☒ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☒ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☒ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☒ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☒ No		21. Was the quote number listed on the container label? If yes, Quote #

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with ____mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # _____.

Time of preservation _____. If more than one preservative is needed, please note in the comments below.

Sample(s) _____ were received with bubbles >6 mm in diameter.

Samples(s) _____ were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: _____.

SR barcode labels applied by: RMG Date: 7/22/20

Comments: