4401 Lyman Drive, Suite C
Hilliard, OH 43026

T (614) 705-2250

www.sme-usa.com

November 14, 2022

Mr. Kelly Joseph
United States Environmental Protection Agency (USEPA)
Region 5
Mail Code: SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Via E-mail: Franc.David@epa.gov

RE: SME Serial Letter #66
2022 Groundwater Monitoring Report
Sheboygan River and Harbor Site
Tecumseh Products Site
Sheboygan Falls, Wisconsin
SME Project No. 069638.00.064

Dear Mr. Kelly:

Pursuant to the Long-Term Monitoring and Operation Plan Upper River – Phase I[1] (LTMOP), SME is providing the groundwater analytical results for the 2021 monitoring event. Six groundwater monitoring wells (MW9, MW10, MW12, MW13, MW16, and MW17) are located on the Site and down-gradient of the groundwater monitoring/interceptor trench (GMIT). A map of the monitoring well locations is included in Attachment 1. The wells have been sampled annually following completion of the source removal activities in accordance with the LTMOP. The objective of the monitoring of these wells is to assess polychlorinated biphenyl (PCB) concentration trends in groundwater on the site and to evaluate if it is necessary to operate the GMIT[2] to prevent PCB-impacted groundwater from migrating to the Sheboygan River.

SME conducted the sampling on May 25, 2021, and in accordance with the Field Sampling Plan submitted and approved as part of the Phase I Design. The groundwater purging and stabilization was conducted using with low flow sampling protocol, and purging was conducted until field measurements for specific conductance, dissolved oxygen, turbidity, oxygen reduction potential (ORP), and pH had stabilized. Following purging and stabilization, a groundwater sample for analysis of PCBs was collected from each well. Samples were collected in pre-cleaned, laboratory-provided containers and were transported to Pace Analytical laboratory of Green Bay for analysis.

A summary of the 2022 results compared to the historical data is provided in Table 1. We compared the groundwater results to the USEPA Maximum Contaminant Level (MCL) and the Wisconsin NR140 groundwater criteria. A copy of the laboratory report is provided in Attachment 2.

[1] *Long-Term Monitoring and Operations Plan, Upper River – Phase* 1, PRS and URS, May 2004.
[2] *Remedial Design Work Plan, Upper River – Phase I and II*, PRS and URS, June 2004.

PCBs were detected in five wells in excess of the Limit of Quantitation (≈ 0.04 µg/L). As in the past, PCBs were detected in two monitoring in excess of the Maximum Contaminant Level (MCL). The concentration of PCBs in MW13 in 2022 was higher than the last three years; however, the concentration of PCBs in MW13 remains significantly lower than the concentrations of PCBs from 2009 to 2015. The average PCB concentration from the previous 5 years (2017-2021, 0.44 µg/L) was also significantly less than the 5 years prior (2012-2016, 0.75 µg/L) or 10 years prior (2010-2016, 1.087 µg/L).

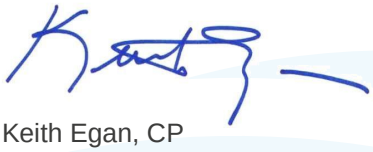
In the past we have concluded that based on the historical data and modeling, as long as the building dewatering pad/foundation slab remains acting as an engineering control to prevent infiltration, the river should not be impacted by the groundwater. However, the Phase II investigation of the Tecumseh facility in 2016, 2018, and 2021 demonstrated there were high levels of exposed PCBs in soil outside of the footprint of dewatering pad/foundation slab. The concentrations in soil ranged from 0.03 to over 15,000 mg/kg with a mean of 470 mg/kg. The presence of this exposed impact and the limited groundwater impact implies the leaching to groundwater is an incomplete preferential pathway.

The *Long-Term Monitoring and Operations Plan, Upper River – Phase* 1, states the groundwater shall be sampled for PCB concentrations on a semi-annual basis for a period of five years following completion of source removal activities. At the direction of the USEPA, semi-annual occurred for eight years after completion of source removal and annually since 2013. During this time, the concentrations of PCBs in groundwater have generally continued to decline to below the MCL and in most wells, laboratory level of detection. Based on the short-term increases, we will continue to complete annual groundwater sampling.

If you have questions regarding the sampling event, feel free to contact me at (513) 319-8919 or keith.egan@sme-usa.com.

Respectfully,

SME



Keith Egan, CP
Chief Consultant

Attachments: Table 1 – Groundwater Analytical Results
Figure 1 – Groundwater Features Diagram
Laboratory Analytical Report

Distribution: Mr. Christopher Dietrich, Wisconsin Department of Natural Resources via e-mail (Christopher.dietrich@wisconsin.gov)
Ms. Debbie McMillan, PRS via e-mail (dmcmillan@grhdevelopment.com)
Mr. Peter Johnson, Johnson-Wright via e-mail (pjohnson@johnsonwright.net)
Mr. Jason Smith, Tecumseh Products Company, LLC via e-mail (Jason.smith@tecumseh.com)

TABLE 1
GROUNDWATER ANALYTICAL RESULTS

TABLE 1
FORMER TECUMSEH SITE
CLEVELAND STREET, SHEBOYGAN FALLS, WISCONSIN
GROUNDWATER ANALYTICAL RESULTS
SME Project No. 069638.00.073

SAMPLE DATE / WELL ID	Wisconsin DNR NR 140 Criteria	USEPA Maximum Contaminant Level (MCL)	11/17/2004	5/27/2005	12/13/2005	7/10/2006	11/20/2006	5/31/2007	10/23/2007	5/14/2008	10/15/2008
MW9	0.03	0.5	0.47	0.47	0.49	0.49	0.48	0.49	0.47	0.49	0.24
MW10			0.47	0.48	0.50	NC	**1.1**	0.49	**0.98**	**0.72**	**0.5**
MW12			**1.5**	0.47	0.50	0.47	**0.57**	**0.46**	**0.44**	**0.83**	0.23
MW13			**1.5**	0.48	0.48	**2.1**	**1.1**	**0.82**	**1.5**	**1.6**	**1.9**
MW16			0.49	0.48	0.50	0.47	0.49	**0.4**	0.47	0.49	0.24
MW17			0.48	0.48	0.48	0.46	0.48	0.51	0.47	0.5	0.24

SAMPLE DATE / WELL ID	Wisconsin DNR NR 140 Criteria	USEPA Maximum Contaminant Level (MCL)	5/14/2009	10/22/2009	5/14/2010	10/29/2010	6/29/2011	11/29/2011	6/28/2012	11/7/2012	6/4/2013
MW9	0.03	0.5	0.24	0.23	0.29	0.29	0.29	0.31	0.29	0.31	0.25
MW10			**0.44**	**0.47**	**0.39**	**0.85**	**0.44**	**0.67**	**0.38**	**0.57**	**0.55**
MW12			**0.49**	0.23	**0.33**	**0.88**	**0.34**	0.31	**0.8**	0.31	0.25
MW13			**1.6**	**1.0**	**2.0**	**1.1**	**1.7**	**1.5**	**0.82**	**0.54**	**0.44**
MW16			0.23	0.23	0.29	0.29	0.29	0.31	0.29	0.31	0.27
MW17			0.23	0.23	0.30	0.29	0.29	0.31	0.29	0.31	0.26

SAMPLE DATE / WELL ID	Wisconsin DNR NR 140 Criteria	USEPA Maximum Contaminant Level (MCL)	6/19/2014	6/11/2015	7/13/2016	8/30/2017	5/10/2018	6/4/2019	6/9/2020	5/25/2021	8/9/2022
MW9	0.03	0.5	0.25	0.24	0.25	0.26	0.26	0.11	0.045	0.044	0.048
MW10			**0.57**	***0.44***	**0.61**	**0.65**	0.26	0.11	0.045	0.044	**0.63**
MW12			***0.33***	***0.30***	**0.52**	**0.59**	0.25	0.11	0.044	0.044	**0.35**
MW13			**0.91**	**1.2**	**0.66**	**0.65**	***0.35***	***0.26***	**0.42**	**0.54**	**1.1**
MW16			0.25	0.24	0.25	0.26	0.27	***0.16***	***0.097***	**0.14**	**0.42**
MW17			***0.27***	0.24	0.26	0.26	0.26	***0.13***	0.045	0.044	**0.41**

SAMPLE DATE / WELL ID	Wisconsin DNR NR 140 Criteria	USEPA Maximum Contaminant Level (MCL)	MEAN	MAXIMUM
MW9	0.03	0.5	ND	ND
MW10			**0.51**	**1.10**
MW12			**0.45**	**1.50**
MW13			**1.05**	**2.10**
MW16			ND	**0.50**
MW17			ND	**0.51**

NOTES:

(1) PCB concentrations reported in µg/L (parts per billion or ppb) unless otherwise noted.

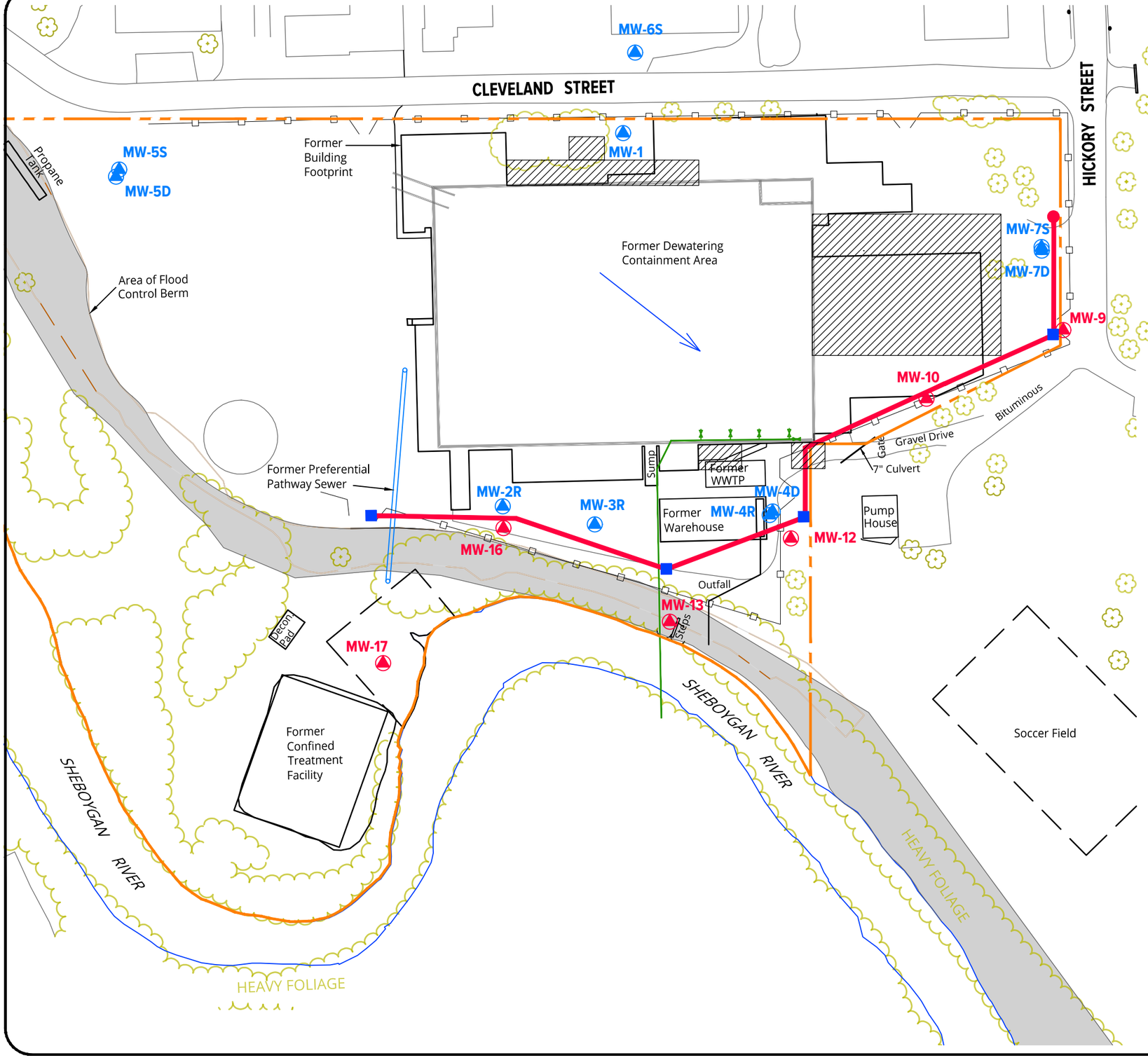
(2) Grey shading - PCBs were not detected above the Limit of Detection (LOD).

(3) Italicized numbers are estimated because the concentration was less than Limit of Quantitation (LOQ).

(4) NA - Not available. NC - Not Collected.

(5) PCB results shown from the 6/9/2020 and 5/25/2021 were the highest aroclor LOD or sum of the detections.

ATTACHMENT 1
FIGURE 1 – GROUNDWATER FEATURES DIAGRAM



LEGEND

- APPROXIMATE SITE BOUNDARY
- EXISTING FENCE
- EXISTING TREE AND/OR BRUSH
- GROUNDWATER MONITORING/ INTERCEPTOR TRENCH (AS BUILT)
- FLOOD CONTROL BERM
- DEWATERING PAD
- FORMER DREDGE SLURRY PIPE
- SUMP W/PUMP
- CLEAN OUT/MONITORING POINT
- MONITORING WELLS
- DOWNGRADIENT MONITORING WELLS
- HISTORIC GROUNDWATER FLOW DIRECTION
- EXPOSED SOIL IMPACTED WITH PCBs

NOTES:

1. BASE DRAWING INFORMATION TAKEN FROM GOOGLE EARTH PRO WITH IMAGE DATE 6-1-2015 AND STORMWATER POLLUTION PREVENTION PLAN, BY PETRO ENVIRONMENTAL, LLC, DATED SEPTEMBER 2004.
2. MW-9, MW-10, MW-12, MW-13, MW-16, AND MW-17 DOWN GRADIENT WELLS INCLUDED IN THE SEMI ANNUAL GROUNDWATER MONITORING.

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Project
SHEBOYGAN RIVER SUPERFUND SITE

Project Location
FORMER TECUMSEH SITE SHEBOYGAN FALLS, WISCONSIN

Sheet Name
TECUMSEH FALLS PROPERTY GROUNDWATER FEATURES

No.	Revision Date

Date: 8-31-2021
CADD: JAB
Designer: KE/AJL
Scale: AS NOTED
Project: 069638.00.068
Figure No.: 1

PLOT DATE: Aug 31, 2021 - 4:35pm - julie.blake
\\sme-inc\p2\WIP\069638.00\CAD\069638.00.068\rev0\069638.00.068_GWF_05.dwg

ATTACHMENT 2
LABORATORY ANALYTICAL REPORT

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

August 30, 2022

Aaron Lammers
SME
3301 Tech Circle
Kalamazoo, MI 49008

RE: Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Dear Aaron Lammers:

Enclosed are the analytical results for sample(s) received by the laboratory on August 10, 2022. 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:

- Pace Analytical Services - Minneapolis

This report was revised on August 26, 2022, to report total polychlorinated biphenyls by method 8082A.

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

Sincerely,

Tod Noltemeyer

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Keith Egan, Pollution Risk Services LLC
Megan Schaner, SME

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

CERTIFICATIONS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

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

SAMPLE SUMMARY

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40249619001	**MW12**	Water	08/09/22 09:45	08/10/22 10:30
40249619002	**MW9**	Water	08/09/22 10:50	08/10/22 10:30
40249619003	**MW10**	Water	08/09/22 12:00	08/10/22 10:30
40249619004	**MW13**	Water	08/09/22 12:45	08/10/22 10:30
40249619005	**MW16**	Water	08/09/22 13:25	08/10/22 10:30
40249619006	**MW17**	Water	08/09/22 14:05	08/10/22 10:30
40249619007	**EQUIPMENT BLANK**	Water	08/09/22 14:20	08/10/22 10:30
40249619008	**DUP GW**	Water	08/09/22 00:00	08/10/22 10:30

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

SAMPLE ANALYTE COUNT

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40249619001	**MW12**	EPA 8082A	RAG	10	PASI-M
40249619002	**MW9**	EPA 8082A	RAG	10	PASI-M
40249619003	**MW10**	EPA 8082A	RAG	10	PASI-M
40249619004	**MW13**	EPA 8082A	RAG	10	PASI-M
40249619005	**MW16**	EPA 8082A	RAG	10	PASI-M
40249619006	**MW17**	EPA 8082A	RAG	10	PASI-M
40249619007	**EQUIPMENT BLANK**	EPA 8082A	RAG	10	PASI-M
40249619008	**DUP GW**	EPA 8082A	RAG	10	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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

PROJECT NARRATIVE

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Method: **EPA 8082A**
Description: 8082A GCS PCB
Client: SME
Date: August 30, 2022

General Information:
8 samples were analyzed for EPA 8082A by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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

Additional Comments:

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

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

ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: MW12 **Lab ID: 40249619001** Collected: 08/09/22 09:45 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.040**	ug/L	0.10	0.040	1	08/12/22 09:06	08/15/22 12:31	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.041**	ug/L	0.10	0.041	1	08/12/22 09:06	08/15/22 12:31	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.043**	ug/L	0.10	0.043	1	08/12/22 09:06	08/15/22 12:31	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.11**	ug/L	0.10	0.043	1	08/12/22 09:06	08/15/22 12:31	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.19**	ug/L	0.10	0.049	1	08/12/22 09:06	08/15/22 12:31	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.048J**	ug/L	0.10	0.041	1	08/12/22 09:06	08/15/22 12:31	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.049**	ug/L	0.10	0.049	1	08/12/22 09:06	08/15/22 12:31	11096-82-5	
PCB, Total	**0.35**	ug/L	0.10	0.040	1	08/12/22 09:06	08/15/22 12:31	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	65	%.	30-125		1	08/12/22 09:06	08/15/22 12:31	877-09-8	
Decachlorobiphenyl (S)	65	%.	30-133		1	08/12/22 09:06	08/15/22 12:31	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: MW9 **Lab ID: 40249619002** Collected: 08/09/22 10:50 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.039**	ug/L	0.098	0.039	1	08/12/22 09:06	08/15/22 13:19	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.040**	ug/L	0.098	0.040	1	08/12/22 09:06	08/15/22 13:19	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.042**	ug/L	0.098	0.042	1	08/12/22 09:06	08/15/22 13:19	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.042**	ug/L	0.098	0.042	1	08/12/22 09:06	08/15/22 13:19	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.048**	ug/L	0.098	0.048	1	08/12/22 09:06	08/15/22 13:19	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.040**	ug/L	0.098	0.040	1	08/12/22 09:06	08/15/22 13:19	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.048**	ug/L	0.098	0.048	1	08/12/22 09:06	08/15/22 13:19	11096-82-5	
PCB, Total	**<0.039**	ug/L	0.098	0.039	1	08/12/22 09:06	08/15/22 13:19	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	52	%.	30-125		1	08/12/22 09:06	08/15/22 13:19	877-09-8	
Decachlorobiphenyl (S)	82	%.	30-133		1	08/12/22 09:06	08/15/22 13:19	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: MW10 **Lab ID: 40249619003** Collected: 08/09/22 12:00 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.040**	ug/L	0.10	0.040	1	08/12/22 09:06	08/15/22 13:34	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.041**	ug/L	0.10	0.041	1	08/12/22 09:06	08/15/22 13:34	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.043**	ug/L	0.10	0.043	1	08/12/22 09:06	08/15/22 13:34	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.21**	ug/L	0.10	0.043	1	08/12/22 09:06	08/15/22 13:34	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.35**	ug/L	0.10	0.049	1	08/12/22 09:06	08/15/22 13:34	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.065J**	ug/L	0.10	0.041	1	08/12/22 09:06	08/15/22 13:34	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.049**	ug/L	0.10	0.049	1	08/12/22 09:06	08/15/22 13:34	11096-82-5	
PCB, Total	**0.63**	ug/L	0.10	0.040	1	08/12/22 09:06	08/15/22 13:34	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	49	%.	30-125		1	08/12/22 09:06	08/15/22 13:34	877-09-8	
Decachlorobiphenyl (S)	87	%.	30-133		1	08/12/22 09:06	08/15/22 13:34	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: MW13 **Lab ID: 40249619004** Collected: 08/09/22 12:45 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.039**	ug/L	0.099	0.039	1	08/12/22 09:06	08/15/22 13:50	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.040**	ug/L	0.099	0.040	1	08/12/22 09:06	08/15/22 13:50	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.043**	ug/L	0.099	0.043	1	08/12/22 09:06	08/15/22 13:50	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.36**	ug/L	0.099	0.042	1	08/12/22 09:06	08/15/22 13:50	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.59**	ug/L	0.099	0.048	1	08/12/22 09:06	08/15/22 13:50	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.098J**	ug/L	0.099	0.040	1	08/12/22 09:06	08/15/22 13:50	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.049**	ug/L	0.099	0.049	1	08/12/22 09:06	08/15/22 13:50	11096-82-5	
PCB, Total	**1.1**	ug/L	0.099	0.039	1	08/12/22 09:06	08/15/22 13:50	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	50	%.	30-125		1	08/12/22 09:06	08/15/22 13:50	877-09-8	
Decachlorobiphenyl (S)	83	%.	30-133		1	08/12/22 09:06	08/15/22 13:50	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: MW16 **Lab ID: 40249619005** Collected: 08/09/22 13:25 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.039**	ug/L	0.097	0.039	1	08/12/22 09:06	08/15/22 14:06	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.040**	ug/L	0.097	0.040	1	08/12/22 09:06	08/15/22 14:06	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.042**	ug/L	0.097	0.042	1	08/12/22 09:06	08/15/22 14:06	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.13**	ug/L	0.097	0.042	1	08/12/22 09:06	08/15/22 14:06	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.21**	ug/L	0.097	0.047	1	08/12/22 09:06	08/15/22 14:06	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.080J**	ug/L	0.097	0.040	1	08/12/22 09:06	08/15/22 14:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.048**	ug/L	0.097	0.048	1	08/12/22 09:06	08/15/22 14:06	11096-82-5	
PCB, Total	**0.42**	ug/L	0.097	0.039	1	08/12/22 09:06	08/15/22 14:06	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	47	%.	30-125		1	08/12/22 09:06	08/15/22 14:06	877-09-8	
Decachlorobiphenyl (S)	77	%.	30-133		1	08/12/22 09:06	08/15/22 14:06	2051-24-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: MW17 **Lab ID: 40249619006** Collected: 08/09/22 14:05 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.039**	ug/L	0.098	0.039	1	08/12/22 09:06	08/15/22 14:22	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.040**	ug/L	0.098	0.040	1	08/12/22 09:06	08/15/22 14:22	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.042**	ug/L	0.098	0.042	1	08/12/22 09:06	08/15/22 14:22	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.082J**	ug/L	0.098	0.042	1	08/12/22 09:06	08/15/22 14:22	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.27**	ug/L	0.098	0.048	1	08/12/22 09:06	08/15/22 14:22	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.063J**	ug/L	0.098	0.040	1	08/12/22 09:06	08/15/22 14:22	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.048**	ug/L	0.098	0.048	1	08/12/22 09:06	08/15/22 14:22	11096-82-5	
PCB, Total	**0.41**	ug/L	0.098	0.039	1	08/12/22 09:06	08/15/22 14:22	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	44	%.	30-125		1	08/12/22 09:06	08/15/22 14:22	877-09-8	
Decachlorobiphenyl (S)	80	%.	30-133		1	08/12/22 09:06	08/15/22 14:22	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: EQUIPMENT BLANK **Lab ID: 40249619007** Collected: 08/09/22 14:20 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.042**	ug/L	0.11	0.042	1	08/12/22 09:06	08/15/22 14:38	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.043**	ug/L	0.11	0.043	1	08/12/22 09:06	08/15/22 14:38	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.046**	ug/L	0.11	0.046	1	08/12/22 09:06	08/15/22 14:38	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.045**	ug/L	0.11	0.045	1	08/12/22 09:06	08/15/22 14:38	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.051**	ug/L	0.11	0.051	1	08/12/22 09:06	08/15/22 14:38	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.043**	ug/L	0.11	0.043	1	08/12/22 09:06	08/15/22 14:38	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.052**	ug/L	0.11	0.052	1	08/12/22 09:06	08/15/22 14:38	11096-82-5	
PCB, Total	**<0.042**	ug/L	0.11	0.042	1	08/12/22 09:06	08/15/22 14:38	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	50	%.	30-125		1	08/12/22 09:06	08/15/22 14:38	877-09-8	
Decachlorobiphenyl (S)	87	%.	30-133		1	08/12/22 09:06	08/15/22 14:38	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Sample: DUP GW **Lab ID: 40249619008** Collected: 08/09/22 00:00 Received: 08/10/22 10:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	**<0.039**	ug/L	0.099	0.039	1	08/12/22 09:06	08/15/22 12:16	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.040**	ug/L	0.099	0.040	1	08/12/22 09:06	08/15/22 12:16	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.043**	ug/L	0.099	0.043	1	08/12/22 09:06	08/15/22 12:16	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.18**	ug/L	0.099	0.042	1	08/12/22 09:06	08/15/22 12:16	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.29**	ug/L	0.099	0.048	1	08/12/22 09:06	08/15/22 12:16	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.055J**	ug/L	0.099	0.040	1	08/12/22 09:06	08/15/22 12:16	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.049**	ug/L	0.099	0.049	1	08/12/22 09:06	08/15/22 12:16	11096-82-5	
PCB, Total	**0.53**	ug/L	0.099	0.039	1	08/12/22 09:06	08/15/22 12:16	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	65	%.	30-125		1	08/12/22 09:06	08/15/22 12:16	877-09-8	
Decachlorobiphenyl (S)	69	%.	30-133		1	08/12/22 09:06	08/15/22 12:16	2051-24-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

QC Batch: 834134
QC Batch Method: EPA 3510C
Analysis Method: EPA 8082A
Analysis Description: 8082A GCS PCB
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 40249619001, 40249619002, 40249619003, 40249619004, 40249619005, 40249619006, 40249619007, 40249619008

METHOD BLANK: 4417627 Matrix: Water
Associated Lab Samples: 40249619001, 40249619002, 40249619003, 40249619004, 40249619005, 40249619006, 40249619007, 40249619008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.040	0.10	08/15/22 11:44	
PCB-1221 (Aroclor 1221)	ug/L	<0.041	0.10	08/15/22 11:44	
PCB-1232 (Aroclor 1232)	ug/L	<0.043	0.10	08/15/22 11:44	
PCB-1242 (Aroclor 1242)	ug/L	<0.043	0.10	08/15/22 11:44	
PCB-1248 (Aroclor 1248)	ug/L	<0.049	0.10	08/15/22 11:44	
PCB-1254 (Aroclor 1254)	ug/L	<0.041	0.10	08/15/22 11:44	
PCB-1260 (Aroclor 1260)	ug/L	<0.049	0.10	08/15/22 11:44	
Decachlorobiphenyl (S)	%.	90	30-133	08/15/22 11:44	
Tetrachloro-m-xylene (S)	%.	72	30-125	08/15/22 11:44	

LABORATORY CONTROL SAMPLE: 4417628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2	1.3	67	49-125	
PCB-1260 (Aroclor 1260)	ug/L	2	1.5	73	53-125	
Decachlorobiphenyl (S)	%.			81	30-133	
Tetrachloro-m-xylene (S)	%.			58	30-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4417629 4417630

Parameter	Units	40249619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	<0.040	2	2	1.6	1.5	79	79	30-125	1	30	
PCB-1260 (Aroclor 1260)	ug/L	<0.049	2	2	1.6	1.6	79	81	39-125	1	30	
Decachlorobiphenyl (S)	%.						72	83	30-133			
Tetrachloro-m-xylene (S)	%.						62	63	30-125			

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

Pace Analytical Services, LLC
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Green Bay, WI 54302
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QUALIFIERS

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 069638.00.073 WATERS
Pace Project No.: 40249619

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40249619001	**MW12**	EPA 3510C	834134	EPA 8082A	834485
40249619002	**MW9**	EPA 3510C	834134	EPA 8082A	834485
40249619003	**MW10**	EPA 3510C	834134	EPA 8082A	834485
40249619004	**MW13**	EPA 3510C	834134	EPA 8082A	834485
40249619005	**MW16**	EPA 3510C	834134	EPA 8082A	834485
40249619006	**MW17**	EPA 3510C	834134	EPA 8082A	834485
40249619007	**EQUIPMENT BLANK**	EPA 3510C	834134	EPA 8082A	834485
40249619008	**DUP GW**	EPA 3510C	834134	EPA 8082A	834485

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 40249619

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: SME

Address: 882 40th Street SE Grand Rapids, MI 49508

Report To: Aaron Lammers

Copy To: Megan Schaner

Billing Information: →

Email To: Megan.Schaner@sme-usa.com Aaron.Lammers@sme-usa.com

Site Collection Info/Address: 426 Cleveland St

Customer Project Name/Number: 069638.00.073

State: WI County/City: Sheboygan Falls Time Zone Collected: [ ]PT [ ]MT [✓]CT [ ]ET

Phone: 810 852 1094

Email: jacob.lindsay@sme-usa.com

Collected By (print): Jacob Lindsay

Collected By (signature): Jacob Lindsay

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____

Site/Facility ID #:

Purchase Order # :

Quote #:

Turnaround Date Required: Standard

Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [✓] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager:

Analyses: PGBS

Container Type: Plastic (P) or Glass (G)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type	Lab Sample # / Comments
MW12	GW		8/9/22	945				2	G	001
MS (MW12)	GW		8/9/22	945				2	G	001
MSD (MW12)	GW			945						001
MW9	GW			1050						002
MW10	GW			1200						003
MW13	GW			1245						004
MW16	GW			1325						005
MW17	GW			1405						006
Equipment Blank	GW			1420						007
DUP GW	GW									008

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: Samples to be analyzed at Minneapolis Lab

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: 0 oC
Cooler 1 Therm Corr. Factor: ___ oC
Cooler 1 Corrected Temp: 0 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Megan Schaner SME	8/10/22 0905	Thuya PM PMA	8/10/22 0905
Thuya PM PMA	8/10/22 1030	Pace	8/10/22 1030

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Sample Preservation Receipt Form

Client Name: SME Project # 40249619

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

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

	Glass							Plastic					Vials						Jars				General							
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	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act. pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001	6																															2.5 / 5 / 10
002	2																															2.5 / 5 / 10
003	2																															2.5 / 5 / 10
004	2																															2.5 / 5 / 10
005	2																															2.5 / 5 / 10
006	2																															2.5 / 5 / 10
007	2																															2.5 / 5 / 10
008	2																															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																	TP 8/10/22															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	

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40249619

40249619

Client Name: SME

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 - 188 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 2.5 /Corr: 3

Temp Blank Present: ☐ yes ☑ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 8/10/22 /Initials: TP

Labeled By Initials: PDV

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.
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 login

Internal Transfer Chain of Custody

WO# : 10620950

10620950

[x] Samples Pre-Logged into eCOC.

State Of Origin: WI

Cert. Needed: [x] Yes [ ] No

Workorder: 40249619 **Workorder Name:** 069638.00.073

Owner Received Date: 8/10/2022 Results Requested By: 8/24/2022

Report To

Tod Noltemeyer
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Subcontract To

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	8082 PCBs Standard EPA List	Requested Analysis	LAB USE ONLY
1	MW12	RQS	8/9/2022 09:45	40249619001	Water	3	X	DO MS/MSD on this sample	001
2	MW9	PS	8/9/2022 10:50	40249619002	Water	1	X		002
3	MW10	PS	8/9/2022 12:00	40249619003	Water	1	X		003
4	MW13	PS	8/9/2022 12:45	40249619004	Water	1	X		004
5	MW16	PS	8/9/2022 13:25	40249619005	Water	1	X		005
6	MW17	PS	8/9/2022 14:05	40249619006	Water	1	X		006
7	EQUIPMENT BLANK	PS	8/9/2022 14:20	40249619007	Water	1	X		007
8	DUP GW	PS	8/9/2022 00:00	40249619008	Water	1	X		008

Transfers	Released By	Date/Time	Received By	Date/Time
1	Thomas A Yoch	8/10/22 1700	PACE	8/11/22 13:00
2				
3				

Comments

Cooler Temperature on Receipt 2.7 °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.*

DC#_Title: ENV-FRM-MIN4-0150 v05_Sample Condition Upon Receipt (SCUR)

Effective Date: 04/12/2022

Sample Condition Upon Receipt

Client Name: PACE, WI

Project #:

WO# : 10620950

PM: FEP **Due Date: 08/24/22**

CLIENT: PASI-WI

Courier: ☐Fed Ex ☐UPS ☐USPS ☒Client ☐Pace ☐SpeeDee ☐Commercial

See Exceptions ☐ENV-FRM-MIN4-0142

Tracking Number:

Custody Seal on Cooler/Box Present? ☐Yes ☒No **Seals Intact?** ☐Yes ☒No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☐Bubble Wrap ☒Bubble Bags ☐None ☐Other: **Temp Blank?** ☒Yes ☐No

Thermometer: ☐T1(0461) ☒T2(1336) ☐T3(0459) ☐T4(0254) ☐T5(0489) ☐T6(0235) ☐T7 (0042) ☐01339252/1710 ☐122639816 ☐140792808

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

Did Samples Originate in West Virginia? ☐Yes ☒No **Were All Container Temps Taken?** ☐Yes ☐No ☒N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 2.7 °C

Correction Factor: TRUE **Cooler Temp Corrected w/temp blank:** 2.7 °C

Average Corrected Temp (no temp blank only): ____ °C ☐See Exceptions ENV-FRM-MIN4-0142 ☐1 Container

USDA Regulated Soil: (☒N/A, water sample/Other:)

Date/Initials of Person Examining Contents: JM 8/11/22

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☐No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

If Yes to either question, fill out a Regulated Soil Checklist ENV-FRM-MIN4-0154 and include with SCUR/COC paperwork.

Location (check one): ☐ Duluth ☒ Minneapolis ☐ Virginia

Chain of Custody Present and Filled Out?	☒Yes	☐No		
Chain of Custody Relinquished?	☒Yes	☐No		
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐N/A	
Samples Arrived within Hold Time?	☒Yes	☐No		
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		
Rush Turn Around Time Requested?	☐Yes	☒No		
Sufficient Volume?	☒Yes	☐No		
Correct Containers Used?	☒Yes	☐No		
-Pace Containers Used?	☒Yes	☐No		
Containers Intact?	☒Yes	☐No		
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒Water ☐Soil ☐Oil ☐Other-	☒Yes	☐No		
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐Yes	☐No	☒N/A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	
Headspace in Methyl Mercury Container?	☐Yes	☐No	☒N/A	
Extra labels present on soil VOA or WIDRO containers?	☐Yes	☐No	☒N/A	
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	
Trip Blank Present?	☐Yes	☐No	☒N/A	
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	

COMMENTS:

1.
2.
3.
4. If Fecal: ☐<8 hrs ☐>8hr, <24 hrs, ☐>24 hrs
5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other
6.
7.
8.
9.
10. Is sediment visible in the dissolved container? ☐Yes ☐No
11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ **ENV-FRM-MIN4-0142**
12. Sample #

☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate

Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐ **ENV-FRM-MIN4-0142**

Res. Chlorine	0-6 Roll	0-6 Strip	0-14 Strip

13. **See Exception** ☐ **ENV-FRM-MIN4-0140**
14. Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Date/Time: **Field Data Required?** ☐Yes ☒No

Comments/Resolution:

Project Manager Review: Date: 08/12/2022

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e.,, out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: JM 2

Qualtrax ID: 52742

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40249619

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: SME
Address: 882 40th Street SE, Grand Rapids, MI 49508
Report To: Aaron Lammers
Copy To: Megan Schaner
Customer Project Name/Number: 069638.00.073
Phone: 810 852 1094
Email: jacob.lindsay@sme-usa.com
Collected By (print): Jacob Lindsay
Collected By (signature):
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____

Billing Information:
Email To: Megan.Schaner@sme-usa.com, Aaron.Lammers@sme-usa.com
Site Collection Info/Address: 426 Cleveland St.
State: WI County/City: Sheboygan Falls Time Zone Collected: [ ]PT [ ]MT [✓]CT [ ]ET
Site/Facility ID #:
Purchase Order #:
Quote #:
Turnaround Date Required: Standard
Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
Compliance Monitoring? [ ] Yes [ ] No
DW PWS ID #:
DW Location Code:
Immediately Packed on Ice: [✓] Yes [ ] No
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: _____

Container Preservative Type **: U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager:

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: PCBs	Lab Profile/Line: Lab Sample # / Comments
MW12	GW		8/9/22	945				2	G	X	001
MS (MW12)	GW		8/9/22	945				2	G	X	001
MSD (MW12)	GW			945						X	001
MW9	GW			1050						X	002
MW10	GW			1200						X	003
MW13	GW			1245						X	004
MW16	GW			1325						X	005
MW17	GW			1405						X	006
Equipment Blank	GW			1420						X	007
DUP GW	GW									X	008

Lab Profile/Line:
Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____
LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: Samples to be analyzed at Minneapolis Lab

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
SME	8/10/22 0905	Pace	8/10/22 0905
Pace	8/10/22 1030	Pace	8/10/22 1030

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: 1 of: 1

Sample Preservation Receipt Form

Client Name: SME Project # 40249619

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

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

	Glass							Plastic					Vials						Jars				General								
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	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001	6																																2.5 / 5 / 10
002	2																																2.5 / 5 / 10
003	2																																2.5 / 5 / 10
004	2																																2.5 / 5 / 10
005	2																																2.5 / 5 / 10
006	2																																2.5 / 5 / 10
007	2																																2.5 / 5 / 10
008	2																																2.5 / 5 / 10
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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

8/10/22

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	

DC#_Title: ENV-FRM-GBAY-0014 v02_SCUR
Revision: 3 | Effective Date: | Issued by: Green Bay

Sample Condition Upon Receipt Form (SCUR)

Client Name: SME

Project #:

WO# : 40249619

40249619

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 - 188 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 2.5 /Corr: 3

Temp Blank Present: ☐ yes ☑ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents: Date: 8/10/22 /Initials: TP

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.
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:
Person Contacted: Date/Time:
Comments/ Resolution:

If checked, see attached form for additional comments ☐

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