August 31, 2020

Wisconsin Department of Natural Resources
Attn: Mr. John Hunt
223 E. Steinfest Road
Antigo, WI 54409

Subject:

Summary Letter Report
Tomahawk Tissue/Georgia Pacific (LF #1878)
Tannery Road
Town of Bradley, Lincoln County, WI

Dear Mr. Hunt:

The purpose of this correspondence is to provide the results of the environmental sampling and inspection services conducted at the above referenced location. The site location is shown on the attached Figure 1. This project was funded by the Wisconsin Department of Natural Resources (WDNR) under PO#37000-0000012744.

BACKGROUND

REI Engineering, Inc. (REI) submitted a proposal to prepare a site health and safety plan to ensure the safety of the personnel working on the property, conduct an inspection of the landfill cap using the WDNR Waste and Materials Management program closed landfill inspection form, conduct an inspection of the conditions of the monitoring network including ten (10) groundwater monitoring wells and one (1) piezometer, and complete two (2) groundwater sample events of the entire monitoring network. The site is a former one and a half (1.5) acre papermill sludge landfill located in the Town of Bradley, Lincoln County, Wisconsin. The landfill was abandoned in 1989 and no environmental sampling has been conducted at the site since 2006. REI was authorized to proceed with the proposed scope of work on October 15, 2019.

SUMMARY OF FIELDWORK

REI personnel mobilized to the site on October 30, 2019, to conduct an inspection of the landfill cap using the WDNR Waste and Materials Management program closed landfill inspection form. Prior to arriving on-site REI completed and submitted a site-specific health and safety plan to ensure the safety of the personnel working on the property. A copy of the health and safety plan is included as Attachment A. The landfill cap inspection resulted in the identification of the following issues:

- No gate at the entrance to be kept locked when authorized personnel not on site
- No sign posted at the entrance of the facility to indicate the landfill is closed including the landfill name, license number, penalty for unauthorized use, and any other pertinent information
- Access to the landfill is not restricted by use of gates, fencing, or other appropriate means

- All monitoring devices are not clearly and permanently labeled on the outside of the devices
- Permanent monitoring wells no longer being used to gather information are not properly abandoned

A copy of the completed landfill cap inspection form is included as Attachment B. REI personnel located, inspected, and photographed the ten (10) monitoring wells and one (1) piezometer prior to conducting groundwater sampling. An additional five (5) groundwater monitoring wells not indicated on the historic site map were also located. Many of the physical labels on the monitoring wells did not match with the indicated positions on the historic site map. REI communicated this to the WDNR project manager of the site in a phone call on October 30, 2019 and was instructed to sample the wells that were previously identified. Therefore, REI used the labels and locations indicated on the historic site map. Photographs of the ten (10) monitoring wells and one (1) piezometer are included in Attachment C.

REI personnel conducted groundwater sample events on October 30, 2019, and June 18, 2020. During the first sample event all monitoring well locks were cut and replaced with Masterlock brand locks with 2121 keys for future access. During both sample events, field parameters including pH, conductivity, and temperature were recorded. Groundwater samples were collected from the ten (10) monitoring wells and one (1) piezometer during both sample events and submitted for laboratory analysis to Pace Analytical Services, Inc., in Green Bay, Wisconsin, for the following parameters: Dioxin/Furans (MW3, MW4, and MW10 only), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) Metals, Total Hardness, Total Alkalinity, Total Chloride, Total Chemical Oxygen Demand (COD), Total Ammonia (as N), Total Nitrate (as N), and Total Sulfate.

GROUNDWATER ANALYTICAL RESULTS

A total of eleven (11) groundwater samples were collected during both sample events from the ten (10) monitoring wells and one (1) piezometer. Detections exceeding NR 140 Enforcement Standards for the analyzed parameters are summarized as follows:

- MW2 (10/30/19) – Vinyl Chloride (0.38J µg/L)
- MW2 (6/18/20) – Vinyl Chloride (0.68J µg/L)
- MW5 (6/18/20) – Vinyl Chloride (1.7J µg/L)
- MW6 (10/30/19) – Arsenic (10.2J µg/L)
- MW7 (10/30-19) – Lead (20.8 µg/L)
- MW9 (10/30/19) – Total Chromium (127 µg/L)

Detections exceeding NR 140 Preventive Action Limits for the analyzed parameters are summarized as follows:

- MW2 (10/30/19) – Cadmium (4.6J µg/L), Lead (6.7J µg/L)
- MW3 (6/18/20) – Naphthalene (47.2 µg/L)
- MW5 (10/30/19) – Cadmium (3.4J µg/L)
- MW6 (10/30/19) – Cadmium (2.6J µg/L)
- MW8 (10/30/19) – Cadmium (1.6J µg/L)

Most of these detections were flagged by the laboratory as J-qualifiers indicating the reported concentration was at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ). Groundwater analytical results are summarized in Tables 1 - 3. The complete laboratory analytical reports are included as Attachment D.

CONCLUSIONS AND RECOMMENDATIONS

REI completed the proposed scope of work including the preparation of a site health and safety plan, inspection of the landfill cap using the WDNR Waste and Materials Management program closed landfill inspection form, inspection of the conditions of the ten (10) groundwater monitoring wells and one (1) piezometer, and completion of two (2) groundwater sample events of the entire monitoring network at the former Tomahawk Tissue/Georgia Pacific landfill located in the Town of Bradley, Lincoln County, Wisconsin. Multiple exceedances of both NR 140 Enforcement Standards and NR 140 Preventive Action Limits were identified during both sample events. REI recommends the following:

- Removal of intermittent woody vegetation on the landfill cap. In addition, annual inspections to ensure woody vegetation does not re-establish.
- Installation of a locked gate at the entrance of the landfill to deter unauthorized personnel from entering.
- Installation of a sign at the entrance of the facility indicating the landfill is closed, the landfill name, license number, and penalty for unauthorized use.
- Addition of permanent and accurate labels on the outside of all monitoring devices.
- Abandonment of the five (5) undocumented wells (indicated on Figure 2 – Site Map).
- Annual sampling of the site to monitor groundwater conditions.

This completes the approved scope of work for this project. If you have any questions or to discuss further, please contact our office at (715) 675-9784 or electronically at klassa@reiengineering.com.

Sincerely,
REI Engineering, Inc.

Kenneth J. Lassa
Senior Consultant

Andrew R. Delforge, P.G.
Senior Hydrogeologist

Attachments:

Table 1 – Groundwater Analytical Results - VOCs
Table 2 – Groundwater Analytical Results – PAHs, Metals, Inorganics, Other, Field Parameters
Table 3 – Groundwater Analytical Results – Dioxins/Furans
Figure 1 – Vicinity Map
Figure 2 – Site Map
Attachment A – Health and Safety Plan
Attachment B – Landfill Inspection Form
Attachment C – Photographs
Attachment D – Laboratory Analytical Reports

Table 1
Groundwater Analytical Results - VOCs
Tomahawk Tissue/Georgia Pacific (LF #1878)
Town of Bradley, Lincoln Couty, WI

		Collected By-->	REI Engineering, Inc.																					
		Sample-->	MW1		MW2		MW3		MW4		MW4A		MW5		MW6		MW7		MW8		MW9		MW10	
		Date-->	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20
VOCs (µg/L)	**Enforcement Standard (ES)**	**Preventive Action Limit (PAL)**																						
Benzene	5	0.5	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Bromobenzene	--	--	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
Bromochloromethane	--	--	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Bromodichloromethane	0.6	0.06	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Bromoform	4.4	0.44	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bromomethane	10	1	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97
n-Butylbenzene	--	--	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	1.2J	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71
sec-Butylbenzene	--	--	<0.85	<0.85	<0.85	<0.85	1.2J	<0.85	1.2J	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85
tert-Butylbenzene	--	--	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon tetrachloride	5	0.5	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1	<0.17	<1.1
Chlorobenzene	--	--	<0.71	<0.71	<0.71	<0.71	10.9	15.7	7.7	10.7	<0.71	<0.71	<0.71	0.95J	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71
Chloroethane	400	80	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Chloroform	6	0.6	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Chloromethane	30	3	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
2-Chlorotoluene	--	--	<0.93	<0.93	<0.93	<0.93	6.1	5.4	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93	<0.93
4-Chlorotoluene	--	--	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76
1,2-Dibromo-3-chloropropane	0.2	0.02	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Dibromochloromethane	60	6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6
1,2-Dibromoethane (EDB)	0.05	0.005	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83
Dibromomethane	--	--	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94
1,2-Dichlorobenzene	600	60	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71
1,3-Dichlorobenzene	600	120	<0.63	<0.63	<0.63	<0.63	1.4J	1.2J	2.5	2.9	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63
1,4-Dichlorobenzene	75	15	<0.94	<0.94	<0.94	<0.94	7.4	6.6	9.9	13.8	<0.94	<0.94	<0.94	1.3J	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94
Dichlorodifluoromethane	1,000	200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	850	85	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27	<0.24	<0.27
1,2-Dichloroethane	5	0.5	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28
1,1-Dichloroethene	7	0.7	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
cis-1,2-Dichloroethene	70	7	<0.27	<0.27	<0.27	<0.27	0.40J	0.54J	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
trans-1,2-Dichloroethene	100	20	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46	<1.1	<0.46
1,2-Dichloropropane	5	0.5	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28
1,3-Dichloropropane	--	--	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83
2,2-Dichloropropane	--	--	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3
1,1-Dichloropropene	--	--	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54
cis-1,3-Dichloropropene	0.4	0.04	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6
trans-1,3-Dichloropropene	0.4	0.04	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
Diisopropyl ether	--	--	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Ethylbenzene	700	140	<0.22	<0.32	<0.22	<0.32	<0.22	3.2	<0.22	<0.32	<0.22	<0.32	<0.22	<0.32	<0.22	<0.32	<0.22	<0.32	<0.22	<0.32	<0.22	<0.32	<0.22	<0.32
Hexachloro-1,3-butadiene	--	--	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5	<1.2	<1.5
Isopropylbenzene (cumene)	--	--	<0.39	<1.7	<0.39	<1.7	1.1J	<1.7	1.4J	<1.7	<0.39	<1.7	<0.39	<1.7	1.2J	<1.7	<0.39	<1.7	<0.39	<1.7	<0.39	<1.7	<0.39	<1.7
p-Isopropyltoluene	--	--	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
Methylene Chloride	5	1	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58
Methyl-tert-butyl ether (MTBE)	60	12	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Naphthalene	100	10	<1.2	<1.2	<1.2	<1.2	4.5J	*47.2*	3.7J	3.1J	<1.2	<1.2	<1.2	<1.2	2.6J	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
n-Propylbenzene	--	--	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	1.4J	1.1J	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
Styrene	100	10	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0	<0.47	<3.0
1,1,1,2-Tetrachloroethane	70	7	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28
Tetrachloroethene (PCE)	5	0.5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Toluene	800	160	<0.17	<0.27	<0.17	<0.27	0.21J	4.4	0.20J	0.59J	<0.17	<0.27	<0.17	<0.27	<0.17	<0.27	<0.17	<0.27	<0.17	<0.27	<0.17	<0.27	<0.17	<0.27
1,2,3-Trichlorobenzene	--	--	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2	<0.63	<2.2
1,2,4-Trichlorobenzene	70	14	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95
1,1,1-Trichloroethane	200	40	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
1,1,2-Trichloroethane	5	0.5	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55
Trichloroethene (TCE)	5	0.5	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
Trichlorofluoromethane	--	--	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2,3-Trichloropropane	60	12	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59
Trimethylbenzenes (TMB)[1]	480	96	<1.71	<1.71	<1.71	<1.71	<1.71	3.04J	6.8	6.2	<1.71	<1.71	<1.71	<1.71	2.8	<1.71	<1.71	<1.71	<1.71	<1.71	<1.71	<1.71	<1.71	<1.71
Vinyl chloride	0.2	0.02	<0.17	<0.17	**0.38J**	**0.68J**	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	**1.7**	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Xylenes[2]	2,000	400	<0.73	<0.73	<0.73	<0.73	1.2	7.7	1.4	1.5	<0.73	<0.73	<0.73	<0.73	0.31J	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73

Notes:
[1] = NR140.10 Trimethylbenzene standard is for combined 1,2,4- and 1,3,5- isomers
[2] = NR140.10 Xylene standard is for combined m-, o-, and p- isomers
µg/L - Parts Per Billion (ppb)
< = Concentration Below Laboratory Detection Limit
- = Not Sampled
-- = No Standard/Not Applicable
J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ)

Bold	= Exceeds NR140.10 Enforcement Standard
Italic	= Exceeds NR140.10 Preventive Action Limit

Groundwater Analytical Table 2
Groundwater Analytical Results - PAHs, Metals, Inorganics, Other, Field Parameters
Tomahawk Tissue/Georgia Pacific (LF #1878)
Town of Bradley, Lincoln Couty, WI

Collected By-->			REI Engineering, Inc.																				
Sample-->			MW1		MW2		MW3		MW4		MW4A		MW5		MW6		MW7		MW8		MW9		MW10	
Date-->			10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20
PAHs (µg/L)	**Enforcement Standard (ES)**	**Preventive Action Limit (PAL)**																					
Acenaphthene	--	--	<0.0055	<0.0063	<0.0056	<0.0055	0.0091J	0.011J	0.033	0.0085J	<0.0056	<0.0056	<0.0055	<0.0054	<0.0056	0.0090J	<0.0055	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0058	<0.0057
Acenapthylene	--	--	<0.0045	<0.0051	<0.0046	<0.045	<0.0047	<0.0047	0.017J	<0.0045	<0.0046	<0.0046	<0.0045	<0.0044	<0.0046	<0.0047	<0.0045	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0047	<0.0047
Anthracene	3,000	600	<0.0095	<0.011	<0.0097	<0.0095	<0.0098	<0.0098	<0.0099	<0.0094	<0.0096	<0.0096	<0.0095	<0.0093	<0.0096	<0.0098	<0.0095	<0.0097	<0.0097	<0.0096	<0.0096	<0.0096	<0.010	<0.0098
Benzo (a) Anthracene	--	--	<0.0069	<0.0078	<0.0070	<0.0069	<0.0071	0.020J	0.0090J	<0.0068	0.0083J	<0.0069	<0.0069	<0.0067	<0.0069	<0.0071	0.026J	<0.0070	<0.0070	<0.0069	<0.0069	<0.0069	<0.0072	<0.0071
Benzo (a) Pyrene	0.2	0.02	<0.0096	<0.011	<0.0098	<0.0096	<0.0098	0.028J	0.014J	<0.0095	<0.0097	<0.0097	<0.0096	<0.0094	<0.0097	<0.0098	0.042J	<0.0098	<0.0098	<0.0097	<0.0097	<0.0097	<0.010	<0.0098
Benzo (b) Fluoranthene	0.2	0.02	<0.0052	<0.0059	<0.0053	<0.0052	<0.0054	0.070	0.025J	<0.0052	0.0059J	<0.0053	<0.0052	<0.0051	<0.0053	<0.0054	0.051	<0.0053	<0.0053	0.0090J	<0.0053	<0.0053	<0.0055	<0.0054
Benzo (g,h,i) Perylene	--	--	<0.0062	<0.0070	<0.0063	<0.0062	<0.0063	0.040	0.018J	<0.0061	<0.0062	<0.0062	<0.0062	<0.0061	<0.0062	<0.0063	0.042	<0.0063	<0.0063	0.0096J	<0.0062	<0.0062	<0.0065	<0.0063
Benzo (k) Fluoranthene	--	--	<0.0069	<0.0078	<0.0070	<0.0069	<0.0071	0.033J	0.016J	<0.0068	<0.0069	<0.0069	<0.0069	<0.0067	<0.0069	<0.0071	0.022J	<0.0070	<0.0070	0.013J	<0.0069	<0.0069	<0.0072	<0.0071
Chrysene	0.2	0.02	<0.012	<0.013	<0.012	<0.012	<0.012	0.047J	0.016J	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.040J	<0.012	<0.012	0.017J	<0.012	<0.012	<0.012	<0.012
Dibenzo (a,h) Anthracene	--	--	<0.0091	<0.010	<0.0093	<0.0091	<0.0094	<0.0094	<0.0095	<0.0090	<0.0092	<0.0092	<0.0091	<0.0089	<0.0092	<0.0094	<0.0091	<0.0093	<0.0093	<0.0092	<0.0092	<0.0092	<0.0095	<0.0094
Fluoranthene	400	80	<0.0097	<0.011	<0.0099	<0.0097	<0.010	0.025J	<0.010	<0.0096	0.015J	<0.0098	<0.0097	<0.0095	<0.0098	<0.010	0.035J	<0.0099	<0.0099	<0.0098	<0.0098	<0.0098	<0.010	<0.010
Fluorene	400	80	<0.0072	<0.0082	<0.0074	<0.0072	0.016J	0.013J	0.13	0.021J	0.0077J	<0.0073	<0.0072	0.0082J	<0.0073	<0.013J	<0.0072	<0.0074	<0.0074	<0.0073	<0.0073	<0.0073	<0.0076	<0.0074
Indeno (1,2,3-cd) Pyrene	--	--	<0.016	<0.018	<0.016	<0.016	<0.016	0.030J	<0.017	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	0.029J	<0.016	<0.016	<0.016	<0.016	<0.016	<0.017	<0.016
1-Methyl Naphthalene	--	--	<0.0054	0.0074J	0.0092J	<0.0054	0.061	0.53	3.2	0.41	0.0057J	0.013J	<0.0054	0.0064J	<0.0054	0.15	0.0057J	<0.0055	0.0079J	<0.0054	<0.0054	<0.0054	0.0063J	0.0055
2-Methyl Naphthalene	--	--	<0.0045	0.012J	0.0071J	<0.0045	0.091	0.031	4.5	0.52	0.0085J	0.0070J	<0.0045	0.024	<0.0045	0.11	<0.0045	<0.0045	0.0077J	0.0045J	<0.0045	<0.0045	0.0051J	0.0046
Naphthalene	100	10	<0.017	<0.019	<0.017	<0.017	1.3	14.1	2.5	0.27	<0.017	<0.017	<0.017	<0.016	<0.017	0.42	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
Phenanthrene	--	--	<0.013	<0.014	0.013J	<0.013	<0.013	<0.013	<0.013	<0.012	<0.013	<0.013	<0.013	<0.012	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Pyrene	250	50	<0.0094	<0.0079	0.013J	<0.0070	<0.0071	0.016J	0.010J	<0.0069	0.011J	0.0098J	0.010J	<0.0068	<0.0070	<0.0071	0.047	<0.0071	<0.0071	<0.0070	<0.0070	<0.0070	<0.0073	<0.0071
Metals (µg/L)																								
Arsenic (As)[1]	10	1	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	**10.2J**	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3
Barium (Ba)[1]	2,000	400	9.7	37.6	30.0	28.0	230	358	78.6	93.1	98.4	50.8	54.6	53.7	26.6	22.8	18.8	<8.9	23.7	8.0	27.9	37.2	97.6	34.5
Cadmium (Cd)[1]	5	0.5	<1.3	<1.3	*4.6J*	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	*3.4J*	1.6J	*2.9J*	<1.3	<1.3	<1.3	*1.6J*	<1.3	<1.3	<1.3	<1.3	<1.3
Total Chromium (Cr)[1]	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	2.7J	5.9J	3.0J	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	8.6J	<2.5	3.8J	<2.5	**127**	5.9J	<5.1	<2.5
Copper (Cu)[1]	1,300	130	-	7.5J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (Pb)[1]	15	1.5	<5.9	<5.9	*6.7J*	9.5J	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	11.6J	**20.8**	12.0J	<5.9	<5.9	<5.9	<5.9	<11.8	<5.9
Selenium (Se)[1]	50	10	<12.2	<12.2	<12.2	<12.2	<12.2	<	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2
Silver (Ag)[1]	50	10	<3.2	<3.2	<3.2	<3.2	<3.2	<12.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
Mercury (Hg)[1]	2	0.2	<0.084	<0.084	<0.084	<0.084	<0.084	<3.2	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084
Inorganics (mg/L)																								
Ammonia (as N)[1]	9.7	0.97	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	0.28J	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	0.48J	<0.26
Chloride[2]	250	125	0.76J	<2.2	<2.5	<2.2	8.6J	7.9J	5.1J	4.0J	3.8J	2.0J	2.8J	2.7J	3.3J	2.5J	<2.5	0.77J	<2.5	0.76J	<2.5	<2.2	<2.5	<2.2
Nitrate (as N)[1]	10	2	<0.075	<0.22	1.2	<0.22	<0.38	<0.22	<0.38	<0.22	<0.38	<0.044	0.70J	0.70J	<0.38	<0.22	<0.38	<0.044	<0.38	0.048J	<0.38	<0.22	<0.38	<0.22
Sulfate[2]	250	125	6.3	5.7J	<5.0	3.3J	<5.0	<2.2	<5.0	5.1J	5.9J	6.5	<5.0	3.1J	<5.0	<2.2	9.6J	7.5	<5.0	1.6J	14.7J	10.2	<5.0	7.1J
Other																								
Total Hardness (µg/L)	--	--	21,200	24,200	50,400	40,200	382,000	531,000	69,500	128,000	195,000	197,000	75,600	159,000	125,000	107,000	72,100	37,400	12,000	6,710	28,200	19,200	334,000	77,800
Alkalinity (Total as CaCO3)(mg/L)	--	--	23.0J	17.8J	52.5	45.6	424	569	150	84.2	215	207	200	197	138	89.8	127	30.7	<7.0	<7.4	24.3	<7.4	324	57.2
Chemical Oxygen Demand (mg/L)	--	--	<14.7	<15.5	41.9J	39.6J	80.7	119	65.6	29.0J	78.1	46.2J	44.1J	37.6J	63.5	39.8J	130	20.4J	158	<14.7	48.4J	137	145	33.3J
Field Parameters																								
pH	--	--	6.17	6.37	6.36	6.13	6.20	6.49	5.81	6.15	6.91	7.12	6.65	6.77	6.89	7.01	6.44	6.26	5.85	6.36	5.40	5.51	6.23	5.95
Specific Conductivity (µS/cm)	--	--	47.60	50.80	117.2	111.8	502.8	15.85	110.9	87.80	402.2	412.5	145.7	322.0	186.9	216.9	64.10	63.60	28.30	17.70	69.70	40.70	800.0	163.5
Temperature (°F)	--	--	48.1	45.9	47.7	47.1	47.3	47.9	49.9	47.0	49.6	46.1	48.5	51.5	46	49.9	47.9	51.4	49	50.9	51.1	49.4	49.8	47.2

Notes:
µg/L - Parts Per Billion (ppb)
mg/L - Parts Per Million (ppm)
< = Concentration Below Laboratory Detection Limit
- = Not Sampled
-- = No Standard/Not Applicable
J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ)
[1] = NR140 Table 1 Public Health Groundwater Quality Standard
[2] = NR140 Table 2 Public Welfare Groundwater Quality Standard

Bold	= Exceeds Enforcement Standard
Italic	= Exceeds Preventive Action Limit

Table 3
Groundwtaer Analytical Results - Dioxins/Furans
Tomahawk Tissue/Georgia Pacific (#1878)
Town of Bradley, Lincoln County, WI

			Collected By-->	REI Engineering, Inc.					
			Sample -->	MW3		MW4		MW10	
			Date-->	10/30/19	6/18/20	10/30/19	6/18/20	10/30/19	6/18/20
Dioxin Congeners (pg/L)	**CAS Number**	**Enforcement Standard (ES)**	**Preventive Action Limit (PAL)**						
2,3,7,8-TCDD	1746-01-6	30	3	<10	<9.6	<10	<9.8	<10	<9.7
1,2,3,7,8-PeCDD	36088-22-9	--	--	<50	<48	<50	<49	<50	<49
1,2,3,4,7,8-HxCDD	39227-28-6	--	--	<50	<48	<50	<49	<50	<49
1,2,3,6,7,8-HxCDD	57653-85-7	--	--	<50	<48	<50	<49	<50	<49
1,2,3,7,8,9-HxCDD	19408-74-3	--	--	<50	<48	<50	<49	<50	<49
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	--	<50	<48	<50	<49	<50	<49
OCDD	3268-87-9	--	--	<100	<96	<100	<98	<100	<97
Total TCDD	--	--	--	<10	<9.6	<10	<9.8	<10	<9.7
Total PeCDD	--	--	--	<50	<48	<50	<49	<50	<49
Total HxCDD	--	--	--	<50	<48	<50	<49	<50	<49
Total HpCDD	--	--	--	<50	<48	<50	<49	<50	<49
Furan Congeners (pg/L)									
2,3,7,8-TCDF	51207-31-9	--	--	<10	<9.6	<10	<9.8	<10	<9.7
1,2,3,7,8-PeCDF	57117-41-6	--	--	<50	<48	<50	<49	<50	<49
2,3,4,7,8-PeCDF	57117-31-4	--	--	<50	<48	<50	<49	<50	<49
1,2,3,4,7,8-HxCDF	70648-26-9	--	--	<50	<48	<50	<49	<50	<49
1,2,3,6,7,8-HxCDF	57117-44-9	--	--	<50	<48	<50	<49	<50	<49
2,3,4,6,7,8-HxCDF	60851-34-5	--	--	<50	<48	<50	<49	<50	<49
1,2,3,7,8,9-HxCDF	72918-21-9	--	--	<50	<48	<50	<49	<50	<49
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	--	<50	<48	<50	<49	<50	<49
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	--	<50	<48	<50	<48	<50	<49
OCDF	39001-02-0	--	--	<100	<96	<100	<98	<100	<97
Total TCDF	--	--	--	<10	<9.6	<10	<9.8	<10	<9.7
Total PeCDF	--	--	--	<50	<48	<50	<49	<50	<49
Total HxCDF	--	--	--	<50	<48	<50	<49	<50	<49
Total HpCDF	--	--	--	<50	<48	57	55	<50	<49

Notes:

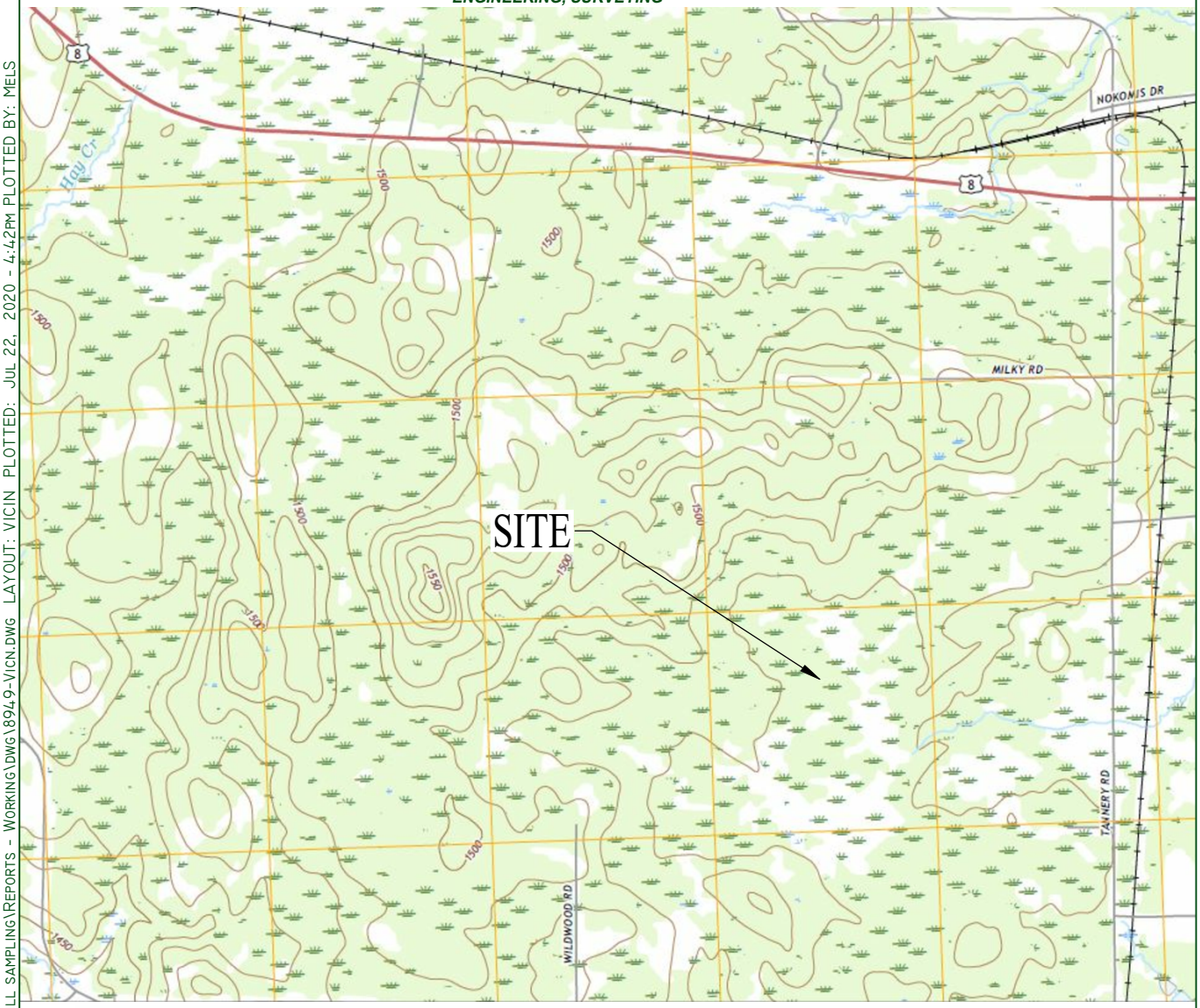
pg/L - Parts Per Trillion (ppt)

< = Concentration Below Laboratory Detection Limit
- = Not Sampled
- - = No Standard/Not Applicable
J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ)
[1] = NR140 Table 1 Public Health Groundwater Quality Standard
[2] = NR140 Table 2 Public Welfare Groundwater Quality Standard

Bold	= Exceeds Enforcement Standard
Italic	= Exceeds Preventive Action Limit

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
HPCDD: Heptachlorodibenzo-p-dioxin
OCDD: Octachlorodibenzo-p-dioxin
TCDF: Tetrachlorodibenzofuran
PeCDF: Pentachlorodibenzofuran
HxCDF: Hexachlorodibenzofuran
HPCDF: Heptachlorodibenzofuran
OCDF: Octachlorodibenzofuran

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING



SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

FEET

ORTH
EET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

MN
GN
2°50'
50 MILS
2°1'
36 MILS

UTM GRID AND 2019 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

BRADLEY, WI
2018

WISCONSIN

QUADRANGLE LOCATION

REI ENGINEERING, INC.

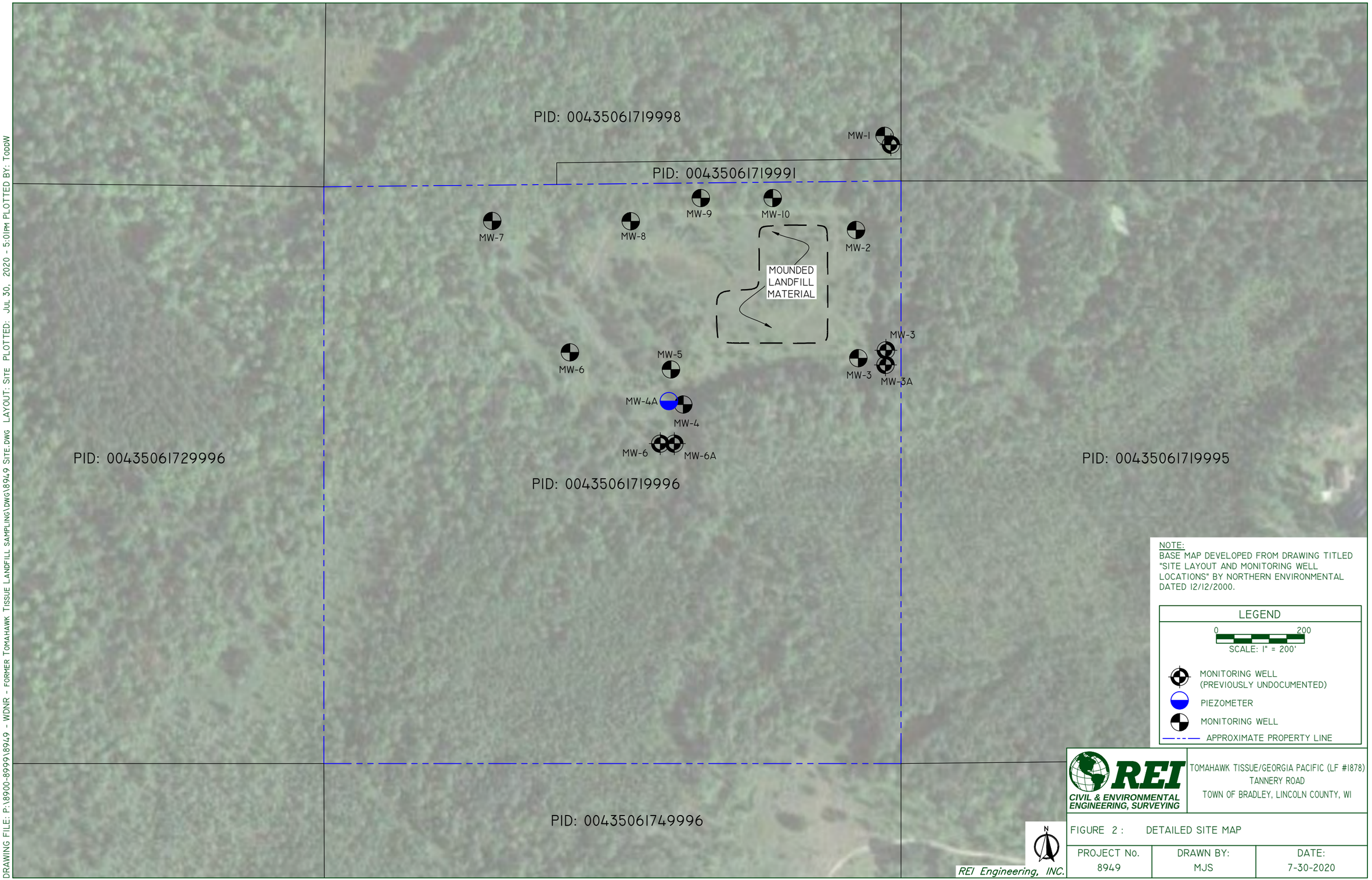
TOMAHAWK TISSUE/GEORGIA PACIFIC (LF #1878)
TANNERY ROAD
TOWN OF BRADLEY, LINCOLN COUNTY, WI

N

FIGURE 1 : VICINITY MAP

PROJECT NO.	DRAWN BY:	DATE:
8949	MJS	7-22-2020

DRAWING FILE: P:\8900-8999\8949 - WDNR - FORMER TOMAHAWK TISSUE LANDFILL SAMPLING\REPORTS - WORKING\DWG\8949-VICN.DWG LAYOUT: VICIN PLOTTED: JUL 22, 2020 - 4:42PM PLOTTED BY: MELS



NOTE:
BASE MAP DEVELOPED FROM DRAWING TITLED "SITE LAYOUT AND MONITORING WELL LOCATIONS" BY NORTHERN ENVIRONMENTAL DATED 12/12/2000.

LEGEND

0 200
SCALE: 1" = 200'

- MONITORING WELL (PREVIOUSLY UNDOCUMENTED)
- PIEZOMETER
- MONITORING WELL
- APPROXIMATE PROPERTY LINE

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

TOMAHAWK TISSUE/GEORGIA PACIFIC (LF #1878)
TANNERY ROAD
TOWN OF BRADLEY, LINCOLN COUNTY, WI

FIGURE 2 : DETAILED SITE MAP

PROJECT No.	DRAWN BY:	DATE:
8949	MJS	7-30-2020

REI Engineering, INC.

DRAWING FILE: P:\8900-8999\8949 - WDNR - FORMER TOMAHAWK TISSUE LANDFILL SAMPLING\DWG\8949 SITE.DWG LAYOUT: SITE PLOTTED: JUL 30, 2020 - 5:01PM PLOTTED BY: TODDW

ATTACHMENT A

HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN

Wisconsin Department of Natural Resources
Tomahawk Tissue/Georgia Pacific LF #1878
Town of Bradley,Tomahawk WI

PROJECT SITE NAME
Tomahawk Tissue/Georgia Pacific LF #1878

PROJECT LOCATION
SW 1/4, NE 1/4, Section 17, T35N, R6E

October 21, 2019

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

Wisconsin Department of Natural Resources
Solid Waste Clean upTomahawk Tissue/Georgia Pacific LF #1878
Town of Bradley, Tomahawk WI

TABLE OF CONTENTS

Wisconsin Department of Natural Resources
Delta Landfill - Solid Waste Clean Up
HEALTH AND SAFETY PLAN

A. BACKGROUND	
SITE NAME Tomahwk Tissue/Georgia Pacific LF #1878	**Project Type** Perform landfill inspection, well insepection and 2 rounds of groundwater monitoring.
LOCATION SW 1/4, NE 1/4, Section 17, T35N, R6E, Town of Bradley, Lincoln County, WI	Tannery Road Town of Bradley Tomahawk, WI 54487
SITE HISTORY: Former 1.5 acre papermill sludge landfill that was abandoned in 1989.	
SCOPE OF PROJECT: Complete inspection of the landfill cap using the DNR Waste and Materials Management Program, Closed Landfill Inspection Form. Locate, identify and conduct two (2) groundwater monitoring events in all wells.	
SITE SAFETY COORDINATOR	Samantha Schroeder
PROJECT MANAGER	Ken Lassa
PROJECT ENVIRONMENTAL CONSULTANT	REI ENGINEERING, INC.
CONSULTANT ADDRESS/ CONTACT INFO.	4080 N. 20TH AVE, WAUSAU, WI 54401 715-675-9784

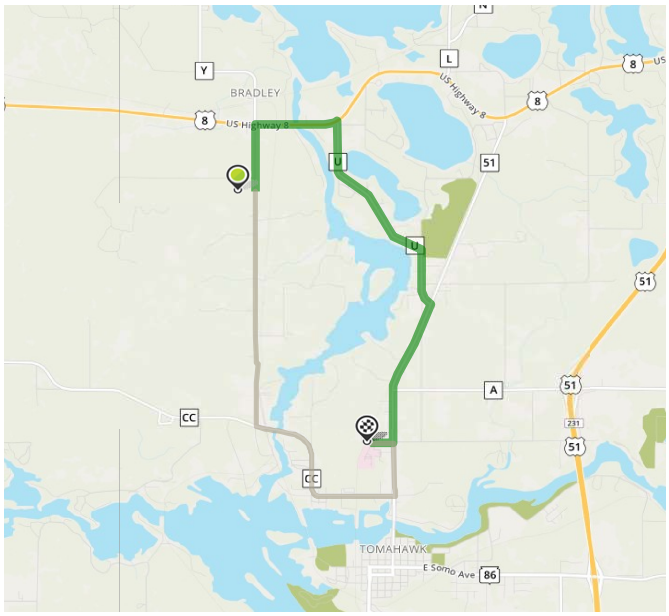
B. EMERGENCY REFERENCES (POST ON SITE)	
SITE	Tomahawk Tissue/Georgia Pacific LF #1878
DESIGNATED HOSPITAL	**Ascension Sacred Heart** **401 W Mohawk Drive** **Tomahawk, WI 54487**

EMERGENCY RESOURCES	TELEPHONE NUMBERS/CHANNEL
AMBULANCE	911
HOSPITAL EMERGENCY CENTER	911 OR 715-453-7700
POISON CONTROL CENTER	800-222-1222
BAYFIELD COUNTY SHERIFF'S DEPARTMENT	911
IRON RIVER FIRE DEPARTMENT	911

EMERGENCY CONTACTS	
PROJECT MANAGER	Ken Lassa
OFFICE	(715) 675-9784
MOBILE	(715) 574-3430
PROJECT SAFETY MANAGER	Samantha Schroeder
OFFICE	(715) 675-9784
MOBILE	(715) 574-1582
NATIONAL SPILL RESPONSE CENTER	(800) 424-8802

B1. HOSPITAL ROUTE

ROUTE TO THE HOSPITAL - Ascension Sacred Heart, 401 W. Mohawk Drive, Tomahawk, WI



YOUR TRIP TO:

401 W Mohawk Dr

mapquest

8 MIN | 5.1 MI

Est. fuel cost: $0.54

Trip time based on traffic conditions as of 8:46 AM on October 17, 2019. Current Traffic: Light

Print a full health report of your car with HUM vehicle diagnostics **(800) 906-2501**

Directions to Ascension Sacred Heart Hospital, 401 West Mohawk Drive Suite 100, Tomahawk, wi

1. Start out going **north** on Tannery Rd toward Milky Rd.

Then 0.63 miles — 0.63 total miles

2. Take the 1st **right** onto US Highway 8/US-8 E.

US Highway 8 is 0.4 miles past Milky Rd.

If you are on County Road Y and reach Nokomis Dr you've gone about 0.2 miles too far.

Then 0.75 miles — 1.37 total miles

3. Take the 3rd **right** onto County Highway U/County Hwy-U. Continue to follow County Hwy-U.

County Hwy-U is 0.2 miles past Swanson Rd.

If you reach Essex Rd you've gone about 0.4 miles too far.

Then 2.12 miles — 3.49 total miles

4. Turn **right** onto N 4Th St/US-51 Bus S.

Then 1.38 miles — 4.87 total miles

5. Turn **right** onto W Mohawk Dr.

W Mohawk Dr is 0.2 miles past Harley Davidson Rd.

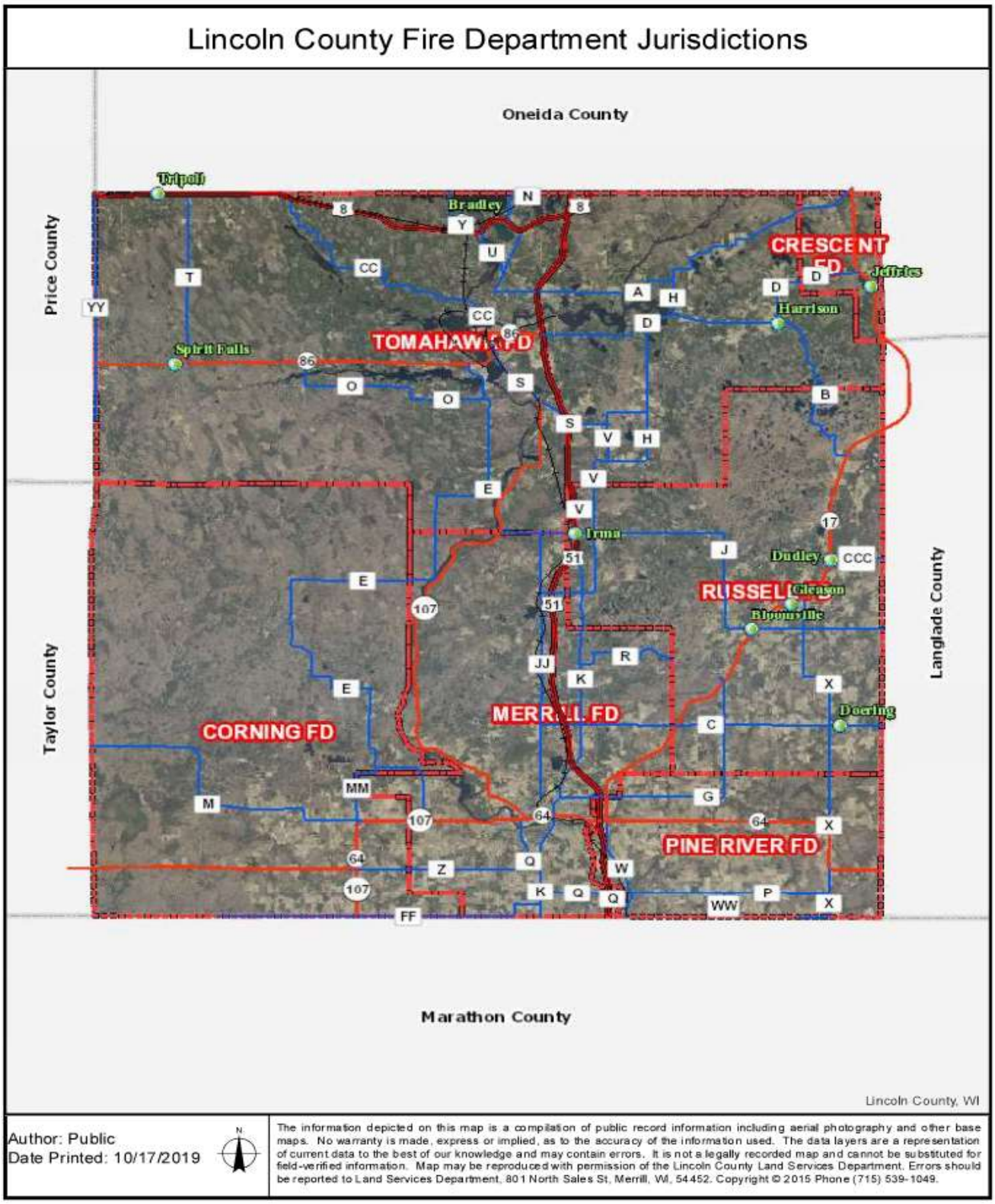
If you reach Swan Ave you've gone a little too far.

Then 0.21 miles — 5.08 total miles

6. 401 W Mohawk Dr, Tomahawk, WI 54487-2218, 401 W MOHAWK DR is on the **left**.

Your destination is 0.1 miles past Menominee St.

If you reach the end of W Mohawk Dr you've gone about 0.2 miles too far.


Lincoln County Fire Department Jurisdictions
Oneida County
Price County
Taylor County
Langlade County
Marathon County
Tripoli
Bradley
Spirit Falls
Harrison
Jeffries
Irma
Dudley
Gleason
Bloomville
Doering
CRESCENT FD
TOMAHAWK FD
RUSSELL FD
MERRILL FD
CORNING FD
PINE RIVER FD
Lincoln County, WI
Author: Public
Date Printed: 10/17/2019
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C. SITE CHARACTERIZATION

SITE NAME Tomahawk Tissue/Georgia Pacific LF #1878

SITE HISTORY

The Tomahawk Tissue/Georgia Pacific LF #1878 site is an inactive papermill sludge landfill of approximately 1.5 acres. In 1989 Tomahawk Tissue Corporation dissolved in bankruptcy and the landfill was abandoned. In 1997 the Department of Natural Resource (DNR) capped the landfill. There are 11 groundwater monitoring wells on the site. No work has been performed at the site since 2006.

SCOPE OF WORK

REI will prepare and submit a site safety plan for the safety of personnel conducting work on the property. REI will obtain acces to the site through communications with adjacent landowners. REI will complete the inspection of the landfill cap using the WDNR Waste and Materials Management program closed landfill inspection form. Included with this will be an inspection of the condition of each well including photographs. REI has assumed all locks will be inoperable and will need to be cutoff. Each protective cap will be secured with a new keyed alike lock. REI will also conduct (2) groundwater monitoring events for eleven (11) groundwater monitoring wells. REI understand that no site work has been conducted since 2006 and some of the wells were not found by the WDNR project manager in a recent visit. Upon finding each of the wells, REI will photograph condition, cut off lock to access and record water level in each well. Field paramenters including pH, conductivity and temperature will also be collected. Sample will be collected and submitted for laboratory analysis of the following paramenters: Dioxin/furans (wells MW3, MW4 and MW10 only), VOCs, PAHS, RCRA Metals, Total Hardness, Total Alkalinity, Total Chloride, Total COD, Total Ammonia N, Total Nitrated Nitrogen and Total Sulfate. Upon Completion of the 2nd round of groundwater samples, REI will prepare a summary report describing methods and procedures, finding from the cap inspections and groundwater monitoring events. The report will include figures identifying the site location, locations of the wells include tabulated analytical results and laboratory analytical reports.

SITE REGULATORY STATUS

Wisconsin Department of Natural Resources Bureau of Remediation and Redevelopment standards

OSHA 1910 Occupational Health and Safety Standards

CHARACTERIZATION OF POTENTIAL WASTES

No waste will be generated from this scope of work

SITE FEATURES AND HAZARDS: Site is partly wooded with some open areas and some trails and an access road. Potential for severe weather conditions while onsite.

HISTORY OF PUBLIC COMPLAINT AND AGENCY ACTIONS: N/A

D. HEALTH AND SAFETY EVALUATION - PHYSICAL /CONSTRUCTION HAZARDS OF CONCERN

HAZARD	APPLICABILITY	TASK #	PROTECTION PROCEDURE
Noise		all	Hearing protection should be worn if >85dB
Heat - Ambient Air	X	all	Frequent Intake of fluids:rest if temp >100 degrees F
Heat - Hot process - Steam			Ensure guarding and personal protection from burns
Heat - Hot process - Incineration			Ensure guarding and personal protection from burns
Cold	X	all	Warm clothing if symptoms develop - go to warm area
Rain	X	all	Wear rain gear, watch footing on wet surfaces
Snow			Warm clothing - watch footing on slippery surfaces
Electrical Storms	X	all	Discontinue operations
Other severe weather	X	all	Discontinue operations, head to nearest available shelter
Confined Space Entry			Follow confined space permitting and entry procedures
Hot work - Welding/Cutting/Brazing			Comply with OSHA requirements
Heavy lifting/moving	X	all	Utilize proper lifting techniques
Rough terrain	X	all	Watch footing
Housekeeping	X	all	Maintain order on jobsite
Structural Integrity			Have integrity of structures verified before work begins
Neighborhood	X	all	Awareness of area: comply with contingency/ER Plans
Remote area	X	all	Buddy system; comply with contingency /ER plans
Compressed gases			Not applicable
Using boats			Have flotation devices and rescue equipment available
Working over water			Have flotation devices and rescue equipment available
Traffic			Obey all traffic regulations: maintain awareness
Explosives			Training and proper handling/storage
Heavy Equipment operation			Only licensed operators; equipment inspections required
Lifting Equipment operation			Only licensed operators; equipment inspections required
Cranes			Only licensed operators; equipment inspections required
Manlifts			Only licensed operators; equipment inspections required
Working at high elevations			Utilize appropriate fall protection
Ladders			Verify integrity of ladders; support and tie off
Scaffolding			Verify integrity of scaffolding; periodic training required
Excavation/Trenching			Comply with OSHA requirements; trench boxes, sloping of walls
Materials handling			Follow use and storage instructions: consult MSDS
Hazardous materials use/ storage			Consult MSDS
Flammable liquids/ gases			Consult MSDS
Oxidizers			Consult MSDS
Corrosives			Consult MSDS
Demolition			Awareness of specific exposures; hard hat, steel toes
Utilities - underground			Have located before any work commences
Utilities - overhead			Keep objects more that 20 feet from power lines
Electrical - general			Comply with OSHA regulations
Electrical - high voltage			Comply with OSHA regulations
Hand tools	X	all	Use appropriate tools for task
Powered hand tools	X	all	Follow operating instructions
Extension cords			Use appropriate cords, check for fraying & grounding
High pressure water			follow operating procedures
Personal Protective Equipment (PPE)	X	all	Use appropriate PPE for task
Use of ATVs to access site	X	all	Use safe driving practices
Other			
Other			

TASK #	ACTIVITIES
TASK 1	Prepare and submit safety plan
TASK 2	Complete inspection of landfill cap using Waste and Materials Management inspection form
TASK 3	Locate, photograph, and record water levels and field parameters
TASK 4	Conduct two (2) gorundwater sampling events for eleven (11) monitoring wells
TASK 5	Complete summary report after 2nd round of groundwater sampling

E. TRAINING REQUIREMENTS

THIS FORM SHALL BE COMPLETED BY REI, PERSONNEL PRIOR TO COMMENCEMENT OF ACTIVITIES AT WORKSITE
IT SHALL BE KEPT AT THE SITE FOR THE DURATION OF ACTIVITIES. THIS FORM MUST BE DELIVERED TO THE ATTENDING PHYSICIAN WHEN MEDICAL ASSISTANCE IS REQUIRED.
ALL REI PERSONNEL MUST COMPLETE AT LEAST 40 HOURS OF HEALTH AND SAFETY TRAINING OR BE DIRECLTY SUPERVISED FOR SITE OPERATIONS AS REQUIRED BY OSHA STANDARD 29 CFR 1910.120. THE TRAINING MUST BE UPDATED ON AN ANNUAL BASIS (EIGHT HOUR). THE DATES OF CERTIFICATION FOR REI ON-SITE PERSONNEL ARE RECORDED BELOW OR ARE KEPT ON FILE AT COMPANY HEADQUARTERS.

CERTIFICATION OF HEALTH AND SAFETY TRAINING

NAME	DATE OF LAST REFRESHER COURSE
Ken Lassa	December 17, 2018
Keith Klebenow	December 17, 2018
Paul Bushar	December 17, 2018
Matt Michalski	December 17, 2018
Andy Delforge	December 17, 2018
Brian Bailey	December 17, 2018

Copies of OSHA 8-hour refresher training as required by OSHA 29 CFR 1910.120 (e) are attached.

CONFINED SPACE ENTRY (N/A)

REI PERSONNEL WHO ARE ENGAGED IN ACTIVITIES AT HAZARDOUS WASTE SITES ARE PROHIBITED FROM ENTERING CONFINED SPACES (E.G., TRENCHES, HOLES, PROCESS VESSELS, STORAGE TANKS, ETC.).

F. ENVIRONMENTAL MONITORING

NO ENVIRONMENTAL MONITORING IS PLANNED OR REQUIRED. CALIBRATION AND MAINTENANCE OF MONITORING EQUIPMENT SHALL BE PERFORMED IN ACCORDANCE WITH REI, INC., STANDARD OPERATING PROCEDURES IF EQUIPMENT IS REQUIRED AND USED.

ENVIRONMENTAL MONITORING EQUIPMENT (N/A)

TYPE OF EQUIPMENT	SERIAL NUMBER	STANDARD OPERATING PROCEDURES	DATE CALIBRATED

E1. TEAM REFRESHER CERTIFICATIONS

CERTIFICATE
of TRAINING

This certifies that

PAUL BUSHAR

Has successfully completed the training program requirement for

8 HOUR HAZWOPER REFRESHER

Topics Covered: Air monitors (4-gas, PID, 6-gas) Operation, calibration/bump, Toxicology, Chemical identification (DOTERG/ NIOSH/WISER/SDS), Scenarios with spills, Product identification, PPE, Respiratory, Containment, control, cleanup & Decontamination.
Written Examination, hands on and Testing.

Ex Environmental, Inc
648 Commerce Drive. PO Box 222
Hudson, WI 54016

December 17 , 2018
DATE

WWW.EXENVIRONMENTAL.COM

JAY PENFIELD, INSTRUCTOR

CERTIFICATE
of TRAINING

This certifies that

KEITH KLEBENOW

Has successfully completed the training program requirement for

8 HOUR HAZWOPER REFRESHER

Topics Covered: Air monitors (4-gas, PID, 6-gas) Operation, calibration/bump, Toxicology, Chemical identification (DOTERG/ NIOSH/WISER/SDS), Scenarios with spills, Product identification, PPE, Respiratory, Containment, control, cleanup & Decontamination.
Written Examination, hands on and Testing.

Ex Environmental, Inc
648 Commerce Drive. PO Box 222
Hudson, WI 54016

December 17 , 2018
DATE

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JAY PENFIELD, INSTRUCTOR

E1. TEAM REFRESHER CERTIFICATIONS

CERTIFICATE
of TRAINING

This certifies that
KENNETH LASSA

Has successfully completed the training program requirement for
8 HOUR HAZWOPER REFRESHER

Topics Covered: Air monitors (4-gas, PID, 6-gas) Operation, calibration/bump, Toxicology, Chemical identification (DOTERG/ NIOSH/WISER/SDS), Scenarios with spills, Product identification, PPE, Respiratory, Containment, control, cleanup & Decontamination.
Written Examination, hands on and Testing.

Ex Environmental, Inc
648 Commerce Drive. PO Box 222
Hudson, WI 54016

December 17 , 2018
DATE

WWW.EXENVIRONMENTAL.COM

JAY PENFIELD, INSTRUCTOR

CERTIFICATE
of TRAINING

This certifies that
MATT MICHALSKI

Has successfully completed the training program requirement for
8 HOUR HAZWOPER REFRESHER

Topics Covered: Air monitors (4-gas, PID, 6-gas) Operation, calibration/bump, Toxicology, Chemical identification (DOTERG/ NIOSH/WISER/SDS), Scenarios with spills, Product identification, PPE, Respiratory, Containment, control, cleanup & Decontamination.
Written Examination, hands on and Testing.

Ex Environmental, Inc
648 Commerce Drive. PO Box 222
Hudson, WI 54016

January 11 , 2019
DATE

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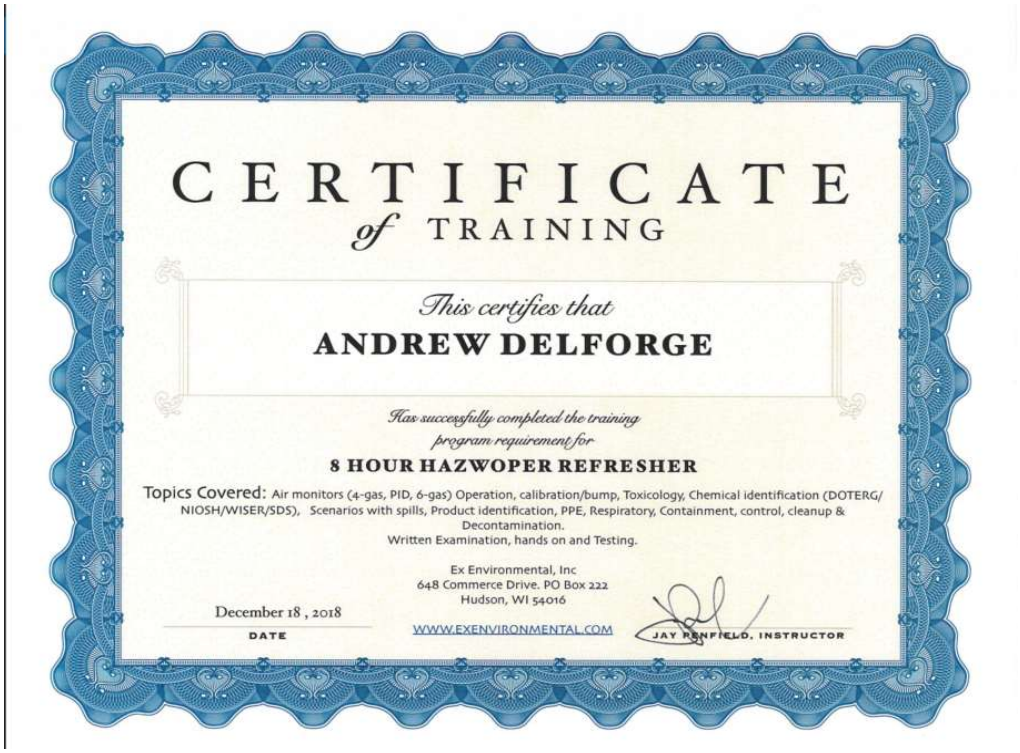
JAY PENFIELD, INSTRUCTOR

E1. TEAM REFRESHER CERTIFICATIONS



CERTIFICATE
of TRAINING

This certifies that

ANDREW DELFORGE

Has successfully completed the training program requirement for

8 HOUR HAZWOPER REFRESHER

Topics Covered: Air monitors (4-gas, PID, 6-gas) Operation, calibration/bump, Toxicology, Chemical identification (DOTERG/ NIOSH/WISER/SDS), Scenarios with spills, Product identification, PPE, Respiratory, Containment, control, cleanup & Decontamination.
Written Examination, hands on and Testing.

Ex Environmental, Inc
648 Commerce Drive. PO Box 222
Hudson, WI 54016

December 18 , 2018
DATE

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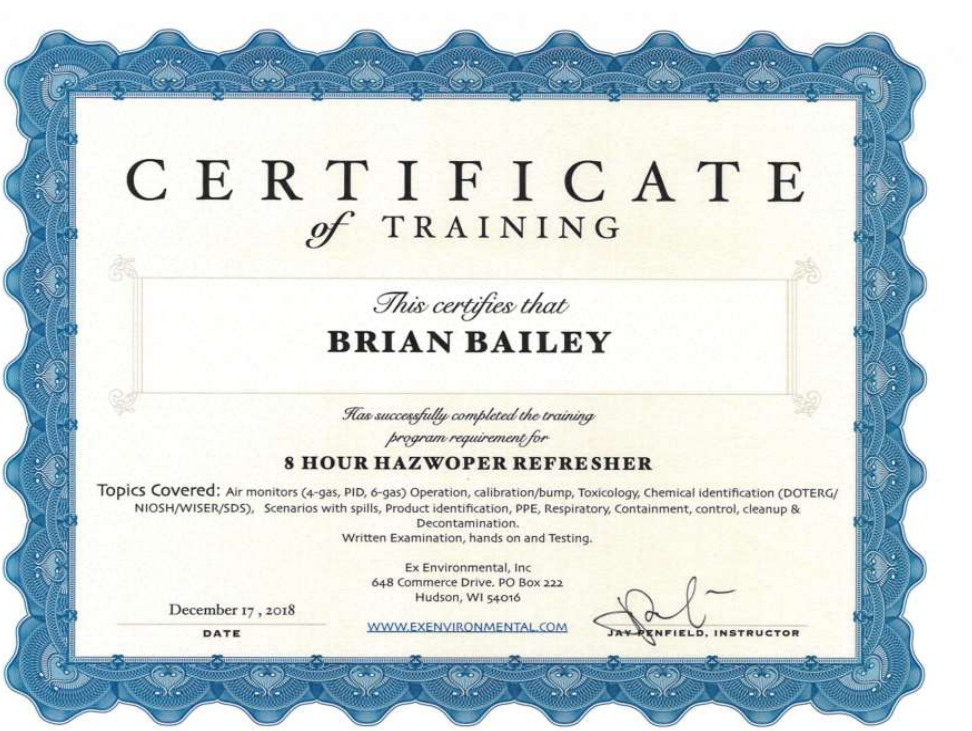
JAY PENFIELD. INSTRUCTOR



CERTIFICATE
of TRAINING

This certifies that

BRIAN BAILEY

Has successfully completed the training program requirement for

8 HOUR HAZWOPER REFRESHER

Topics Covered: Air monitors (4-gas, PID, 6-gas) Operation, calibration/bump, Toxicology, Chemical identification (DOTERG/ NIOSH/WISER/SDS), Scenarios with spills, Product identification, PPE, Respiratory, Containment, control, cleanup & Decontamination.
Written Examination, hands on and Testing.

Ex Environmental, Inc
648 Commerce Drive. PO Box 222
Hudson, WI 54016

December 17 , 2018
DATE

WWW.EXENVIRONMENTAL.COM

JAY PENFIELD. INSTRUCTOR

G. HAZARD ASSESSMENT

SUBSTANCE	MAXIMUM CONCENTRATION (UNITS)	MEDIUM (1,2)	PEL/TLV (PPM)3	CANCER STATUS (2)	ROUTE (5)
N/A					

(1). ENVIRONMENTAL MEDIUM: AIR (A), SURFACE WATER (SW), GROUNDWATER(GW), SOIL (S), SLUDGE (SL), DRINKING WATER (DW).

(2). LIST THE MAXIMUM CONCENTRATION FOR EACH MEDIUM SEPARATELY.

(3). USE THE LOWER OF THE TWO EXPOSURE LIMITS (PEL/TLV).

(4). CANCER STATUS; EPA CLASSIFICATION

GROUP A: HUMAN CARCINOGEN - SUFFICIENT EVIDENCE TO SUPPORT A CAUSAL ASSOCIATION BETWEEN EXPOSURE AND CANCER.

GROUP B1: PROBABLE HUMAN CARCINOGEN - LIMITED EVIDENCE OF CARCINOGENICITY IN HUMANS.

GROUP B2: PROBABLE HUMAN CARCINOGEN - SUFFICIENT EVIDENCE OF CARCINOGENICITY IN ANIMALS. INADEQUATE EVIDENCE OF CARCINOGENICITY IN HUMANS.

GROUP C: POSSIBLE HUMAN CARCINOGEN - LIMITED EVIDENCE OF CARCINOGENICITY IN ANIMALS.

GROUP D: NOT CLASSIFIED - INADEQUATE EVIDENCE OF CARCINOGENICITY IN ANIMALS.

GROUP E: NO EVIDENCE OF CARCINOGENICITY IN HUMANS - NO EVIDENCE FOR CARCINOGENCITY IN AT LEAST TWO ADEQUATE ANIMAL TESTS OR IN BOTH EPIDEMIOLOGIC AND ANIMAL STUDIES.

(5). ROUTE: (I) - INHALATION, (A) - ABSORPTION, (G) - INGESTION, (J) INJECTION

H. SITE ACTIVITIES

PROPOSED FIELDWORK DATE	PROPOSED SCOPE OF WORK
October 2019 & April 2020	Landfill inspection and sample monitoring wells

I. MEDICAL REQUIREMENTS - NOT APPLICABLE

REI PERSONNEL WHOSE PRESENCE MAY BE REQUIRED ON A WORK SITE WHERE EXPOSURE TO HAZARDOUS MATERIALS EXISTS, SHALL PARTICIPATE IN THE REI MEDICAL MONITORING PROGRAM. ALL MEDICAL EXAMINATIONS PERFORMED FOR REI PERSONNEL SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA STANDARDS 29 CFR 1910.120 AND 1910.134.

IT MAY BE NECESSARY TO REQUIRE SPECIFIC CLINICAL TESTS FOR CERTAIN HAZARDOUS WASTE SITES. THE NECESSITY FOR SUCH TESTS WILL BE DETERMINED BY THE PROJECT MANAGER IN CONSULTATION WITH THE COMPANY PHYSICIAN AND SITE SAFETY OFFICER. ANY SITE-SPECIFIC TESTING SHALL BE IDENTIFIED BELOW:

SITE - SPECIFIC CLINICAL TESTS - NOT APPLICABLE

PARAMETER	REQUIRED TESTING	ACTION LEVEL

J. SITE SAFETY PROCEDURES

PERIMETER ESTABLISHMENT

THE RESTRICTED IS NOT RESTRICTED AS IT IS RURAL AND FORESTED AND NO NEARBY TRAFFIC.

SITE ENTRY PROCEDURES

NO UNAUTHORIZED PERSONNEL WILL BE ALLOWED ON SITE. REI EMPLOYEES WILL USE THE BEST MEANS OF ACCESS TO THE SITE THAT POSE THE LEAST AMOUNT OF RISK/DISTANCE OF TRAVEL.

SITE CONTROL

MINIMIZE THE PROTENTIAL FOR EXPSOURE BY USE OF PPE
NO UNAUTHORIZED PERSONNEL WILL BE ALLOWED ON SITE.

SITE CONTROL DURING ACTIVITIES WILL BE ACCOMPLISHED THROUGH THE USE OF CLOSED GATE ON TRAIL

DUE TO THE LIMITED NATURE OF THE WORK, EXCESS EXPOSURE IS NOT EXPECTED.

PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS

PROJECT TASK	LEVEL OF PROTECTION A,B,C, OR D
SOIL HAND EXCAVATION AND REMOAL OF SOLID WASTE CLIMBING SLOPES AND PLACEMENT OF MATERIALS INTO TRAILER	**D**

PPE MODIFICATIONS

SAFETY VESTS TO BE WORN IF WORKING IN A HIGH-TRAFFIC AREA. MANDATORY IF WORKING IN ROADWAY.
PPE SHOULD ALSO INCLUDE LEATHER BOOTS, LEATHER GLOVES, EYE PROTECTION
PPE WILL BE WORN AS NECESSARY TO PREVENT CONTACT WITH CONTAMINATED SOIL AND GROUNDWATER

PPE SELECTION CRITERIA

LEVEL D INCLUDING HEARING PROTECTION

RESPIRATOR CARTRIDGE TYPE

NONE REQUIRED

ACTION LEVELS

(I.E., LIMITATIONS TO ASSIGNED TASKS, PPE REQUIREMENTS AND RATIONAL CONDITIONS NECESSITATING PPE MODIFICATIONS AND/OR WITHDRAWAL FROM SITE);

AS DETERMINED IN THE FIELD

K. PERSONAL PROTECTIVE EQUIPMENT (PPE)

LEVEL A:

LEVEL A PROTECTION SHOULD BE SELECTED WHEN THE HIGHEST LEVEL OF RESPIRATORY, SKIN, EYE, AND MUCOUS MEBRANE PROTECTION IS NEEDED.

*POSITIVE-PRESSURE, SELF-CONTAINED, BREATHING APPARATUS (MSHA/NIOSH APPROVED)(REQUIRED)
*FULLY ENCAPSULATED, CHEMICAL RESISTANT SUIT (REQUIRED)
*CHEMICAL-RESISTANT INNER AND OUTER GLOVES (REQUIRED)
*CHEMICAL-RESISTANT COVERALLS
*TWO-WAY RADIO COMMUNICATION (REQUIRED
*CHEMICAL-RESISTANT BOOTS WITH STEEL TOE AND SHANK (REQUIRED)

LEVEL B:

LEVEL B PROTECTION SHOULD BE SELECTED WHEN THE HIGHEST LEVEL OF RESPIRATORY PROTECTION IS NEEDED, BUT WITH A LESSER DEGREE OF SKIN AND EYE PROTECTION.

*POSITIVE-PRESSURE, SELF-CONTAINED, BREATHING APPARATUS (MSHA/NIOSH APPROVED)(REQUIRED)
*CHEMICAL-RESISTANT CLOTHING (COVERALLS, HOODED TWO-PIECE, CHEMICAL-RESISTANT SPLASH SUIT; OR DISPOSABLE CHEMICAL-RESISTANT COVERALLS) (REQUIRED)
*COVERALLS (UNDER SPLASH SUIT)
*CHEMICAL-RESISTANT INNER AND OUTER GLOVES (REQUIRED)
*CHEMICAL-RESISTANT BOOTS WITH STEEL TOE AND SHANK (REQUIRED)
*TWO-WAY RADIO COMMUNICATION (REQUIRED)
*HARD HAT (REQUIRED)

LEVEL C:

LEVEL C PROTECTION SHOULD BE SELECTED WHEN THE TYPE AND CONCENTRATION OF HAZARDOUS AIRBORNE SUBSTANCE ARE KNOWN, THE CRITERIA FOR USING AIR-PURIFYING RESPIRATORS IS MET, AND SKIN AND EYE EXPOSURE IS UNLIKELY. MONITORING OF THE AIR MUST BE PERFORMED TO COMPLY WITH OSHA REGULATIONS AND TO ENSURE RESPIRATOR EFFECTIVENESS.

*FULL FACE, AIR-PURIFYING REPIRATOR (MSHA/NIOSH APPROVED) WITH APPROPRIATE CARTRIDGES (REQUIRED)
*CHEMICAL-RESISTANT CLOTHING (COVERALLS, HOODED TWO-PIECE, CHEMICAL-RESISTANT SPLASH SUIT; OR DISPOSABLE CHEMICAL-RESISTANT COVERALLS) (REQUIRED)
*CHEMICAL-RESISTANT INNER AND OUTER GLOVES (REQUIRED)
*CHEMICAL-RESISTANT BOOTS WITH STEEL TOE AND SHANK (REQUIRED)
*TWO-WAY RADIO COMMUNICATION
*HARD HAT (REQUIRED)
*ESCAPE RESPIRATOR

LEVEL D:

LEVEL D IS PRIMARILY A WORK UNIFORM. IT SHALL NOT BE WORN ON SITE WHERE RESPIRATORY OR SKIN HAZARDS EXIST.

*PROTECTIVE COVERALLS AND PROTECTIVE GLOVES
*BOOTS WITH STEEL TOE AND SHANK (REQUIRED)
*HARD HAT (REQUIRED)
*SAFETY GLASSES

L. DECONTAMINATION

PERSONNEL DECONTAMINATION PROCEDURES

WASH HANDS BEFORE EATING. WASH GLOVES, BOOTS AND CLOTHING IN WARM, SOAPY WATER. RINSE WITH CLEA
WATER. LAUNDER CLOTHES DAILY. DISCARD DISPOSABLE GLOVES DAILY.

SAMPLING EQUIPMENT DECONTAMINATION PROCEDURES

ALL SAMPLING EQUIPMENT TO BE WASHED IN DETERGENT SOLUTION, WITH CLEAN WATER RINSE.
ALL EQUIPMENT IN CONTACT WITH CONTAMINATED SOILS WILL BE DECONTAMINATED ON SITE AND WITHIN THE LIMI
OF THE GROUNDWATER CONTAMINATION PLUME BOUNDARY

WASTE DISPOSAL PROCEDURES

ON SITE:	DISPOSAL OF SOLID WASTE AT LANDFILL OR RECYCLING CENTER Collection of waste from well sampling activities (rope, bailers, gloves) will be disposed of at landfill or recycling center. Purge water to be spread on site per WDNR.
OFF SITE:	DISPOSAL OF SOLID WASTE AT LANDFILL OR RECYCLING CENTER Disposal of waste generated from groudwater sampling activities will be disposed of at landfill or recyling center.

M. EMERGENCY PLAN

EMERGENCY PERSONNEL RESPONSIBILITIES

NAME	RESPONSIBILITIES
Andy Delforge	CONTACT EMERGENCY PERSONNEL SITE EVACUATION AND CONTROL

SITE EVACUATION PROCEDURES

IN CASE OF EMERGENCY, ALL WORK WILL BE IMMEDIATELY SHUT DOWN. THE SITE SAFETY COORDINATOR WILL INFORM WTH OWNER/MANAGER OF THE SITUATION. THE OWNER/MANAGER WILL THEN CONTACT LOCAL AUTHORITI AND WILL ASSIST WITH THE EVACUATION OF THE PUBLIC FROM THE PREMISES

EMERGENCY DECONTAMINATION

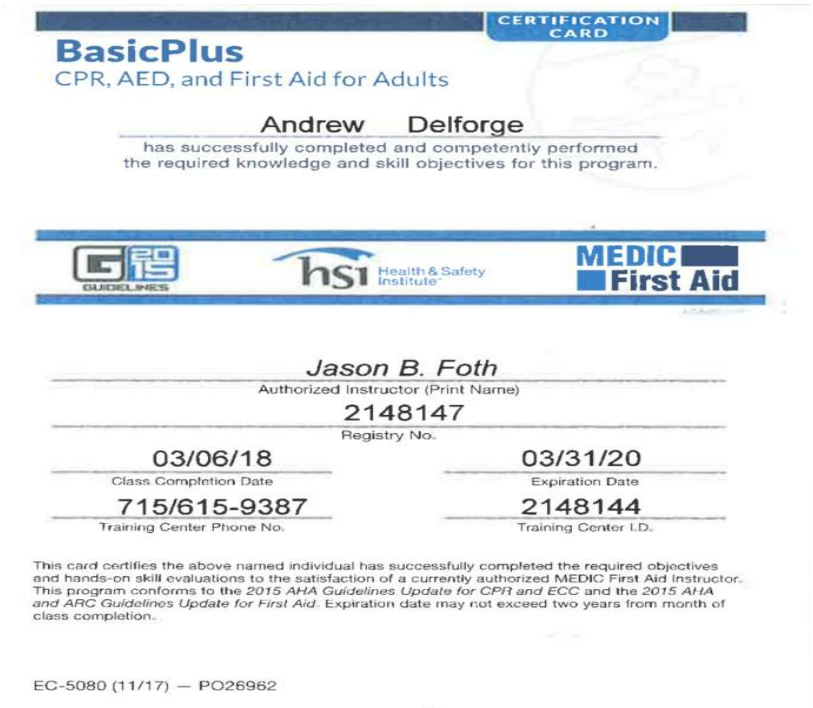
WASH AND REMOVE GLOVES AND BOOTS, REMOVE AND CHANGE CLOTHING SOAKED WITH PRODUCT. WASH ALL SKIN AREAS WHICH HAVE COME INTO CONTACT WITH PRODUCT.

EMERGENCY EQUIPMENT

FIRST AID KIT WITH BURN SUPPLIES. FIRE EXTINGUISHER, BURN BLANKET. ALL OF THE FIRST AID EQUIPMENT IS LOCATED IN THE VEHICLE.

EMERGENCY PERSONNEL TRAINING REQUIREMENTS

FIRST AID



CERTIFICATION CARD

BasicPlus

CPR, AED, and First Aid for Adults

Andrew Delforge

has successfully completed and competently performed the required knowledge and skill objectives for this program.

2015 GUIDELINES | hsi Health & Safety Institute | MEDIC First Aid

Jason B. Foth

Authorized Instructor (Print Name)

2148147

Registry No.

03/06/18 — Class Completion Date

03/31/20 — Expiration Date

715/615-9387 — Training Center Phone No.

2148144 — Training Center I.D.

This card certifies the above named individual has successfully completed the required objectives and hands-on skill evaluations to the satisfaction of a currently authorized MEDIC First Aid Instructor. This program conforms to the *2015 AHA Guidelines Update for CPR and ECC* and the *2015 AHA and ARC Guidelines Update for First Aid*. Expiration date may not exceed two years from month of class completion.

EC-5080 (11/17) — PO26962

N.FIRST AID

BITES* ANIMAL BITES: THOROUGHLY WASH THE WOUND WITH SOAP AND WATER. FLUSH THE AREA WITH RUNNING WATER AND APPLY A STERILE DRESSING. IMMOBILIZE AFFECTED PART UNTIL THE VICTIM HAS BEEN ATTENDED BY A PHYSICIAN. SEE THAT THE ANIMAL IS KEPT ALIVE AND IN QUARANTINE. OBTAIN THE NAME AND ADDRESS OF THE OWNER OF THE ANIMAL. INSECT BITES: REMOVE "STINGER" WITHOUT SQUEEZING IF PRESENT. KEEP AFFECTED PART BELOW THE LEVEL OF THE HEART. APPLY ICE BAG. FOR MINOR BITES AND STINGS APPLY SOOTHING LOTIONS SUCH AS CALAMINE.

BURNS* MINOR BURNS: DO NOT APPLY VASELINE OR GREASE OF ANY KIND. APPLY COLD WATER UNTIL PAIN SUBSIDES IF THERE ARE NO AREAS OF OPEN SKIN. COVER WITH A DRY, STERILE DRESSING. DO NOT BREAK BLISTERS OR REMOVE TISSUE. SEEK MEDICAL ATTENTION. SEVERE BURNS: DO NOT REMOVE ADHERED PARTICLES OF CLOTHING. DO NOT APPLY ICE OR IMMERSE IN WATER. DO NOT APPLY ANY OINTMENTS OR GREASE. COVER BURNS WITH THICK, STERILE DRESSINGS. KEEP BURNED FEET OR LEGS ELEVATED, IF POSSIBLE. MAY NEED TO TREAT FOR SHOCK. CHEMICAL BURNS: WASH AWAY THE CHEMICAL SOAKED CLOTHING WITH LARGE AMOUNTS OF WATER. REMOVE VICTIM'S CHEMICAL SOAKED CLOTHING. IF DRY LIME, BRUSH AWAY BEFORE FLUSHING. APPLY STERILE DRESSING AND SEEK MEDICAL ATTENTION.

CRAMPS* SYMPTOMS: CRAMPS IN MUSCLES OF ABDOMEN AND EXTREMITIES. HEAT EXHAUSTION MAY ALSO BE PRESENT. TREATMENT: SAME AS FOR HEAT EXHAUSTION.

CUTS* APPLY PRESSURE WITH STERILE GAUZE DRESSING AND ELEVATE THE AREA UNTIL BLEEDING STOPS. APPLY BANDAGE AND SEEK MEDICAL ATTENTION.

EYES* FOREIGN OBJECTS: KEEP THE VICTIM FROM RUBBING THE EYE. FLUSH THE EYE WITH WATER. IF FLUSHING FAILS TO REMOVE THE OBJECT, APPLY A DRY, PROTECTIVE DRESSING TO BOTH EYES AND SEEK MEDICAL ATTENTIO CHEMICALS: FLOOD THE EYE THOROUGHLY WITH WATER FOR 15 MINUTES. COVER EYE WITH A DRY STERILE PAD AND SEEK MEDICAL ATTENTION.

FAINTING* KEEP THE VICTIM LYING DOWN. LOOSEN TIGHT CLOTHING. IF VICTIM VOMITS, ROLL HIM ONTO HIS SIDE O TURN HIS HEAD TO THE SIDE. MAINTAIN AN OPEN AIRWAY. BATHE HIS FACE GENTLY WITH COOL WATER. UNLESS RECOVERY IS PROMPT, SEEK MEDICAL ATTENTION.

FRACTURES* DEFORMITY OF AN INJURED PART USUALLY MEANS A FRACTURE. IF FRACTURE IS SUSPECTED, SPLINT THE PART. DO NOT ATTEMPT TO MOVE THE VICTIM. SEEK MEDICAL ATTENTION IMMEDIATELY.

FROSTBITE* SYMPTOMS: JUST BEFORE FROSTBITE OCCURS SKIN MAY BE FLUSHED, THEN CHANGES TO WHITE OR GRAYISH-YELLOW. PAIN MAY BE FELT EARLY, THEN MAY SUBSIDE. BLISTERS MAY APPEAR; AFFECTED PART FEELS VERY COLD AND/OR MAY BE NUMB. TREATMENT: BRING VICTIM INDOORS, COVER THE FROZEN AREA, PROVIDE EXTRA CLOTHING AND BLANKETS. REWARM FROZEN AREA QUICKLY BY IMMERSION IN WARM WATER - NOT HOT WATER. DO NOT RUB THE PART. SEEK MEDICAL ATTENTION

HEAT EXHAUSTION * CAUSED BY EXPOSURE TO HEAT, EITHER SUN OR INDOORS. SYMPTOMS: NEAR NORMAL BODY TEMPERATURE. SKIN IS PALE AND CLAMMY. PROFUSE SWEATING, TIREDNESS, WEAKNESS, HEADACHE, PERHAPS CRAMPS, NAUSEA, DIZZINESS AND POSSIBLE FAINTING. TREATMENT: KEEP VICTIM IN LYING POSITION AND RAISE FEET. LOOSEN CLOTHING, APPLY COOL, WET CLOTHS. IF CONSCIOUS, GIVE SIPS OF WATER. SEEK MEDICAL ATTENTION IMMEDIATELY.

SUNSTROKE* SYMPTOMS: BODY TEMPERATURE IS HIGH. SKIN IS HOT, RED AND DRY. PULSE IS RAPID. VICTIM MAY BE UNCONSCIOUS. TREATMENT: KEEP VICTIM IN LYING POSITION WITH HEAD ELEVATED. REMOVE CLOTHING AND REPEATEDLY SPONGE THE BARE SKIN WITH COOL WATER. SEEK MEDICAL ATTENTION IMMEDIATELY.

POISONING* CALL THE POISON CONTROL CENTER FOR INSTRUCTION ON IMMEDIATE CARE. IF VICTIM BECOMES UNCONSCIOUS, KEEP THE AIRWAY OPEN. IF BREATHING STOPS, BEGIN RESCUE BREATHING. CALL EMS IMMEDIATEL

POISON IVY* REMOVE THE CONTAMINATED CLOTHING. WASH ALL EXPOSED AREAS THOROUGHLY WITH SOAP AND WATER. IF RASH IS MILD, APPLY CALAMINE LOTION OR OTHER SOOTHING SKIN LOTION. IF A SEVERE REACTION OCCURS, SEEK MEDICAL ATTENTION.

PUNCTURE WOUNDS* IF PUNCTURE WOUND IS DEEPER THAN SKIN SURFACE, SEEK MEDICAL ATTENTION. SERIOUS INFECTION CAN OCCUR UNLESS PROPER TREATMENT IS RECEIVED.

SPRAINS* ELEVATE INJURED PART AND APPLY ICE BAG OR COLD PACKS. DO NOT SOAK IN HOT WATER. IMMOBILIZE AFFECTED PART AND SEEK MEDICAL ATTENTION.

UNCONSCIOUSNESS * NEVER ATTEMPT TO GIVE ANYTHING BY MOUTH. KEEP VICTIM LYING FLAT, MAINTAIN OPEN AIRWAY. IF VICTIM IS NOT BREATHING, PERFORM RESCUE BREATHING AND CALL EMS IMMEDIATELY.

O. SITE HEALTH AND SAFETY PLAN REVIEW

THIS DOCUMENT SHALL BE SIGNED BY EACH MEMBER OF REI ENGINEERING TEAM PRIOR TO THE FIRST SITE VISIT.

I HAVE READ AND UNDERSTAND THE CONTENTS OF THIS SITE HEALTH AND SAFETY PLAN AND WILL COMPLY WITH ITS PROVISIONS, REQUIREMENTS, AND RESTRICTIONS.

SITE: Tomahawk Tissue/Georgia Pacific LF #1878, Tannery Road.
Tomahawk , WI 54487

NAME	SIGNATURE	DATE

P. ADDENDUM TO SITE HEALTH AND SAFETY PLAN

USE THIS PAGE TO ADD ADDITIONAL SITE DATA OR DESCRIBE ANY SPECIAL CIRCUMSTANCES THAT HAVE BECOME APPARENT AFTER THE ORIGINAL PREPARATION OF THIS SITE HEALTH AND SAFETY PLAN. INCLUDE ANY CHANGES IN SITE CONDITIONS, PPE AND MONITORING MODIFICATIONS, AND OTHER ITEMS AS APPROPRIATE.

CONDITIONS TO REI ENGINEERING, INC. SITE HEALTH AND SAFETY PLAN

THE INFORMATION PRESENTED IN THIS HEALTH AND SAFETY PLAN IS INTENDED SOLELY TO DESCRIBE THE HEALTH AND SAFETY MEASURES APPLICABLE TO REI ENGINEERING, INC., PERSONNEL ENGAGED IN FIELD ACTIVITIES AT THE PREVIOUSLY DESCRIBED SITE.

REI MAKES NO WARRANTIES REGARDING THE ACCURACY OF THE SITE HEALTH AND SAFETY PLAN, AND NOTHING CONTAINED THEREIN SHALL BE CONSTRUED AS PROVIDING RECOMMENDATIONS OR DIRECTION, EITHER EXPRESSED OR IMPLIED, REGARDING HEALTH AND SAFETY MEASURES TO BE TAKEN BY ANYONE OTHER THAN REI PERSONNEL. REI DISCLAIMS ALL LIABILITY FOR THE ACTIONS AND OMMISIONS OF NON REI REPSONNEL PERSONNEL SHALL BE RESPONSIBLE FOR COMPLYING WITH SITE SAFETY PLANS AND LOCAL, STATE, AND FEDERAL REGULATIONS APPLICABLE TO NON-REI, INC., PERSONNEL.

P. SITE HEALTH AND SAFETY PLAN FOLLOW-UP REPORT

1. WAS THE SITE HEALTH AND SAFETY PLAN FOLLOWED?

_____YES _____ NO

2. IF NO, EXPLAIN ALL CHANGES TO THE HEALTH AND SAFETY PLAN?

3. REASON FOR CHANGES:

4. REPORT PREPARED BY: _____
(SITE SAFETY COORDINATOR)
DATE: _____

5. REPORT REVIEWED BY: _____.
(PROJECT MANAGER)
DATE: _____

R. INCIDENT REPORT

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

NORTHWEST PETROLEUM SERVICE WAUSAU, WISCONSIN

Accident / Incident / Near Miss Report Form

Name of Person Completing Report:		Role in Company:
Employee Name:		❑Accident ❑Incident ❑Near Miss
Date reported to HR & supervisor:	Date & time event occurred:	
Name of *Witness (If applicable):	Witness Phone Number:	
How long has employee worked in their current position?	Body part(s) affected: ❑ Ankle ❑ Hip ❑ Arm ❑ Knee ❑ Back ❑ Leg ❑ Elbow ❑ Neck ❑ Eye ❑ Shoulder ❑ Fingers ❑ Toes ❑ Foot ❑ Trunk ❑ Hand ❑ Wrist ❑ Head ❑ Other_____	Type of injury / illness: ❑ Break/Fracture ❑ Bruise/Contusion ❑ Burn ❑ Cut / Abrasion ❑ Exposure ❑ Foreign Object ❑ Repetitive Motion ❑ Sprain / Strain ❑ Insect Bite/Sting ❑ Other_____
Was medical treatment sought? ❑ Yes or ❑ No (If yes, answer question below)		
When was medical attention first sought? Date: Time:		
Name of doctor:		
Treating medical facility info: Name: Address: City, State Zip: Phone:	How did injury / illness / pain occur? ❑ Gradually or ❑ Suddenly	
What kind of treatment was given? ❑ First Aid by self or other employee ❑ Minor treatment by medical facility ❑ Emergency room care ❑ Overnight hospitalization	Has this accident/ incident/ near miss occurred before? ❑ Yes or ❑ No (If yes, answer question below) When and how often has injury / illness / pain occurred before?	
Did accident, incident or near miss occur at 4080 North 20th Ave? ❑ Yes or ❑ No If no, give address / location where injury / illness occurred:	Future major medical / lost time anticipated? ❑ Yes or ❑ No *Note: Lost time is when you're unable to perform light duty tasks and/or normal duties*	
Did accident/ incident/ near miss occur because of: ❑ Substance abuse? ❑ Failure to use safety devices? ❑ Failure to obey rules? ❑ Personal activities outside of work?	Date returned to work: _____ Estimated date of return: _____	
Did any of the following contribute to the accident / incident / near miss? ❑ Inadequate guard ❑ Unguarded hazard ❑ Safety device is defective ❑ Tool or equipment defective ❑ Workstation layout is hazardous ❑ Unsafe lighting ❑ Unsafe ventilation ❑ Lack of needed personal protective equipment ❑ Lack of appropriate equipment / tools ❑ Unsafe clothing ❑ No training or insufficient training ❑ Weather conditions ❑ Other: _____	Did any of the following contribute to the accident / incident / near miss? ❑ Operating without permission ❑ Operating at unsafe speed ❑ Servicing equipment that has power to it ❑ Making a safety device inoperative ❑ Using defective equipment ❑ Using equipment in an unapproved way ❑ Unsafe lifting ❑ Taking an unsafe position or posture ❑ Distraction, teasing, horseplay ❑ Failure to wear personal protective equipment ❑ Failure to use the available equipment / tools ❑ Poor personal decision ❑ Other: _____	

Describe the events leading to the injury, how the injury occurred, the injury itself, and any treatment received.

Please include: What? Where? When? Why? How? Body parts affected, unusual events, type of injury/illness: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

What could have been done to prevent this injury	
❑ Guard the hazard	❑ Redesign task steps
❑ Redesign work station	❑ Enforce existing policy
❑ Train the employee (s)	❑ Routinely inspect for hazard
❑ Update the policy	❑ Additional PPE
❑ Train the supervisor(s)	❑ Other:

The information I have provided either in my own writing or verbally for the purpose of this form is true and correct. I understand that providing false or misleading information or omission of information on this report or any other form relating to this claim of accident, incident, or near miss may result in termination of my employment.

Employee Signature _____ Date: _____

Supervisor Signature _____ Date: _____

**Witness please complete additional statement form*

S. INCIDENT WITNESS REPORT

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

NORTHWEST PETROLEUM SERVICE WAUSAU, WISCONSIN

Witness Form

Name of Witness:		Phone:
Injured Employee Name/Role:		
Did you see the accident, incident, near miss occur? ❑ Yes or ❑ No (If yes, answer question below) Was it immediately obvious the employee was hurt? ❑ Yes or ❑ No What kind of treatment was given? ❑ First Aid by self or other employee ❑ Minor treatment by medical facility ❑ Emergency room care ❑ Overnight hospitalization ❑ Unknown	Body part(s) affected: ❑ Ankle ❑ Hip ❑ Arm ❑ Knee ❑ Back ❑ Leg ❑ Elbow ❑ Neck ❑ Eye ❑ Shoulder ❑ Fingers ❑ Toes ❑ Foot ❑ Trunk ❑ Hand ❑ Wrist ❑ Head ❑ Other _____	Type of injury / illness: ❑ Break/Fracture ❑ Bruise/Contusion ❑ Burn ❑ Cut / Abrasion ❑ Exposure ❑ Foreign Object ❑ Repetitive Motion ❑ Sprain / Strain ❑ Insect Bite/ Sting ❑ Other _____
Are you aware of any other incidents, on the job or personal, that this employee has suffered before? ❑ Yes or ❑ No	Did accident, incident, near miss occur at 4080 North 20th Ave? ❑ Yes or ❑ No If no, give address / location where injury / illness occurred	
Did the employee violate a known safety rule? ❑ Yes or ❑ No	Was the employee using any type of equipment at the time? ❑ Yes or ❑ No What was the employee using?_____	
Do you think the injury / illness occurred because of: ❑ Substance Abuse ❑ Failure to Use Safety Devices ❑ Failure to Obey Rules ❑ Personal activities outside of work	Have you heard the employee talk about the same or similar injury from personal activities outside of work? ❑ Yes or ❑ No	
Did any of the following contribute to the accident? ❑ Inadequate guard ❑ Unguarded hazard ❑ Safety device is defective ❑ Tool or equipment defective ❑ Workstation layout is hazardous ❑ Unsafe lighting ❑ Unsafe ventilation ❑ Lack of needed personal protective equipment ❑ Lack of appropriate equipment / tools ❑ Unsafe clothing ❑ No training or insufficient training ❑ Other: _____	Did any of the following contribute to the accident? ❑ Operating without permission ❑ Operating at unsafe speed ❑ Servicing equipment that has power to it ❑ Making a safety device inoperative ❑ Using defective equipment ❑ Using equipment in an unapproved way ❑ Unsafe lifting ❑ Taking an unsafe position or posture ❑ Distraction, teasing, horseplay ❑ Failure to wear personal protective equipment ❑ Failure to use the available equipment / tools ❑ Other: _____	

Any additional comments:_____

_____

_____

The information I have provided either in my own writing or verbally for the purpose of this form is true and correct.

Witness Signature:_____ Date:_____

ATTACHMENT B

LANDFILL INSPECTION FORM

CLOSED LANDFILL INSPECTION FORM

Revision:
WASTE & MATERIALS MANAGEMENT PROGRAM

10/30/19

Section 1: General Facility Requirements

A. Gate provided at the entrance and kept locked when authorized personnel not on site.	no	506.07(1)(j)
B. Entrance area clean and no solid waste indiscriminately dumped at or near the entrance. (e.g. operating an unlicensed storage or disposal facility)	yes	289.31(1)
C. Sign posted at the entrance to the facility indicating that the landfill is closed, and includes the landfill name, license number, penalty for unauthorized use and any other pertinent information unless the approved final use does not require signage.	no	506.08(1)(b)
D. Access to the landfill restricted by use of gates, fencing, or other appropriate means unless approved final use allowing access (e.g. baseball playfields, soccer fields, dog runs, etc.) does not require these restrictions.	no	506.08(2)

Section 2: Sediment and Erosion Control

A. Runoff channels are protected to prevent scour and erosion that generates sediment.	yes	506.07(2)(a)(5)
B. Storm water drainage ditches, structures and sedimentation basins cleaned and maintained.	NA	506.07(2)(b)
C. The entire solid waste disposal area is covered with compacted earth and final grades are adequately sloped to allow storm water runoff. (e.g. no depressions with ponded water or wetland vegetation on the disposal area).	yes	506.08(3)(a)
D. Storm water run-on diverted around all areas used for solid waste disposal to limit erosion of the cover soils and infiltration.	yes	506.08(3)(b)
E. The finished surface of the disposal area is covered with a minimum of 6 inches of topsoil.	unknown	506.08(3)(d)
F. Vegetation established to minimize erosion (e.g. no bare spots or woody vegetation).	yes	506.08(4)

Section 3: Gas Control

A. Effective means being utilized to prevent migration of explosive gases generated by the waste fill (e.g. no noticeable gas odors or indication of stressed vegetation, and gas control system operating, if applicable).	NA	506.07(4)

Section 4: Leachate Collection System

A. Any liquid that comes in contact with waste being handled as leachate and properly managed (e.g. no leachate seeps or discolored surface water/soil).	NA	506.07(5)(b)
B. Leachate removal from all leachate storage structures to maintain gravity flow (e.g. no leachate storage on landfill base or liner).	NA	506.07(5)(a)
C. All leachate removed from the leachate collection system is being disposed of at a wastewater treatment facility unless the facility has approval to recirculate leachate or gas condensate.	NK	506.07(5)(a)

CLOSED LANDFILL INSPECTION FORM

Revision:
WASTE & MATERIALS MANAGEMENT PROGRAM

Section 4: Leachate Collection System

D. Leachate lines cleaned on an annual basis or other frequency approved by the Department.	NA	506.07(5)(c)
E. Leachate head wells protected and being monitored for leachate head levels.	NA	507.04(3)

Section 5: Monitoring Devices

A. Monitoring and sampling devices protected to prevent contaminant entry and damage (e.g. caps present and locked, protective casing in good condition and not affected by frost heave or sunk relative to the well casing that prevents closure). MW4A has some Frost heave	Yes	507.04(3)
B. All monitoring devices clearly and permanently labeled on the outside of the device.	no	507.04(4)
C. Any permanent monitoring well no longer being used to gather information is properly abandoned within 60 days after its use has been discontinued.	no	141.25(1)(b)
D. Any monitoring devise that has been damaged, provides a conduit to the subsurface or otherwise fails to function is properly abandoned and replaced within 60 days after discovery.	NA	507.13
E. Surface water sampling locations surveyed and permanently and clearly marked.	NA	507.23(2)

Section 6: Final Use

A. Waste disposal area not being used for agricultural purposes unless approved by the Department.	NA	506.085(1)
B. No structures or other development over waste disposal area unless approved by the Department.	no	506.085(2)
C. No excavation of the final cover or any waste materials.	no	506.085(3)

ATTACHMENT C

PHOTOGRAPHS

Monitoirng Well MW1 Upon Inspection

Monitoring Well MW2 Upon Inspection

Monitoring Well MW3 Upon Inspection

Monitoring Well MW4 and Piezometer MW4A Upon Inspection

Monitoring Well MW5 Upon Inspection

Monitoring Well MW6 Upon Inspection

Monitoring Well MW7 Upon Inspection

Monitoring Well MW8 Upon Inspection

Monitoring Well MW9 Upon Inspection

Monitoring Well MW10 Upon Inspection

ATTACHMENT D

LABORATORY ANALYTICAL REPORTS

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

November 21, 2019

Ken Lassa
REI
4080 North 20th Avenue
Wausau, WI 54401

RE: Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Dear Ken Lassa:
Enclosed are the analytical results for sample(s) received by the laboratory on October 31, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

CERTIFICATIONS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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

SAMPLE SUMMARY

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40198289001	**MW1**	Water	10/30/19 14:00	10/31/19 09:19
40198289002	**MW2**	Water	10/30/19 13:30	10/31/19 09:19
40198289003	**MW3**	Water	10/30/19 13:00	10/31/19 09:19
40198289004	**MW4**	Water	10/30/19 11:30	10/31/19 09:19
40198289005	**MW4A**	Water	10/30/19 11:45	10/31/19 09:19
40198289006	**MW5**	Water	10/30/19 12:30	10/31/19 09:19
40198289007	**MW6**	Water	10/30/19 12:00	10/31/19 09:19
40198289008	**MW7**	Water	10/30/19 11:00	10/31/19 09:19
40198289009	**MW8**	Water	10/30/19 10:30	10/31/19 09:19
40198289010	**MW9**	Water	10/30/19 09:30	10/31/19 09:19
40198289011	**MW10**	Water	10/30/19 09:00	10/31/19 09:19

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

SAMPLE ANALYTE COUNT

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40198289001	**MW1**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289002	**MW2**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289003	**MW3**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289004	**MW4**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289005	**MW4A**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G

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SAMPLE ANALYTE COUNT

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289006	**MW5**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289007	**MW6**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289008	**MW7**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289009	**MW8**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289010	**MW9**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40198289011	**MW10**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW1 **Lab ID: 40198289001** Collected: 10/30/19 14:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:23	7440-38-2	
Barium	**9.7**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:23	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:23	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:23	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:23	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:23	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:23	7440-22-4	
Total Hardness by 2340B	**21200**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:23		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:07	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0055**	ug/L	0.028	0.0055	1	11/01/19 09:00	11/04/19 18:32	83-32-9	
Acenaphthylene	**<0.0045**	ug/L	0.023	0.0045	1	11/01/19 09:00	11/04/19 18:32	208-96-8	
Anthracene	**<0.0095**	ug/L	0.048	0.0095	1	11/01/19 09:00	11/04/19 18:32	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.034	0.0069	1	11/01/19 09:00	11/04/19 18:32	56-55-3	
Benzo(a)pyrene	**<0.0096**	ug/L	0.048	0.0096	1	11/01/19 09:00	11/04/19 18:32	50-32-8	
Benzo(b)fluoranthene	**<0.0052**	ug/L	0.026	0.0052	1	11/01/19 09:00	11/04/19 18:32	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	11/01/19 09:00	11/04/19 18:32	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.034	0.0069	1	11/01/19 09:00	11/04/19 18:32	207-08-9	
Chrysene	**<0.012**	ug/L	0.059	0.012	1	11/01/19 09:00	11/04/19 18:32	218-01-9	
Dibenz(a,h)anthracene	**<0.0091**	ug/L	0.046	0.0091	1	11/01/19 09:00	11/04/19 18:32	53-70-3	
Fluoranthene	**<0.0097**	ug/L	0.048	0.0097	1	11/01/19 09:00	11/04/19 18:32	206-44-0	
Fluorene	**<0.0072**	ug/L	0.036	0.0072	1	11/01/19 09:00	11/04/19 18:32	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.080	0.016	1	11/01/19 09:00	11/04/19 18:32	193-39-5	
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	11/01/19 09:00	11/04/19 18:32	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	11/01/19 09:00	11/04/19 18:32	91-57-6	
Naphthalene	**<0.017**	ug/L	0.083	0.017	1	11/01/19 09:00	11/04/19 18:32	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	11/01/19 09:00	11/04/19 18:32	85-01-8	
Pyrene	**0.0094J**	ug/L	0.035	0.0070	1	11/01/19 09:00	11/04/19 18:32	129-00-0	B
Total PAHs	**0.028**	ug/L			1	11/01/19 09:00	11/04/19 18:32		
Surrogates									
2-Fluorobiphenyl (S)	43	%	30-85		1	11/01/19 09:00	11/04/19 18:32	321-60-8	
Terphenyl-d14 (S)	41	%	10-120		1	11/01/19 09:00	11/04/19 18:32	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 10:17	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 10:17	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 10:17	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 10:17	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 10:17	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 10:17	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 10:17	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 10:17	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 10:17	96-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW1 **Lab ID: 40198289001** Collected: 10/30/19 14:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 10:17	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 10:17	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 10:17	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 10:17	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 10:17	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 10:17	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 10:17	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 10:17	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 10:17	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 10:17	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 10:17	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 10:17	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 10:17	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 10:17	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 10:17	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 10:17	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 10:17	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 10:17	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 10:17	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 10:17	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 10:17	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 10:17	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 10:17	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 10:17	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 10:17	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 10:17	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 10:17	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 10:17	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 10:17	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 10:17	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 10:17	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 10:17	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 10:17	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 10:17	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 10:17	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 10:17	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 10:17	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 10:17	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 10:17	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 10:17	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 10:17	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 10:17	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 10:17	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 10:17	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 10:17	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 10:17	103-65-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW1 **Lab ID: 40198289001** Collected: 10/30/19 14:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 10:17	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 10:17	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 10:17	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 10:17	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 10:17	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 10:17	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/01/19 10:17	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/01/19 10:17	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/01/19 10:17	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**0.76J**	mg/L	2.0	0.50	1		10/31/19 17:33	16887-00-6	
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		10/31/19 17:33	14797-55-8	
Sulfate	**6.3**	mg/L	3.0	1.0	1		10/31/19 17:33	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**23.0J**	mg/L	23.5	7.0	1		11/12/19 10:56		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:35	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<14.7**	mg/L	50.0	14.7	1	11/11/19 06:26	11/11/19 08:50		

Sample: MW2 **Lab ID: 40198289002** Collected: 10/30/19 13:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:30	7440-38-2	
Barium	**30.0**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:30	7440-39-3	
Cadmium	**4.6J**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:30	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:30	7440-47-3	
Lead	**6.7J**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:30	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:30	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:30	7440-22-4	
Total Hardness by 2340B	**50400**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:30		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:18	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW2 **Lab ID: 40198289002** Collected: 10/30/19 13:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	11/01/19 09:00	11/04/19 18:49	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	11/01/19 09:00	11/04/19 18:49	208-96-8	
Anthracene	**<0.0097**	ug/L	0.048	0.0097	1	11/01/19 09:00	11/04/19 18:49	120-12-7	
Benzo(a)anthracene	**<0.0070**	ug/L	0.035	0.0070	1	11/01/19 09:00	11/04/19 18:49	56-55-3	
Benzo(a)pyrene	**<0.0098**	ug/L	0.049	0.0098	1	11/01/19 09:00	11/04/19 18:49	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.027	0.0053	1	11/01/19 09:00	11/04/19 18:49	205-99-2	
Benzo(g,h,i)perylene	**<0.0063**	ug/L	0.031	0.0063	1	11/01/19 09:00	11/04/19 18:49	191-24-2	
Benzo(k)fluoranthene	**<0.0070**	ug/L	0.035	0.0070	1	11/01/19 09:00	11/04/19 18:49	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	11/01/19 09:00	11/04/19 18:49	218-01-9	
Dibenz(a,h)anthracene	**<0.0093**	ug/L	0.046	0.0093	1	11/01/19 09:00	11/04/19 18:49	53-70-3	
Fluoranthene	**<0.0099**	ug/L	0.049	0.0099	1	11/01/19 09:00	11/04/19 18:49	206-44-0	
Fluorene	**<0.0074**	ug/L	0.037	0.0074	1	11/01/19 09:00	11/04/19 18:49	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.082	0.016	1	11/01/19 09:00	11/04/19 18:49	193-39-5	
1-Methylnaphthalene	**0.0092J**	ug/L	0.027	0.0055	1	11/01/19 09:00	11/04/19 18:49	90-12-0	
2-Methylnaphthalene	**0.0071J**	ug/L	0.023	0.0045	1	11/01/19 09:00	11/04/19 18:49	91-57-6	
Naphthalene	**<0.017**	ug/L	0.085	0.017	1	11/01/19 09:00	11/04/19 18:49	91-20-3	
Phenanthrene	**0.013J**	ug/L	0.064	0.013	1	11/01/19 09:00	11/04/19 18:49	85-01-8	B
Pyrene	**0.012J**	ug/L	0.035	0.0071	1	11/01/19 09:00	11/04/19 18:49	129-00-0	B
Total PAHs	**0.059**	ug/L			1	11/01/19 09:00	11/04/19 18:49		
Surrogates									
2-Fluorobiphenyl (S)	37	%	30-85		1	11/01/19 09:00	11/04/19 18:49	321-60-8	
Terphenyl-d14 (S)	10	%	10-120		1	11/01/19 09:00	11/04/19 18:49	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 11:24	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 11:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 11:24	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 11:24	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 11:24	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 11:24	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 11:24	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 11:24	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 11:24	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 11:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 11:24	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 11:24	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 11:24	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 11:24	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 11:24	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 11:24	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 11:24	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 11:24	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 11:24	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 11:24	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 11:24	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 11:24	95-49-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW2 **Lab ID: 40198289002** Collected: 10/30/19 13:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 11:24	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 11:24	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 11:24	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 11:24	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 11:24	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 11:24	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 11:24	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 11:24	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 11:24	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 11:24	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 11:24	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 11:24	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 11:24	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 11:24	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 11:24	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 11:24	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 11:24	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 11:24	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 11:24	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 11:24	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 11:24	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 11:24	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 11:24	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 11:24	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 11:24	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 11:24	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 11:24	75-69-4	
Vinyl chloride	**0.38J**	ug/L	1.0	0.17	1		11/01/19 11:24	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 11:24	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 11:24	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 11:24	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 11:24	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 11:24	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 11:24	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 11:24	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 11:24	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 11:24	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 11:24	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 11:24	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		11/01/19 11:24	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/01/19 11:24	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 11:24	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**<2.5**	mg/L	10.0	2.5	5		10/31/19 18:13	16887-00-6	D3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW2 **Lab ID: 40198289002** Collected: 10/30/19 13:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.2**	mg/L	1.1	0.38	5		10/31/19 18:13	14797-55-8	
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 18:13	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**52.5**	mg/L	47.0	14.1	2		11/12/19 10:56		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:37	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**41.9J**	mg/L	50.0	14.7	1	11/11/19 06:26	11/11/19 08:50		

Sample: MW3 **Lab ID: 40198289003** Collected: 10/30/19 13:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:32	7440-38-2	
Barium	**230**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:32	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:32	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:32	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:32	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:32	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:32	7440-22-4	
Total Hardness by 2340B	**382000**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:32		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:21	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.0091J**	ug/L	0.028	0.0057	1	11/01/19 09:00	11/04/19 21:02	83-32-9	
Acenaphthylene	**<0.0047**	ug/L	0.023	0.0047	1	11/01/19 09:00	11/04/19 21:02	208-96-8	
Anthracene	**<0.0098**	ug/L	0.049	0.0098	1	11/01/19 09:00	11/04/19 21:02	120-12-7	
Benzo(a)anthracene	**<0.0071**	ug/L	0.035	0.0071	1	11/01/19 09:00	11/04/19 21:02	56-55-3	
Benzo(a)pyrene	**<0.0098**	ug/L	0.049	0.0098	1	11/01/19 09:00	11/04/19 21:02	50-32-8	
Benzo(b)fluoranthene	**<0.0054**	ug/L	0.027	0.0054	1	11/01/19 09:00	11/04/19 21:02	205-99-2	
Benzo(g,h,i)perylene	**<0.0063**	ug/L	0.032	0.0063	1	11/01/19 09:00	11/04/19 21:02	191-24-2	
Benzo(k)fluoranthene	**<0.0071**	ug/L	0.035	0.0071	1	11/01/19 09:00	11/04/19 21:02	207-08-9	
Chrysene	**<0.012**	ug/L	0.061	0.012	1	11/01/19 09:00	11/04/19 21:02	218-01-9	
Dibenz(a,h)anthracene	**<0.0094**	ug/L	0.047	0.0094	1	11/01/19 09:00	11/04/19 21:02	53-70-3	
Fluoranthene	**<0.010**	ug/L	0.050	0.010	1	11/01/19 09:00	11/04/19 21:02	206-44-0	
Fluorene	**0.016J**	ug/L	0.037	0.0074	1	11/01/19 09:00	11/04/19 21:02	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.082	0.016	1	11/01/19 09:00	11/04/19 21:02	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW3 **Lab ID: 40198289003** Collected: 10/30/19 13:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
1-Methylnaphthalene	**0.061**	ug/L	0.028	0.0055	1	11/01/19 09:00	11/04/19 21:02	90-12-0	
2-Methylnaphthalene	**0.091**	ug/L	0.023	0.0046	1	11/01/19 09:00	11/04/19 21:02	91-57-6	
Naphthalene	**1.3**	ug/L	0.086	0.017	1	11/01/19 09:00	11/04/19 21:02	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.064	0.013	1	11/01/19 09:00	11/04/19 21:02	85-01-8	
Pyrene	**<0.0071**	ug/L	0.036	0.0071	1	11/01/19 09:00	11/04/19 21:02	129-00-0	
Total PAHs	**1.5**	ug/L			1	11/01/19 09:00	11/04/19 21:02		
Surrogates									
2-Fluorobiphenyl (S)	57	%	30-85		1	11/01/19 09:00	11/04/19 21:02	321-60-8	
Terphenyl-d14 (S)	74	%	10-120		1	11/01/19 09:00	11/04/19 21:02	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:09	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:09	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:09	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 12:09	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:09	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:09	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 12:09	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 12:09	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 12:09	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 12:09	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 12:09	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 12:09	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 12:09	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:09	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:09	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:09	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 12:09	108-67-8	
1,3-Dichlorobenzene	**1.4J**	ug/L	2.1	0.63	1		11/01/19 12:09	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 12:09	142-28-9	
1,4-Dichlorobenzene	**7.4**	ug/L	3.1	0.94	1		11/01/19 12:09	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 12:09	594-20-7	
2-Chlorotoluene	**6.1**	ug/L	5.0	0.93	1		11/01/19 12:09	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 12:09	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 12:09	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:09	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 12:09	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 12:09	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 12:09	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 12:09	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 12:09	56-23-5	
Chlorobenzene	**10.9**	ug/L	2.4	0.71	1		11/01/19 12:09	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 12:09	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 12:09	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 12:09	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 12:09	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW3 **Lab ID: 40198289003** Collected: 10/30/19 13:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 12:09	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 12:09	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 12:09	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 12:09	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 12:09	87-68-3	
Isopropylbenzene (Cumene)	**1.1J**	ug/L	5.0	0.39	1		11/01/19 12:09	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 12:09	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 12:09	75-09-2	
Naphthalene	**4.5J**	ug/L	5.0	1.2	1		11/01/19 12:09	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 12:09	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 12:09	127-18-4	
Toluene	**0.21J**	ug/L	5.0	0.17	1		11/01/19 12:09	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 12:09	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 12:09	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 12:09	75-01-4	
cis-1,2-Dichloroethene	**0.40J**	ug/L	1.0	0.27	1		11/01/19 12:09	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 12:09	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 12:09	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:09	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 12:09	103-65-1	
o-Xylene	**1.2**	ug/L	1.0	0.26	1		11/01/19 12:09	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 12:09	99-87-6	
sec-Butylbenzene	**1.2J**	ug/L	5.0	0.85	1		11/01/19 12:09	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 12:09	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 12:09	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 12:09	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/01/19 12:09	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/01/19 12:09	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/01/19 12:09	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**8.6J**	mg/L	10.0	2.5	5		10/31/19 18:26	16887-00-6	D3
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 18:26	14797-55-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 18:26	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**424**	mg/L	117	35.2	5		11/12/19 10:57		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:38	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**80.7**	mg/L	50.0	14.7	1	11/11/19 06:26	11/11/19 08:50		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW4 **Lab ID: 40198289004** Collected: 10/30/19 11:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:35	7440-38-2	
Barium	**78.6**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:35	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:35	7440-43-9	
Chromium	**5.9J**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:35	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:35	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:35	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:35	7440-22-4	
Total Hardness by 2340B	**69500**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:35		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:23	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.033**	ug/L	0.029	0.0057	1	11/01/19 09:00	11/04/19 21:19	83-32-9	
Acenaphthylene	**0.017J**	ug/L	0.023	0.0047	1	11/01/19 09:00	11/04/19 21:19	208-96-8	
Anthracene	**<0.0099**	ug/L	0.049	0.0099	1	11/01/19 09:00	11/04/19 21:19	120-12-7	
Benzo(a)anthracene	**0.0090J**	ug/L	0.036	0.0071	1	11/01/19 09:00	11/04/19 21:19	56-55-3	
Benzo(a)pyrene	**0.014J**	ug/L	0.050	0.0099	1	11/01/19 09:00	11/04/19 21:19	50-32-8	
Benzo(b)fluoranthene	**0.025J**	ug/L	0.027	0.0054	1	11/01/19 09:00	11/04/19 21:19	205-99-2	
Benzo(g,h,i)perylene	**0.018J**	ug/L	0.032	0.0064	1	11/01/19 09:00	11/04/19 21:19	191-24-2	
Benzo(k)fluoranthene	**0.016J**	ug/L	0.036	0.0071	1	11/01/19 09:00	11/04/19 21:19	207-08-9	
Chrysene	**0.016J**	ug/L	0.062	0.012	1	11/01/19 09:00	11/04/19 21:19	218-01-9	
Dibenz(a,h)anthracene	**<0.0095**	ug/L	0.047	0.0095	1	11/01/19 09:00	11/04/19 21:19	53-70-3	
Fluoranthene	**<0.010**	ug/L	0.050	0.010	1	11/01/19 09:00	11/04/19 21:19	206-44-0	
Fluorene	**0.13**	ug/L	0.038	0.0075	1	11/01/19 09:00	11/04/19 21:19	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.017**	ug/L	0.083	0.017	1	11/01/19 09:00	11/04/19 21:19	193-39-5	
1-Methylnaphthalene	**3.2**	ug/L	0.028	0.0056	1	11/01/19 09:00	11/04/19 21:19	90-12-0	
2-Methylnaphthalene	**4.5**	ug/L	0.023	0.0046	1	11/01/19 09:00	11/04/19 21:19	91-57-6	
Naphthalene	**2.5**	ug/L	0.086	0.017	1	11/01/19 09:00	11/04/19 21:19	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.065	0.013	1	11/01/19 09:00	11/04/19 21:19	85-01-8	
Pyrene	**0.010J**	ug/L	0.036	0.0072	1	11/01/19 09:00	11/04/19 21:19	129-00-0	B
Total PAHs	**10.5**	ug/L			1	11/01/19 09:00	11/04/19 21:19		
Surrogates									
2-Fluorobiphenyl (S)	60	%	30-85		1	11/01/19 09:00	11/04/19 21:19	321-60-8	
Terphenyl-d14 (S)	75	%	10-120		1	11/01/19 09:00	11/04/19 21:19	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:31	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:31	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:31	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 12:31	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:31	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:31	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 12:31	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 12:31	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 12:31	96-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW4 **Lab ID: 40198289004** Collected: 10/30/19 11:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 12:31	120-82-1	
1,2,4-Trimethylbenzene	**6.8**	ug/L	2.8	0.84	1		11/01/19 12:31	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 12:31	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 12:31	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:31	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:31	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:31	78-87-5	
1,3,5-Trimethylbenzene	**2.1J**	ug/L	2.9	0.87	1		11/01/19 12:31	108-67-8	
1,3-Dichlorobenzene	**2.5**	ug/L	2.1	0.63	1		11/01/19 12:31	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 12:31	142-28-9	
1,4-Dichlorobenzene	**9.9**	ug/L	3.1	0.94	1		11/01/19 12:31	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 12:31	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 12:31	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 12:31	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 12:31	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:31	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 12:31	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 12:31	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 12:31	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 12:31	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 12:31	56-23-5	
Chlorobenzene	**7.7**	ug/L	2.4	0.71	1		11/01/19 12:31	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 12:31	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 12:31	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 12:31	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 12:31	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 12:31	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 12:31	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 12:31	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 12:31	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 12:31	87-68-3	
Isopropylbenzene (Cumene)	**1.4J**	ug/L	5.0	0.39	1		11/01/19 12:31	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 12:31	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 12:31	75-09-2	
Naphthalene	**3.7J**	ug/L	5.0	1.2	1		11/01/19 12:31	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 12:31	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 12:31	127-18-4	
Toluene	**0.20J**	ug/L	5.0	0.17	1		11/01/19 12:31	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 12:31	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 12:31	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 12:31	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:31	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 12:31	10061-01-5	
m&p-Xylene	**0.72J**	ug/L	2.0	0.47	1		11/01/19 12:31	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:31	104-51-8	
n-Propylbenzene	**1.4J**	ug/L	5.0	0.81	1		11/01/19 12:31	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW4 **Lab ID: 40198289004** Collected: 10/30/19 11:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
o-Xylene	**1.4**	ug/L	1.0	0.26	1		11/01/19 12:31	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 12:31	99-87-6	
sec-Butylbenzene	**1.2J**	ug/L	5.0	0.85	1		11/01/19 12:31	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 12:31	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 12:31	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 12:31	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/01/19 12:31	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/01/19 12:31	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 12:31	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**5.1J**	mg/L	10.0	2.5	5		10/31/19 18:39	16887-00-6	D3
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 18:39	14797-55-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 18:39	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**150**	mg/L	117	35.2	5		11/12/19 11:00		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:39	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**65.6**	mg/L	50.0	14.7	1	11/11/19 06:26	11/11/19 08:50		

Sample: MW4A **Lab ID: 40198289005** Collected: 10/30/19 11:45 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:37	7440-38-2	
Barium	**98.4**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:37	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:37	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:37	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:37	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:37	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:37	7440-22-4	
Total Hardness by 2340B	**195000**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:37		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:25	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW4A **Lab ID: 40198289005** Collected: 10/30/19 11:45 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	11/01/19 09:00	11/04/19 19:06	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	11/01/19 09:00	11/04/19 19:06	208-96-8	
Anthracene	**<0.0096**	ug/L	0.048	0.0096	1	11/01/19 09:00	11/04/19 19:06	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.035	0.0069	1	11/01/19 09:00	11/04/19 19:06	56-55-3	
Benzo(a)pyrene	**<0.0097**	ug/L	0.048	0.0097	1	11/01/19 09:00	11/04/19 19:06	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.026	0.0053	1	11/01/19 09:00	11/04/19 19:06	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	11/01/19 09:00	11/04/19 19:06	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.035	0.0069	1	11/01/19 09:00	11/04/19 19:06	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	11/01/19 09:00	11/04/19 19:06	218-01-9	
Dibenz(a,h)anthracene	**<0.0092**	ug/L	0.046	0.0092	1	11/01/19 09:00	11/04/19 19:06	53-70-3	
Fluoranthene	**<0.0098**	ug/L	0.049	0.0098	1	11/01/19 09:00	11/04/19 19:06	206-44-0	
Fluorene	**<0.0073**	ug/L	0.037	0.0073	1	11/01/19 09:00	11/04/19 19:06	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.081	0.016	1	11/01/19 09:00	11/04/19 19:06	193-39-5	
1-Methylnaphthalene	**0.013J**	ug/L	0.027	0.0054	1	11/01/19 09:00	11/04/19 19:06	90-12-0	
2-Methylnaphthalene	**0.0070J**	ug/L	0.022	0.0045	1	11/01/19 09:00	11/04/19 19:06	91-57-6	
Naphthalene	**<0.017**	ug/L	0.084	0.017	1	11/01/19 09:00	11/04/19 19:06	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	11/01/19 09:00	11/04/19 19:06	85-01-8	
Pyrene	**0.0098J**	ug/L	0.035	0.0070	1	11/01/19 09:00	11/04/19 19:06	129-00-0	B
Total PAHs	**0.058**	ug/L			1	11/01/19 09:00	11/04/19 19:06		
Surrogates									
2-Fluorobiphenyl (S)	44	%	30-85		1	11/01/19 09:00	11/04/19 19:06	321-60-8	
Terphenyl-d14 (S)	11	%	10-120		1	11/01/19 09:00	11/04/19 19:06	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:54	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:54	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:54	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 12:54	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:54	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:54	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 12:54	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 12:54	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 12:54	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 12:54	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 12:54	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 12:54	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 12:54	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:54	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:54	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 12:54	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 12:54	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 12:54	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 12:54	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 12:54	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 12:54	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 12:54	95-49-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW4A **Lab ID: 40198289005** Collected: 10/30/19 11:45 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 12:54	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 12:54	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 12:54	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 12:54	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 12:54	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 12:54	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 12:54	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 12:54	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:54	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 12:54	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 12:54	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 12:54	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 12:54	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 12:54	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 12:54	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 12:54	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 12:54	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 12:54	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 12:54	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 12:54	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 12:54	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 12:54	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 12:54	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 12:54	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 12:54	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 12:54	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 12:54	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 12:54	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 12:54	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 12:54	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 12:54	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 12:54	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 12:54	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 12:54	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 12:54	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 12:54	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 12:54	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 12:54	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 12:54	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		11/01/19 12:54	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/01/19 12:54	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 12:54	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**3.8J**	mg/L	10.0	2.5	5		10/31/19 18:53	16887-00-6	D3

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW4A **Lab ID: 40198289005** Collected: 10/30/19 11:45 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 18:53	14797-55-8	D3
Sulfate	**5.9J**	mg/L	15.0	5.0	5		10/31/19 18:53	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**215**	mg/L	23.5	7.0	1		11/12/19 11:00		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:40	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**78.1**	mg/L	52.6	15.5	1	11/15/19 05:52	11/15/19 08:30		

Sample: MW5 **Lab ID: 40198289006** Collected: 10/30/19 12:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:39	7440-38-2	
Barium	**54.6**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:39	7440-39-3	
Cadmium	**3.4J**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:39	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:39	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:39	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:39	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:39	7440-22-4	
Total Hardness by 2340B	**75600**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:39		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:28	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0055**	ug/L	0.028	0.0055	1	11/01/19 09:00	11/04/19 19:22	83-32-9	
Acenaphthylene	**<0.0045**	ug/L	0.023	0.0045	1	11/01/19 09:00	11/04/19 19:22	208-96-8	
Anthracene	**<0.0095**	ug/L	0.048	0.0095	1	11/01/19 09:00	11/04/19 19:22	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.034	0.0069	1	11/01/19 09:00	11/04/19 19:22	56-55-3	
Benzo(a)pyrene	**<0.0096**	ug/L	0.048	0.0096	1	11/01/19 09:00	11/04/19 19:22	50-32-8	
Benzo(b)fluoranthene	**<0.0052**	ug/L	0.026	0.0052	1	11/01/19 09:00	11/04/19 19:22	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	11/01/19 09:00	11/04/19 19:22	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.034	0.0069	1	11/01/19 09:00	11/04/19 19:22	207-08-9	
Chrysene	**<0.012**	ug/L	0.059	0.012	1	11/01/19 09:00	11/04/19 19:22	218-01-9	
Dibenz(a,h)anthracene	**<0.0091**	ug/L	0.046	0.0091	1	11/01/19 09:00	11/04/19 19:22	53-70-3	
Fluoranthene	**<0.0097**	ug/L	0.048	0.0097	1	11/01/19 09:00	11/04/19 19:22	206-44-0	
Fluorene	**<0.0072**	ug/L	0.036	0.0072	1	11/01/19 09:00	11/04/19 19:22	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.080	0.016	1	11/01/19 09:00	11/04/19 19:22	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW5 **Lab ID: 40198289006** Collected: 10/30/19 12:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	11/01/19 09:00	11/04/19 19:22	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	11/01/19 09:00	11/04/19 19:22	91-57-6	
Naphthalene	**<0.017**	ug/L	0.083	0.017	1	11/01/19 09:00	11/04/19 19:22	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	11/01/19 09:00	11/04/19 19:22	85-01-8	
Pyrene	**0.010J**	ug/L	0.035	0.0070	1	11/01/19 09:00	11/04/19 19:22	129-00-0	B
Total PAHs	**0.035**	ug/L			1	11/01/19 09:00	11/04/19 19:22		
Surrogates									
2-Fluorobiphenyl (S)	52	%	30-85		1	11/01/19 09:00	11/04/19 19:22	321-60-8	
Terphenyl-d14 (S)	33	%	10-120		1	11/01/19 09:00	11/04/19 19:22	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 10:39	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 10:39	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 10:39	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 10:39	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 10:39	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 10:39	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 10:39	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 10:39	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 10:39	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 10:39	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 10:39	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 10:39	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 10:39	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 10:39	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 10:39	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 10:39	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 10:39	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 10:39	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 10:39	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 10:39	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 10:39	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 10:39	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 10:39	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 10:39	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 10:39	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 10:39	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 10:39	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 10:39	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 10:39	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 10:39	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 10:39	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 10:39	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 10:39	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 10:39	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 10:39	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW5 **Lab ID: 40198289006** Collected: 10/30/19 12:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 10:39	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 10:39	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 10:39	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 10:39	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 10:39	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 10:39	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 10:39	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 10:39	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 10:39	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 10:39	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 10:39	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 10:39	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 10:39	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 10:39	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 10:39	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 10:39	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 10:39	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 10:39	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 10:39	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 10:39	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 10:39	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 10:39	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 10:39	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 10:39	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 10:39	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 10:39	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/01/19 10:39	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/01/19 10:39	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 10:39	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.8J**	mg/L	10.0	2.5	5		10/31/19 19:45	16887-00-6	D3
Nitrate as N	**0.70J**	mg/L	1.1	0.38	5		10/31/19 19:45	14797-55-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 19:45	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**200**	mg/L	117	35.2	5		11/12/19 11:01		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:41	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**44.1J**	mg/L	52.6	15.5	1	11/15/19 05:52	11/15/19 08:30		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW6 **Lab ID: 40198289007** Collected: 10/30/19 12:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**10.2J**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:47	7440-38-2	
Barium	**26.6**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:47	7440-39-3	
Cadmium	**2.9J**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:47	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:47	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:47	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:47	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:47	7440-22-4	
Total Hardness by 2340B	**125000**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:47		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:30	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	11/04/19 08:59	11/05/19 13:49	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	11/04/19 08:59	11/05/19 13:49	208-96-8	
Anthracene	**<0.0096**	ug/L	0.048	0.0096	1	11/04/19 08:59	11/05/19 13:49	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.035	0.0069	1	11/04/19 08:59	11/05/19 13:49	56-55-3	
Benzo(a)pyrene	**<0.0097**	ug/L	0.048	0.0097	1	11/04/19 08:59	11/05/19 13:49	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.026	0.0053	1	11/04/19 08:59	11/05/19 13:49	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	11/04/19 08:59	11/05/19 13:49	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.035	0.0069	1	11/04/19 08:59	11/05/19 13:49	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	11/04/19 08:59	11/05/19 13:49	218-01-9	
Dibenz(a,h)anthracene	**<0.0092**	ug/L	0.046	0.0092	1	11/04/19 08:59	11/05/19 13:49	53-70-3	
Fluoranthene	**<0.0098**	ug/L	0.049	0.0098	1	11/04/19 08:59	11/05/19 13:49	206-44-0	
Fluorene	**<0.0073**	ug/L	0.037	0.0073	1	11/04/19 08:59	11/05/19 13:49	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.081	0.016	1	11/04/19 08:59	11/05/19 13:49	193-39-5	
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	11/04/19 08:59	11/05/19 13:49	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	11/04/19 08:59	11/05/19 13:49	91-57-6	
Naphthalene	**<0.017**	ug/L	0.084	0.017	1	11/04/19 08:59	11/05/19 13:49	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	11/04/19 08:59	11/05/19 13:49	85-01-8	
Pyrene	**<0.0070**	ug/L	0.035	0.0070	1	11/04/19 08:59	11/05/19 13:49	129-00-0	
Total PAHs	**0.017**	ug/L			1	11/04/19 08:59	11/05/19 13:49		
Surrogates									
2-Fluorobiphenyl (S)	52	%	30-85		1	11/04/19 08:59	11/05/19 13:49	321-60-8	
Terphenyl-d14 (S)	85	%	10-120		1	11/04/19 08:59	11/05/19 13:49	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 11:01	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 11:01	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 11:01	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 11:01	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 11:01	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 11:01	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 11:01	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 11:01	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 11:01	96-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW6 **Lab ID: 40198289007** Collected: 10/30/19 12:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 11:01	120-82-1	
1,2,4-Trimethylbenzene	**2.8**	ug/L	2.8	0.84	1		11/01/19 11:01	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 11:01	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 11:01	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 11:01	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 11:01	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 11:01	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 11:01	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 11:01	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 11:01	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 11:01	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 11:01	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 11:01	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 11:01	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 11:01	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 11:01	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 11:01	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 11:01	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 11:01	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 11:01	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 11:01	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 11:01	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 11:01	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 11:01	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 11:01	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 11:01	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 11:01	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 11:01	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 11:01	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 11:01	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 11:01	87-68-3	
Isopropylbenzene (Cumene)	**1.2J**	ug/L	5.0	0.39	1		11/01/19 11:01	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 11:01	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 11:01	75-09-2	
Naphthalene	**2.6J**	ug/L	5.0	1.2	1		11/01/19 11:01	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 11:01	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 11:01	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 11:01	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 11:01	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 11:01	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 11:01	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 11:01	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 11:01	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 11:01	179601-23-1	
n-Butylbenzene	**1.2J**	ug/L	2.4	0.71	1		11/01/19 11:01	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 11:01	103-65-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW6 **Lab ID: 40198289007** Collected: 10/30/19 12:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
o-Xylene	**0.31J**	ug/L	1.0	0.26	1		11/01/19 11:01	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 11:01	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 11:01	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 11:01	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 11:01	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 11:01	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		11/01/19 11:01	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/01/19 11:01	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/01/19 11:01	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**3.3J**	mg/L	10.0	2.5	5		10/31/19 19:59	16887-00-6	D3
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 19:59	14797-55-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 19:59	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**138**	mg/L	117	35.2	5		11/12/19 11:01		M0
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.28J**	mg/L	0.87	0.26	1		11/20/19 12:42	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**63.5**	mg/L	50.0	14.7	1	11/15/19 05:52	11/15/19 08:31		

Sample: MW7 **Lab ID: 40198289008** Collected: 10/30/19 11:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:49	7440-38-2	
Barium	**18.8**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:49	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:49	7440-43-9	
Chromium	**8.6J**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:49	7440-47-3	
Lead	**20.8**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:49	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:49	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:49	7440-22-4	
Total Hardness by 2340B	**72100**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:49		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:32	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW7 **Lab ID: 40198289008** Collected: 10/30/19 11:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0055**	ug/L	0.028	0.0055	1	11/04/19 08:59	11/05/19 14:07	83-32-9	
Acenaphthylene	**<0.0045**	ug/L	0.023	0.0045	1	11/04/19 08:59	11/05/19 14:07	208-96-8	
Anthracene	**<0.0095**	ug/L	0.048	0.0095	1	11/04/19 08:59	11/05/19 14:07	120-12-7	
Benzo(a)anthracene	**0.026J**	ug/L	0.034	0.0069	1	11/04/19 08:59	11/05/19 14:07	56-55-3	
Benzo(a)pyrene	**0.042J**	ug/L	0.048	0.0096	1	11/04/19 08:59	11/05/19 14:07	50-32-8	
Benzo(b)fluoranthene	**0.051**	ug/L	0.026	0.0052	1	11/04/19 08:59	11/05/19 14:07	205-99-2	
Benzo(g,h,i)perylene	**0.042**	ug/L	0.031	0.0062	1	11/04/19 08:59	11/05/19 14:07	191-24-2	
Benzo(k)fluoranthene	**0.022J**	ug/L	0.034	0.0069	1	11/04/19 08:59	11/05/19 14:07	207-08-9	
Chrysene	**0.040J**	ug/L	0.059	0.012	1	11/04/19 08:59	11/05/19 14:07	218-01-9	
Dibenz(a,h)anthracene	**<0.0091**	ug/L	0.046	0.0091	1	11/04/19 08:59	11/05/19 14:07	53-70-3	
Fluoranthene	**0.035J**	ug/L	0.048	0.0097	1	11/04/19 08:59	11/05/19 14:07	206-44-0	B
Fluorene	**<0.0072**	ug/L	0.036	0.0072	1	11/04/19 08:59	11/05/19 14:07	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.029J**	ug/L	0.080	0.016	1	11/04/19 08:59	11/05/19 14:07	193-39-5	
1-Methylnaphthalene	**0.0057J**	ug/L	0.027	0.0054	1	11/04/19 08:59	11/05/19 14:07	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	11/04/19 08:59	11/05/19 14:07	91-57-6	
Naphthalene	**<0.017**	ug/L	0.083	0.017	1	11/04/19 08:59	11/05/19 14:07	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	11/04/19 08:59	11/05/19 14:07	85-01-8	
Pyrene	**0.047**	ug/L	0.035	0.0070	1	11/04/19 08:59	11/05/19 14:07	129-00-0	B
Total PAHs	**0.36**	ug/L			1	11/04/19 08:59	11/05/19 14:07		
Surrogates									
2-Fluorobiphenyl (S)	41	%	30-85		1	11/04/19 08:59	11/05/19 14:07	321-60-8	
Terphenyl-d14 (S)	20	%	10-120		1	11/04/19 08:59	11/05/19 14:07	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 13:16	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 13:16	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 13:16	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 13:16	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 13:16	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 13:16	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 13:16	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 13:16	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 13:16	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 13:16	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 13:16	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 13:16	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 13:16	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 13:16	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 13:16	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 13:16	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 13:16	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 13:16	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 13:16	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 13:16	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 13:16	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 13:16	95-49-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW7 **Lab ID: 40198289008** Collected: 10/30/19 11:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 13:16	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 13:16	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 13:16	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 13:16	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 13:16	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 13:16	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 13:16	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 13:16	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 13:16	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 13:16	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 13:16	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 13:16	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 13:16	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 13:16	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 13:16	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 13:16	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 13:16	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 13:16	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 13:16	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 13:16	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 13:16	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 13:16	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 13:16	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 13:16	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 13:16	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 13:16	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 13:16	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 13:16	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 13:16	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 13:16	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 13:16	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 13:16	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 13:16	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 13:16	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 13:16	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 13:16	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 13:16	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 13:16	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 13:16	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		11/01/19 13:16	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/01/19 13:16	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 13:16	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**<2.5**	mg/L	10.0	2.5	5		10/31/19 20:12	16887-00-6	D3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW7 **Lab ID: 40198289008** Collected: 10/30/19 11:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 20:12	14797-55-8	D3
Sulfate	**9.6J**	mg/L	15.0	5.0	5		10/31/19 20:12	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**127**	mg/L	117	35.2	5		11/12/19 11:03		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:44	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**130**	mg/L	50.0	14.7	1	11/15/19 05:52	11/15/19 08:31		

Sample: MW8 **Lab ID: 40198289009** Collected: 10/30/19 10:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:52	7440-38-2	
Barium	**23.7**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:52	7440-39-3	
Cadmium	**1.6J**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:52	7440-43-9	
Chromium	**3.8J**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:52	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:52	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:52	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:52	7440-22-4	
Total Hardness by 2340B	**12000**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:52		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:34	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	11/04/19 08:59	11/05/19 11:59	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	11/04/19 08:59	11/05/19 11:59	208-96-8	
Anthracene	**<0.0097**	ug/L	0.048	0.0097	1	11/04/19 08:59	11/05/19 11:59	120-12-7	
Benzo(a)anthracene	**<0.0070**	ug/L	0.035	0.0070	1	11/04/19 08:59	11/05/19 11:59	56-55-3	
Benzo(a)pyrene	**<0.0098**	ug/L	0.049	0.0098	1	11/04/19 08:59	11/05/19 11:59	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.027	0.0053	1	11/04/19 08:59	11/05/19 11:59	205-99-2	
Benzo(g,h,i)perylene	**<0.0063**	ug/L	0.031	0.0063	1	11/04/19 08:59	11/05/19 11:59	191-24-2	
Benzo(k)fluoranthene	**<0.0070**	ug/L	0.035	0.0070	1	11/04/19 08:59	11/05/19 11:59	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	11/04/19 08:59	11/05/19 11:59	218-01-9	
Dibenz(a,h)anthracene	**<0.0093**	ug/L	0.046	0.0093	1	11/04/19 08:59	11/05/19 11:59	53-70-3	
Fluoranthene	**<0.0099**	ug/L	0.049	0.0099	1	11/04/19 08:59	11/05/19 11:59	206-44-0	
Fluorene	**<0.0074**	ug/L	0.037	0.0074	1	11/04/19 08:59	11/05/19 11:59	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.082	0.016	1	11/04/19 08:59	11/05/19 11:59	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW8 **Lab ID: 40198289009** Collected: 10/30/19 10:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
1-Methylnaphthalene	**0.0079J**	ug/L	0.027	0.0055	1	11/04/19 08:59	11/05/19 11:59	90-12-0	
2-Methylnaphthalene	**0.0077J**	ug/L	0.023	0.0045	1	11/04/19 08:59	11/05/19 11:59	91-57-6	
Naphthalene	**<0.017**	ug/L	0.085	0.017	1	11/04/19 08:59	11/05/19 11:59	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.064	0.013	1	11/04/19 08:59	11/05/19 11:59	85-01-8	
Pyrene	**<0.0071**	ug/L	0.035	0.0071	1	11/04/19 08:59	11/05/19 11:59	129-00-0	
Total PAHs	**0.037**	ug/L			1	11/04/19 08:59	11/05/19 11:59		
Surrogates									
2-Fluorobiphenyl (S)	44	%	30-85		1	11/04/19 08:59	11/05/19 11:59	321-60-8	
Terphenyl-d14 (S)	11	%	10-120		1	11/04/19 08:59	11/05/19 11:59	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 13:39	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 13:39	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 13:39	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 13:39	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 13:39	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 13:39	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 13:39	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 13:39	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 13:39	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 13:39	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 13:39	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 13:39	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 13:39	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 13:39	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 13:39	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 13:39	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 13:39	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 13:39	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 13:39	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 13:39	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 13:39	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 13:39	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 13:39	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 13:39	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 13:39	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 13:39	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 13:39	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 13:39	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 13:39	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 13:39	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 13:39	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 13:39	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 13:39	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 13:39	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 13:39	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW8 **Lab ID: 40198289009** Collected: 10/30/19 10:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 13:39	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 13:39	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 13:39	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 13:39	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 13:39	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 13:39	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 13:39	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 13:39	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 13:39	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 13:39	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 13:39	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 13:39	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 13:39	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 13:39	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 13:39	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 13:39	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 13:39	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 13:39	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 13:39	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 13:39	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 13:39	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 13:39	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 13:39	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 13:39	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 13:39	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 13:39	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		11/01/19 13:39	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/01/19 13:39	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/01/19 13:39	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**<2.5**	mg/L	10.0	2.5	5		10/31/19 20:25	16887-00-6	D3
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 20:25	14797-55-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 20:25	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**<7.0**	mg/L	23.5	7.0	1		11/12/19 13:34		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:45	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**158**	mg/L	50.0	14.7	1	11/15/19 05:52	11/15/19 08:31		

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW9 **Lab ID: 40198289010** Collected: 10/30/19 09:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:54	7440-38-2	
Barium	**27.9**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:54	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:54	7440-43-9	
Chromium	**127**	ug/L	10.0	2.5	1	11/06/19 06:39	11/07/19 14:54	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/06/19 06:39	11/07/19 14:54	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:54	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:54	7440-22-4	
Total Hardness by 2340B	**28200**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:54		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:37	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	11/04/19 08:59	11/05/19 12:18	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	11/04/19 08:59	11/05/19 12:18	208-96-8	
Anthracene	**<0.0096**	ug/L	0.048	0.0096	1	11/04/19 08:59	11/05/19 12:18	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.035	0.0069	1	11/04/19 08:59	11/05/19 12:18	56-55-3	
Benzo(a)pyrene	**<0.0097**	ug/L	0.048	0.0097	1	11/04/19 08:59	11/05/19 12:18	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.026	0.0053	1	11/04/19 08:59	11/05/19 12:18	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	11/04/19 08:59	11/05/19 12:18	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.035	0.0069	1	11/04/19 08:59	11/05/19 12:18	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	11/04/19 08:59	11/05/19 12:18	218-01-9	
Dibenz(a,h)anthracene	**<0.0092**	ug/L	0.046	0.0092	1	11/04/19 08:59	11/05/19 12:18	53-70-3	
Fluoranthene	**<0.0098**	ug/L	0.049	0.0098	1	11/04/19 08:59	11/05/19 12:18	206-44-0	
Fluorene	**<0.0073**	ug/L	0.037	0.0073	1	11/04/19 08:59	11/05/19 12:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.081	0.016	1	11/04/19 08:59	11/05/19 12:18	193-39-5	
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	11/04/19 08:59	11/05/19 12:18	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	11/04/19 08:59	11/05/19 12:18	91-57-6	
Naphthalene	**<0.017**	ug/L	0.084	0.017	1	11/04/19 08:59	11/05/19 12:18	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	11/04/19 08:59	11/05/19 12:18	85-01-8	
Pyrene	**<0.0070**	ug/L	0.035	0.0070	1	11/04/19 08:59	11/05/19 12:18	129-00-0	
Total PAHs	**0.011**	ug/L			1	11/04/19 08:59	11/05/19 12:18		
Surrogates									
2-Fluorobiphenyl (S)	51	%	30-85		1	11/04/19 08:59	11/05/19 12:18	321-60-8	
Terphenyl-d14 (S)	62	%	10-120		1	11/04/19 08:59	11/05/19 12:18	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 14:01	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 14:01	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 14:01	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 14:01	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 14:01	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 14:01	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 14:01	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 14:01	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 14:01	96-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW9 **Lab ID: 40198289010** Collected: 10/30/19 09:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 14:01	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 14:01	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 14:01	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 14:01	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 14:01	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 14:01	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 14:01	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 14:01	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 14:01	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 14:01	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 14:01	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 14:01	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 14:01	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 14:01	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 14:01	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 14:01	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 14:01	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 14:01	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 14:01	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 14:01	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 14:01	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 14:01	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 14:01	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 14:01	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 14:01	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 14:01	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 14:01	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 14:01	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 14:01	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 14:01	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 14:01	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/01/19 14:01	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 14:01	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 14:01	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 14:01	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 14:01	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 14:01	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 14:01	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 14:01	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 14:01	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 14:01	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 14:01	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 14:01	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 14:01	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 14:01	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 14:01	103-65-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW9 **Lab ID: 40198289010** Collected: 10/30/19 09:30 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 14:01	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 14:01	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 14:01	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 14:01	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 14:01	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 14:01	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/01/19 14:01	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/01/19 14:01	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 14:01	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**<2.5**	mg/L	10.0	2.5	5		10/31/19 20:38	16887-00-6	D3
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 20:38	14797-55-8	D3
Sulfate	**14.7J**	mg/L	15.0	5.0	5		10/31/19 20:38	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**24.3**	mg/L	23.5	7.0	1		11/12/19 11:04		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		11/20/19 12:46	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**48.4J**	mg/L	50.0	14.7	1	11/15/19 05:52	11/15/19 08:31		

Sample: MW10 **Lab ID: 40198289011** Collected: 10/30/19 09:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/06/19 06:39	11/07/19 14:57	7440-38-2	
Barium	**97.6**	ug/L	5.0	1.5	1	11/06/19 06:39	11/07/19 14:57	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/06/19 06:39	11/07/19 14:57	7440-43-9	
Chromium	**<5.1**	ug/L	20.0	5.1	2	11/06/19 06:39	11/08/19 09:37	7440-47-3	D3
Lead	**<11.8**	ug/L	39.4	11.8	2	11/06/19 06:39	11/08/19 09:37	7439-92-1	D3
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/06/19 06:39	11/07/19 14:57	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/06/19 06:39	11/07/19 14:57	7440-22-4	
Total Hardness by 2340B	**334000**	ug/L	2000	150	1	11/06/19 06:39	11/07/19 14:57		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/08/19 10:10	11/11/19 09:39	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW10 **Lab ID: 40198289011** Collected: 10/30/19 09:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0058**	ug/L	0.029	0.0058	1	11/04/19 08:59	11/05/19 12:36	83-32-9	
Acenaphthylene	**<0.0047**	ug/L	0.024	0.0047	1	11/04/19 08:59	11/05/19 12:36	208-96-8	
Anthracene	**<0.010**	ug/L	0.050	0.010	1	11/04/19 08:59	11/05/19 12:36	120-12-7	
Benzo(a)anthracene	**<0.0072**	ug/L	0.036	0.0072	1	11/04/19 08:59	11/05/19 12:36	56-55-3	
Benzo(a)pyrene	**<0.010**	ug/L	0.050	0.010	1	11/04/19 08:59	11/05/19 12:36	50-32-8	
Benzo(b)fluoranthene	**<0.0055**	ug/L	0.027	0.0055	1	11/04/19 08:59	11/05/19 12:36	205-99-2	
Benzo(g,h,i)perylene	**<0.0065**	ug/L	0.032	0.0065	1	11/04/19 08:59	11/05/19 12:36	191-24-2	
Benzo(k)fluoranthene	**<0.0072**	ug/L	0.036	0.0072	1	11/04/19 08:59	11/05/19 12:36	207-08-9	
Chrysene	**<0.012**	ug/L	0.062	0.012	1	11/04/19 08:59	11/05/19 12:36	218-01-9	
Dibenz(a,h)anthracene	**<0.0095**	ug/L	0.048	0.0095	1	11/04/19 08:59	11/05/19 12:36	53-70-3	
Fluoranthene	**<0.010**	ug/L	0.051	0.010	1	11/04/19 08:59	11/05/19 12:36	206-44-0	
Fluorene	**<0.0076**	ug/L	0.038	0.0076	1	11/04/19 08:59	11/05/19 12:36	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.017**	ug/L	0.084	0.017	1	11/04/19 08:59	11/05/19 12:36	193-39-5	
1-Methylnaphthalene	**0.0063J**	ug/L	0.028	0.0056	1	11/04/19 08:59	11/05/19 12:36	90-12-0	
2-Methylnaphthalene	**0.0051J**	ug/L	0.023	0.0047	1	11/04/19 08:59	11/05/19 12:36	91-57-6	
Naphthalene	**<0.017**	ug/L	0.087	0.017	1	11/04/19 08:59	11/05/19 12:36	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.066	0.013	1	11/04/19 08:59	11/05/19 12:36	85-01-8	
Pyrene	**<0.0073**	ug/L	0.036	0.0073	1	11/04/19 08:59	11/05/19 12:36	129-00-0	
Total PAHs	**0.029**	ug/L			1	11/04/19 08:59	11/05/19 12:36		
Surrogates									
2-Fluorobiphenyl (S)	53	%	30-85		1	11/04/19 08:59	11/05/19 12:36	321-60-8	
Terphenyl-d14 (S)	42	%	10-120		1	11/04/19 08:59	11/05/19 12:36	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 14:23	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/01/19 14:23	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 14:23	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/01/19 14:23	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/01/19 14:23	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 14:23	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/01/19 14:23	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/01/19 14:23	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/01/19 14:23	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/01/19 14:23	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/01/19 14:23	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/01/19 14:23	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/01/19 14:23	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 14:23	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 14:23	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/01/19 14:23	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/01/19 14:23	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/01/19 14:23	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/01/19 14:23	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/01/19 14:23	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/01/19 14:23	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/01/19 14:23	95-49-8	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW10 **Lab ID: 40198289011** Collected: 10/30/19 09:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/01/19 14:23	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/01/19 14:23	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/01/19 14:23	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/01/19 14:23	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/01/19 14:23	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/01/19 14:23	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/01/19 14:23	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 14:23	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 14:23	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/01/19 14:23	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/01/19 14:23	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/01/19 14:23	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/01/19 14:23	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/01/19 14:23	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/01/19 14:23	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/01/19 14:23	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/01/19 14:23	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 14:23	87-68-3	
Isopropylbenzene (Cumene)	**1.2J**	ug/L	5.0	0.39	1		11/01/19 14:23	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/01/19 14:23	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/01/19 14:23	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/01/19 14:23	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/01/19 14:23	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/01/19 14:23	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/01/19 14:23	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 14:23	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/01/19 14:23	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/01/19 14:23	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/01/19 14:23	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/01/19 14:23	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/01/19 14:23	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/01/19 14:23	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/01/19 14:23	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/01/19 14:23	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/01/19 14:23	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/01/19 14:23	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/01/19 14:23	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/01/19 14:23	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/01/19 14:23	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/01/19 14:23	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/01/19 14:23	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/19 14:23	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**<2.5**	mg/L	10.0	2.5	5		10/31/19 20:51	16887-00-6	D3

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Sample: MW10 **Lab ID: 40198289011** Collected: 10/30/19 09:00 Received: 10/31/19 09:19 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		10/31/19 20:51	14797-55-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		10/31/19 20:51	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**324**	mg/L	117	35.2	5		11/12/19 11:05		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.48J**	mg/L	0.87	0.26	1		11/20/19 12:47	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**145**	mg/L	50.0	14.7	1	11/15/19 05:52	11/15/19 08:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 340138 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1975167 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.084	0.28	11/11/19 09:02	

LABORATORY CONTROL SAMPLE: 1975168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1975169 1975170

Parameter	Units	40198289001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.084	5	5	5.2	5.4	105	109	85-115	4	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 339777 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1973115 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	11/07/19 14:18	
Barium	ug/L	<1.5	5.0	11/07/19 14:18	
Cadmium	ug/L	<1.3	5.0	11/07/19 14:18	
Chromium	ug/L	<2.5	10.0	11/07/19 14:18	
Lead	ug/L	<5.9	19.7	11/07/19 14:18	
Selenium	ug/L	<12.2	40.8	11/07/19 14:18	
Silver	ug/L	<3.2	10.7	11/07/19 14:18	
Total Hardness by 2340B	ug/L	<150	2000	11/07/19 14:18	

LABORATORY CONTROL SAMPLE: 1973116

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	481	96	80-120	
Barium	ug/L	500	481	96	80-120	
Cadmium	ug/L	500	478	96	80-120	
Chromium	ug/L	500	485	97	80-120	
Lead	ug/L	500	479	96	80-120	
Selenium	ug/L	500	481	96	80-120	
Silver	ug/L	250	245	98	80-120	
Total Hardness by 2340B	ug/L		32800			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1973117 1973118

Parameter	Units	40198289001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<8.3	500	500	468	466	94	93	75-125	1	20	
Barium	ug/L	9.7	500	500	493	495	97	97	75-125	0	20	
Cadmium	ug/L	<1.3	500	500	474	472	95	94	75-125	0	20	
Chromium	ug/L	<2.5	500	500	467	461	93	92	75-125	1	20	
Lead	ug/L	<5.9	500	500	468	467	94	93	75-125	0	20	
Selenium	ug/L	<12.2	500	500	458	447	92	89	75-125	2	20	
Silver	ug/L	<3.2	250	250	238	240	95	96	75-125	1	20	
Total Hardness by 2340B	ug/L	21200			52200	52100				0	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 339351 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1970850 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	11/01/19 06:54	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	11/01/19 06:54	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	11/01/19 06:54	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	11/01/19 06:54	
1,1-Dichloroethane	ug/L	<0.27	1.0	11/01/19 06:54	
1,1-Dichloroethene	ug/L	<0.24	1.0	11/01/19 06:54	
1,1-Dichloropropene	ug/L	<0.54	1.8	11/01/19 06:54	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	11/01/19 06:54	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	11/01/19 06:54	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	11/01/19 06:54	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	11/01/19 06:54	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	11/01/19 06:54	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	11/01/19 06:54	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	11/01/19 06:54	
1,2-Dichloroethane	ug/L	<0.28	1.0	11/01/19 06:54	
1,2-Dichloropropane	ug/L	<0.28	1.0	11/01/19 06:54	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	11/01/19 06:54	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	11/01/19 06:54	
1,3-Dichloropropane	ug/L	<0.83	2.8	11/01/19 06:54	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	11/01/19 06:54	
2,2-Dichloropropane	ug/L	<2.3	7.6	11/01/19 06:54	
2-Chlorotoluene	ug/L	<0.93	5.0	11/01/19 06:54	
4-Chlorotoluene	ug/L	<0.76	2.5	11/01/19 06:54	
Benzene	ug/L	<0.25	1.0	11/01/19 06:54	
Bromobenzene	ug/L	<0.24	1.0	11/01/19 06:54	
Bromochloromethane	ug/L	<0.36	5.0	11/01/19 06:54	
Bromodichloromethane	ug/L	<0.36	1.2	11/01/19 06:54	
Bromoform	ug/L	<4.0	13.2	11/01/19 06:54	
Bromomethane	ug/L	<0.97	5.0	11/01/19 06:54	
Carbon tetrachloride	ug/L	<0.17	1.0	11/01/19 06:54	
Chlorobenzene	ug/L	<0.71	2.4	11/01/19 06:54	
Chloroethane	ug/L	<1.3	5.0	11/01/19 06:54	
Chloroform	ug/L	<1.3	5.0	11/01/19 06:54	
Chloromethane	ug/L	<2.2	7.3	11/01/19 06:54	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	11/01/19 06:54	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	11/01/19 06:54	
Dibromochloromethane	ug/L	<2.6	8.7	11/01/19 06:54	
Dibromomethane	ug/L	<0.94	3.1	11/01/19 06:54	
Dichlorodifluoromethane	ug/L	<0.50	5.0	11/01/19 06:54	
Diisopropyl ether	ug/L	<1.9	6.3	11/01/19 06:54	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

METHOD BLANK: 1970850 Matrix: Water

Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.22	1.0	11/01/19 06:54	
Hexachloro-1,3-butadiene	ug/L	1.3J	5.0	11/01/19 06:54	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	11/01/19 06:54	
m&p-Xylene	ug/L	<0.47	2.0	11/01/19 06:54	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	11/01/19 06:54	
Methylene Chloride	ug/L	<0.58	5.0	11/01/19 06:54	
n-Butylbenzene	ug/L	<0.71	2.4	11/01/19 06:54	
n-Propylbenzene	ug/L	<0.81	5.0	11/01/19 06:54	
Naphthalene	ug/L	<1.2	5.0	11/01/19 06:54	
o-Xylene	ug/L	<0.26	1.0	11/01/19 06:54	
p-Isopropyltoluene	ug/L	<0.80	2.7	11/01/19 06:54	
sec-Butylbenzene	ug/L	<0.85	5.0	11/01/19 06:54	
Styrene	ug/L	<0.47	1.6	11/01/19 06:54	
tert-Butylbenzene	ug/L	<0.30	1.0	11/01/19 06:54	
Tetrachloroethene	ug/L	<0.33	1.1	11/01/19 06:54	
Toluene	ug/L	<0.17	5.0	11/01/19 06:54	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	11/01/19 06:54	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	11/01/19 06:54	
Trichloroethene	ug/L	<0.26	1.0	11/01/19 06:54	
Trichlorofluoromethane	ug/L	<0.21	1.0	11/01/19 06:54	
Vinyl chloride	ug/L	<0.17	1.0	11/01/19 06:54	
4-Bromofluorobenzene (S)	%	94	70-130	11/01/19 06:54	
Dibromofluoromethane (S)	%	98	70-130	11/01/19 06:54	
Toluene-d8 (S)	%	102	70-130	11/01/19 06:54	

LABORATORY CONTROL SAMPLE: 1970851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.1	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	44.8	90	70-130	
1,1,2-Trichloroethane	ug/L	50	48.9	98	70-130	
1,1-Dichloroethane	ug/L	50	44.6	89	73-150	
1,1-Dichloroethene	ug/L	50	51.6	103	73-138	
1,2,4-Trichlorobenzene	ug/L	50	50.6	101	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	42.0	84	64-129	
1,2-Dibromoethane (EDB)	ug/L	50	50.4	101	70-130	
1,2-Dichlorobenzene	ug/L	50	48.4	97	70-130	
1,2-Dichloroethane	ug/L	50	43.8	88	75-140	
1,2-Dichloropropane	ug/L	50	43.3	87	73-135	
1,3-Dichlorobenzene	ug/L	50	47.4	95	70-130	
1,4-Dichlorobenzene	ug/L	50	47.8	96	70-130	
Benzene	ug/L	50	45.0	90	70-130	
Bromodichloromethane	ug/L	50	47.5	95	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

LABORATORY CONTROL SAMPLE: 1970851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	50	48.1	96	68-129	
Bromomethane	ug/L	50	35.1	70	18-159	
Carbon tetrachloride	ug/L	50	49.2	98	70-130	
Chlorobenzene	ug/L	50	50.1	100	70-130	
Chloroethane	ug/L	50	41.9	84	53-147	
Chloroform	ug/L	50	43.0	86	74-136	
Chloromethane	ug/L	50	28.0	56	29-115	
cis-1,2-Dichloroethene	ug/L	50	44.6	89	70-130	
cis-1,3-Dichloropropene	ug/L	50	44.4	89	70-130	
Dibromochloromethane	ug/L	50	50.9	102	70-130	
Dichlorodifluoromethane	ug/L	50	46.0	92	10-130	
Ethylbenzene	ug/L	50	52.5	105	80-124	
Isopropylbenzene (Cumene)	ug/L	50	49.7	99	70-130	
m&p-Xylene	ug/L	100	110	110	70-130	
Methyl-tert-butyl ether	ug/L	50	40.1	80	54-137	
Methylene Chloride	ug/L	50	47.0	94	73-138	
o-Xylene	ug/L	50	54.8	110	70-130	
Styrene	ug/L	50	49.7	99	70-130	
Tetrachloroethene	ug/L	50	53.6	107	70-130	
Toluene	ug/L	50	50.3	101	80-126	
trans-1,2-Dichloroethene	ug/L	50	50.0	100	73-145	
trans-1,3-Dichloropropene	ug/L	50	46.7	93	70-130	
Trichloroethene	ug/L	50	48.4	97	70-130	
Trichlorofluoromethane	ug/L	50	45.9	92	76-147	
Vinyl chloride	ug/L	50	38.5	77	51-120	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			96	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971050 1971051

Parameter	Units	40198252001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<2.4	50	50	51.5	49.9	103	100	70-130	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<2.8	50	50	47.7	45.6	95	91	70-130	5	20	
1,1,2-Trichloroethane	ug/L	<5.5	50	50	51.8	50.1	104	100	70-137	3	20	
1,1-Dichloroethane	ug/L	<2.7	50	50	47.3	46.0	95	92	73-153	3	20	
1,1-Dichloroethene	ug/L	<2.4	50	50	55.0	52.9	110	106	73-138	4	20	
1,2,4-Trichlorobenzene	ug/L	<9.5	50	50	54.9	53.4	110	107	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<17.6	50	50	44.5	42.2	89	84	58-129	5	20	
1,2-Dibromoethane (EDB)	ug/L	<8.3	50	50	53.2	51.9	106	104	70-130	3	20	
1,2-Dichlorobenzene	ug/L	<7.1	50	50	51.4	49.7	103	99	70-130	3	20	
1,2-Dichloroethane	ug/L	<2.8	50	50	45.7	43.9	91	88	75-140	4	20	
1,2-Dichloropropane	ug/L	<2.8	50	50	45.9	43.7	92	87	71-138	5	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971050 1971051

Parameter	Units	40198252001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<6.3	50	50	50.2	49.0	100	98	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<9.4	50	50	51.2	49.5	102	99	70-130	3	20	
Benzene	ug/L	<2.5	50	50	47.6	45.9	95	92	70-130	4	20	
Bromodichloromethane	ug/L	<3.6	50	50	49.9	48.1	100	96	70-130	4	20	
Bromoform	ug/L	<39.7	50	50	49.4	47.6	99	95	68-129	4	20	
Bromomethane	ug/L	<9.7	50	50	42.3	39.5	85	79	15-170	7	20	
Carbon tetrachloride	ug/L	<1.7	50	50	51.6	49.5	103	99	70-130	4	20	
Chlorobenzene	ug/L	<7.1	50	50	53.5	51.5	107	103	70-130	4	20	
Chloroethane	ug/L	<13.4	50	50	46.2	43.1	92	86	51-148	7	20	
Chloroform	ug/L	<12.7	50	50	45.3	43.5	86	82	74-136	4	20	
Chloromethane	ug/L	<21.9	50	50	30.2	29.4	60	59	23-115	3	20	
cis-1,2-Dichloroethene	ug/L	7.4J	50	50	56.2	54.8	98	95	70-131	2	20	
cis-1,3-Dichloropropene	ug/L	<36.3	50	50	46.7	45.1	93	90	70-130	4	20	
Dibromochloromethane	ug/L	<26.0	50	50	53.7	51.3	107	103	70-130	4	20	
Dichlorodifluoromethane	ug/L	<5.0	50	50	48.2	46.1	96	92	10-132	4	20	
Ethylbenzene	ug/L	<2.2	50	50	55.2	53.6	110	107	80-125	3	20	
Isopropylbenzene (Cumene)	ug/L	<3.9	50	50	52.5	51.0	105	102	70-130	3	20	
m&p-Xylene	ug/L	<4.7	100	100	116	112	116	112	70-130	3	20	
Methyl-tert-butyl ether	ug/L	<12.5	50	50	42.1	40.8	84	82	51-145	3	20	
Methylene Chloride	ug/L	<5.8	50	50	49.7	48.1	99	96	73-140	3	20	
o-Xylene	ug/L	<2.6	50	50	57.9	55.8	116	112	70-130	4	20	
Styrene	ug/L	<4.7	50	50	52.3	50.7	105	101	70-130	3	20	
Tetrachloroethene	ug/L	611	50	50	761	726	301	230	70-130	5	20	E,M1
Toluene	ug/L	<1.7	50	50	53.3	51.3	107	103	80-131	4	20	
trans-1,2-Dichloroethene	ug/L	<10.9	50	50	53.4	51.7	107	103	73-148	3	20	
trans-1,3-Dichloropropene	ug/L	<43.7	50	50	49.2	47.8	98	96	70-130	3	20	
Trichloroethene	ug/L	5.7J	50	50	57.9	56.5	104	101	70-130	3	20	
Trichlorofluoromethane	ug/L	<2.1	50	50	47.8	46.1	96	92	74-147	4	20	
Vinyl chloride	ug/L	<1.7	50	50	40.9	39.8	82	80	41-129	3	20	
4-Bromofluorobenzene (S)	%						98	99	70-130			
Dibromofluoromethane (S)	%						97	96	70-130			
Toluene-d8 (S)	%						104	103	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 339404 Analysis Method: EPA 8270 by HVI
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006

METHOD BLANK: 1971125 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	11/04/19 13:09	
2-Methylnaphthalene	ug/L	<0.0049	0.024	11/04/19 13:09	
Acenaphthene	ug/L	<0.0061	0.030	11/04/19 13:09	
Acenaphthylene	ug/L	<0.0050	0.025	11/04/19 13:09	
Anthracene	ug/L	0.013J	0.052	11/04/19 13:09	
Benzo(a)anthracene	ug/L	<0.0076	0.038	11/04/19 13:09	
Benzo(a)pyrene	ug/L	<0.011	0.053	11/04/19 13:09	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	11/04/19 13:09	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	11/04/19 13:09	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	11/04/19 13:09	
Chrysene	ug/L	<0.013	0.065	11/04/19 13:09	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	11/04/19 13:09	
Fluoranthene	ug/L	0.014J	0.053	11/04/19 13:09	
Fluorene	ug/L	<0.0080	0.040	11/04/19 13:09	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	11/04/19 13:09	
Naphthalene	ug/L	<0.018	0.092	11/04/19 13:09	
Phenanthrene	ug/L	0.019J	0.069	11/04/19 13:09	
Pyrene	ug/L	0.022J	0.038	11/04/19 13:09	
Total PAHs	ug/L	0.075		11/04/19 13:09	
2-Fluorobiphenyl (S)	%	65	30-85	11/04/19 13:09	
Terphenyl-d14 (S)	%	115	10-120	11/04/19 13:09	

LABORATORY CONTROL SAMPLE & LCSD: 1971126 1971127

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1-Methylnaphthalene	ug/L	2	1.2	1.1	60	56	39-88	7	29	
2-Methylnaphthalene	ug/L	2	1.3	1.2	64	58	40-93	9	29	
Acenaphthene	ug/L	2	1.5	1.4	75	71	43-102	6	30	
Acenaphthylene	ug/L	2	1.4	1.4	70	68	42-103	2	31	
Anthracene	ug/L	2	1.8	1.7	89	84	52-105	6	36	
Benzo(a)anthracene	ug/L	2	1.6	1.6	78	79	39-120	1	39	
Benzo(a)pyrene	ug/L	2	1.7	1.7	85	86	57-117	2	39	
Benzo(b)fluoranthene	ug/L	2	1.4	1.4	71	72	54-117	0	41	
Benzo(g,h,i)perylene	ug/L	2	0.95	0.99	47	49	32-82	4	44	
Benzo(k)fluoranthene	ug/L	2	1.9	1.8	95	92	56-123	3	39	
Chrysene	ug/L	2	2.0	2.0	101	98	63-122	3	38	
Dibenz(a,h)anthracene	ug/L	2	0.89	0.98	44	49	23-76	10	46	
Fluoranthene	ug/L	2	1.6	1.6	82	81	52-112	1	35	
Fluorene	ug/L	2	1.6	1.5	81	76	46-116	5	33	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.4	1.5	71	73	49-110	4	32	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

LABORATORY CONTROL SAMPLE & LCSD: 1971126 1971127

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ug/L	2	1.3	1.2	66	60	37-84	11	29	
Phenanthrene	ug/L	2	1.8	1.7	89	86	50-104	4	36	
Pyrene	ug/L	2	1.6	1.6	79	78	57-123	1	36	
Total PAHs	ug/L		26.9	26.3				2		
2-Fluorobiphenyl (S)	%				73	69	30-85			
Terphenyl-d14 (S)	%				122	121	10-120			1q,S0

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 339520 Analysis Method: EPA 8270 by HVI
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI
Associated Lab Samples: 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1972006 Matrix: Water
Associated Lab Samples: 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	11/04/19 13:25	
2-Methylnaphthalene	ug/L	<0.0049	0.024	11/04/19 13:25	
Acenaphthene	ug/L	<0.0061	0.030	11/04/19 13:25	
Acenaphthylene	ug/L	<0.0050	0.025	11/04/19 13:25	
Anthracene	ug/L	<0.010	0.052	11/04/19 13:25	
Benzo(a)anthracene	ug/L	<0.0076	0.038	11/04/19 13:25	
Benzo(a)pyrene	ug/L	<0.011	0.053	11/04/19 13:25	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	11/04/19 13:25	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	11/04/19 13:25	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	11/04/19 13:25	
Chrysene	ug/L	<0.013	0.065	11/04/19 13:25	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	11/04/19 13:25	
Fluoranthene	ug/L	0.013J	0.053	11/04/19 13:25	
Fluorene	ug/L	<0.0080	0.040	11/04/19 13:25	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	11/04/19 13:25	
Naphthalene	ug/L	<0.018	0.092	11/04/19 13:25	
Phenanthrene	ug/L	0.014J	0.069	11/04/19 13:25	
Pyrene	ug/L	0.020J	0.038	11/04/19 13:25	
Total PAHs	ug/L	0.057		11/04/19 13:25	
2-Fluorobiphenyl (S)	%	65	30-85	11/04/19 13:25	
Terphenyl-d14 (S)	%	122	10-120	11/04/19 13:25	1q,S3

LABORATORY CONTROL SAMPLE & LCSD: 1972007 1972024

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1-Methylnaphthalene	ug/L	2	0.99	1.0	50	51	39-88	2	29	
2-Methylnaphthalene	ug/L	2	1.1	1.1	54	53	40-93	1	29	
Acenaphthene	ug/L	2	1.2	1.3	59	63	43-102	6	30	
Acenaphthylene	ug/L	2	1.2	1.2	59	58	42-103	1	31	
Anthracene	ug/L	2	1.6	1.5	78	75	52-105	5	36	
Benzo(a)anthracene	ug/L	2	1.8	1.5	88	77	39-120	14	39	
Benzo(a)pyrene	ug/L	2	1.7	1.6	83	81	57-117	2	39	
Benzo(b)fluoranthene	ug/L	2	1.5	1.4	77	71	54-117	7	41	
Benzo(g,h,i)perylene	ug/L	2	1.2	1.2	59	62	32-82	6	44	
Benzo(k)fluoranthene	ug/L	2	1.8	1.7	89	85	56-123	5	39	
Chrysene	ug/L	2	2.0	1.9	101	97	63-122	4	38	
Dibenz(a,h)anthracene	ug/L	2	1.1	1.3	56	66	23-76	16	46	
Fluoranthene	ug/L	2	1.6	1.5	81	76	52-112	7	35	
Fluorene	ug/L	2	1.4	1.3	70	67	46-116	4	33	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.5	1.5	75	76	49-110	1	32	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

LABORATORY CONTROL SAMPLE & LCSD: 1972007 1972024

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ug/L	2	1.1	1.2	57	59	37-84	2	29	
Phenanthrene	ug/L	2	1.6	1.5	80	76	50-104	5	36	
Pyrene	ug/L	2	1.7	1.5	84	73	57-123	14	36	
Total PAHs	ug/L		26.0	25.3				2		
2-Fluorobiphenyl (S)	%				63	60	30-85			
Terphenyl-d14 (S)	%				124	118	10-120			1q,S0

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 339330 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1970784 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	10/31/19 12:09	
Nitrate as N	mg/L	<0.075	0.22	10/31/19 12:09	
Sulfate	mg/L	<1.0	3.0	10/31/19 12:09	

LABORATORY CONTROL SAMPLE: 1970785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.6	98	90-110	
Nitrate as N	mg/L	1.5	1.5	98	90-110	
Sulfate	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1970786 1970787

Parameter	Units	40198289001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.76J	20	20	20.7	20.7	99	100	90-110	0	15	
Nitrate as N	mg/L	<0.075	1.5	1.5	1.5	1.5	99	99	90-110	0	15	
Sulfate	mg/L	6.3	20	20	26.1	26.1	99	99	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1970788 1970789

Parameter	Units	40198289011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	<2.5	100	100	99.7	105	98	103	90-110	5	15	
Nitrate as N	mg/L	<0.38	7.5	7.5	7.1	7.4	95	99	90-110	4	15	
Sulfate	mg/L	<5.0	100	100	101	105	100	105	90-110	4	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 340384 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289010, 40198289011

METHOD BLANK: 1976452 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.0	23.5	11/12/19 10:53	

LABORATORY CONTROL SAMPLE: 1976453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	105	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976454 1976455

Parameter	Units	40198289007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	138	500	500	625	567	98	86	90-110	10	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976456 1976457

Parameter	Units	40198289011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	324	500	500	833	852	102	106	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 340480 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Associated Lab Samples: 40198289009

METHOD BLANK: 1976916 Matrix: Water
Associated Lab Samples: 40198289009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.0	23.5	11/12/19 13:33	

LABORATORY CONTROL SAMPLE: 1976917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	105	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976918 1976919

Parameter	Units	40198289009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	<7.0	100	100	105	108	102	105	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976920 1976921

Parameter	Units	40198623002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	277	100	100	364	362	86	85	90-110	0	20	M0

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 340891 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1979221 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004, 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	<0.26	0.87	11/20/19 12:30	

LABORATORY CONTROL SAMPLE: 1979222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	10	10.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979223 1979224

Parameter	Units	40198289001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	<0.26	10	10	10.1	10.1	101	101	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1979225 1979226

Parameter	Units	40199132030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	<0.26	10	10	9.9	9.6	99	96	90-110	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 340247 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004

METHOD BLANK: 1976031 Matrix: Water
Associated Lab Samples: 40198289001, 40198289002, 40198289003, 40198289004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<14.7	50.0	11/11/19 08:50	

LABORATORY CONTROL SAMPLE: 1976032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	507	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976033 1976034

Parameter	Units	40198559001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<15.5	526	526	556	547	104	102	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1976035 1976036

Parameter	Units	40198618001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	17.0J	526	526	549	545	101	100	90-110	1	10	

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

QC Batch: 340710 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

METHOD BLANK: 1978320 Matrix: Water
Associated Lab Samples: 40198289005, 40198289006, 40198289007, 40198289008, 40198289009, 40198289010, 40198289011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<14.7	50.0	11/15/19 08:30	

LABORATORY CONTROL SAMPLE: 1978321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	515	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1978322 1978323

Parameter	Units	40198289005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	78.1	526	526	615	608	102	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1978324 1978325

Parameter	Units	40198289006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	44.1J	526	526	570	576	100	101	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: 339436

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 339596

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Surrogate limits are based on actual sample matrices and do not apply to QC samples.
B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198289001	**MW1**	EPA 3010	339777	EPA 6010	339875
40198289002	**MW2**	EPA 3010	339777	EPA 6010	339875
40198289003	**MW3**	EPA 3010	339777	EPA 6010	339875
40198289004	**MW4**	EPA 3010	339777	EPA 6010	339875
40198289005	**MW4A**	EPA 3010	339777	EPA 6010	339875
40198289006	**MW5**	EPA 3010	339777	EPA 6010	339875
40198289007	**MW6**	EPA 3010	339777	EPA 6010	339875
40198289008	**MW7**	EPA 3010	339777	EPA 6010	339875
40198289009	**MW8**	EPA 3010	339777	EPA 6010	339875
40198289010	**MW9**	EPA 3010	339777	EPA 6010	339875
40198289011	**MW10**	EPA 3010	339777	EPA 6010	339875
40198289001	**MW1**	EPA 7470	340138	EPA 7470	340196
40198289002	**MW2**	EPA 7470	340138	EPA 7470	340196
40198289003	**MW3**	EPA 7470	340138	EPA 7470	340196
40198289004	**MW4**	EPA 7470	340138	EPA 7470	340196
40198289005	**MW4A**	EPA 7470	340138	EPA 7470	340196
40198289006	**MW5**	EPA 7470	340138	EPA 7470	340196
40198289007	**MW6**	EPA 7470	340138	EPA 7470	340196
40198289008	**MW7**	EPA 7470	340138	EPA 7470	340196
40198289009	**MW8**	EPA 7470	340138	EPA 7470	340196
40198289010	**MW9**	EPA 7470	340138	EPA 7470	340196
40198289011	**MW10**	EPA 7470	340138	EPA 7470	340196
40198289001	**MW1**	EPA 3510	339404	EPA 8270 by HVI	339436
40198289002	**MW2**	EPA 3510	339404	EPA 8270 by HVI	339436
40198289003	**MW3**	EPA 3510	339404	EPA 8270 by HVI	339436
40198289004	**MW4**	EPA 3510	339404	EPA 8270 by HVI	339436
40198289005	**MW4A**	EPA 3510	339404	EPA 8270 by HVI	339436
40198289006	**MW5**	EPA 3510	339404	EPA 8270 by HVI	339436
40198289007	**MW6**	EPA 3510	339520	EPA 8270 by HVI	339596
40198289008	**MW7**	EPA 3510	339520	EPA 8270 by HVI	339596
40198289009	**MW8**	EPA 3510	339520	EPA 8270 by HVI	339596
40198289010	**MW9**	EPA 3510	339520	EPA 8270 by HVI	339596
40198289011	**MW10**	EPA 3510	339520	EPA 8270 by HVI	339596
40198289001	**MW1**	EPA 8260	339351		
40198289002	**MW2**	EPA 8260	339351		
40198289003	**MW3**	EPA 8260	339351		
40198289004	**MW4**	EPA 8260	339351		
40198289005	**MW4A**	EPA 8260	339351		
40198289006	**MW5**	EPA 8260	339351		
40198289007	**MW6**	EPA 8260	339351		
40198289008	**MW7**	EPA 8260	339351		
40198289009	**MW8**	EPA 8260	339351		
40198289010	**MW9**	EPA 8260	339351		
40198289011	**MW10**	EPA 8260	339351		
40198289001	**MW1**	EPA 300.0	339330		
40198289002	**MW2**	EPA 300.0	339330		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40198289

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40198289003	MW3	EPA 300.0	339330		
40198289004	MW4	EPA 300.0	339330		
40198289005	MW4A	EPA 300.0	339330		
40198289006	MW5	EPA 300.0	339330		
40198289007	MW6	EPA 300.0	339330		
40198289008	MW7	EPA 300.0	339330		
40198289009	MW8	EPA 300.0	339330		
40198289010	MW9	EPA 300.0	339330		
40198289011	MW10	EPA 300.0	339330		
40198289001	MW1	EPA 310.2	340384		
40198289002	MW2	EPA 310.2	340384		
40198289003	MW3	EPA 310.2	340384		
40198289004	MW4	EPA 310.2	340384		
40198289005	MW4A	EPA 310.2	340384		
40198289006	MW5	EPA 310.2	340384		
40198289007	MW6	EPA 310.2	340384		
40198289008	MW7	EPA 310.2	340384		
40198289009	MW8	EPA 310.2	340480		
40198289010	MW9	EPA 310.2	340384		
40198289011	MW10	EPA 310.2	340384		
40198289001	MW1	EPA 350.1	340891		
40198289002	MW2	EPA 350.1	340891		
40198289003	MW3	EPA 350.1	340891		
40198289004	MW4	EPA 350.1	340891		
40198289005	MW4A	EPA 350.1	340891		
40198289006	MW5	EPA 350.1	340891		
40198289007	MW6	EPA 350.1	340891		
40198289008	MW7	EPA 350.1	340891		
40198289009	MW8	EPA 350.1	340891		
40198289010	MW9	EPA 350.1	340891		
40198289011	MW10	EPA 350.1	340891		
40198289001	MW1	EPA 410.4	340247	EPA 410.4	340297
40198289002	MW2	EPA 410.4	340247	EPA 410.4	340297
40198289003	MW3	EPA 410.4	340247	EPA 410.4	340297
40198289004	MW4	EPA 410.4	340247	EPA 410.4	340297
40198289005	MW4A	EPA 410.4	340710	EPA 410.4	340856
40198289006	MW5	EPA 410.4	340710	EPA 410.4	340856
40198289007	MW6	EPA 410.4	340710	EPA 410.4	340856
40198289008	MW7	EPA 410.4	340710	EPA 410.4	340856
40198289009	MW8	EPA 410.4	340710	EPA 410.4	340856
40198289010	MW9	EPA 410.4	340710	EPA 410.4	340856
40198289011	MW10	EPA 410.4	340710	EPA 410.4	340856

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Company Name:	RBI Engineering Inc
Branch/Location:	Wausau WI
Project Contact:	Ken Lasca
Phone:	715-675-9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Keith Klefenow
Sampled By (Sign):	
PO #:	Regulatory Program:

Pace Analytical®
www.pacelabs.com

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

Page 1 of 2

CHAIN OF CUSTODY

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

U0198289

Quote #:	
Mail To Contact:	Ken Lasca
Mail To Company:	RBI Engineering
Mail To Address:	4080 N 20th Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: Dioxin/Furans	VOC	PAHs	RCRA Metals	Total Hardness	Total Alkalinity	Total Chloride	Total COD	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter	N	N	N	N	N	N	N	N			
							A	B	A	D	D	A	A	C			
001	MW1	10/30/19	2000	W				X	X	X	X	X	X	X			
002	MW2		1300					X	X	X	X	X	X	X			
003	MW3		1000				X	X	X	X	X	X	X	X			
004	MW4		1130				X	X	X	X	X	X	X	X			
005	MW4A		1145					X	X	X	X	X	X	X			
006	MW5		1230					X	X	X	X	X	X	X			
007	MW6		1200					X	X	X	X	X	X	X			
008	MW7		1100					X	X	X	X	X	X	X			
009	MW8		1030					X	X	X	X	X	X	X			
010	MW9		930					X	X	X	X	X	X	X			
011	MW10		900	W			X	X	X	X	X	X	X	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:
	10/30/19 4:00 pm		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Waltco	10/31/19 0915	PAC	10/31/19 0919
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
40198289

Receipt Temp = 2.0 °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

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

Page 2 of 2

40198289

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	REI Engineering
Branch/Location:	Wausau WI
Project Contact:	Ken Lasser
Phone:	715-675-9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Keith Kleberon
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ken Lasser
Mail To Company:	REI Engineering
Mail To Address:	4080 N 20th Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

	PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: Total Ammonia	Total Nitrate Nitrogen	Total Sulfide	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
		FILTERED? (YES/NO)	Y/N	N	N	N					Profile #
		PRESERVATION (CODE)*	Pick Letter	C	A	A					
001	012	MW1	10/30/19	2:00	W	X	X	X		
002	013	MW2		1:30		X	X	X		
003	014	MW3		1:00		X	X	X		
004	015	MW4		11:30		X	X	X		
005	016	MW 4A		11:45		X	X	X		
006	017	MW 5		12:30		X	X	X		
007	018	MW6		12:00		X	X	X		
008	019	MW7		11:00		X	X	X		
009	020	MW8		10:30		X	X	X		
010	021	~~MW~~ MW9		9:30		X	X	X		
011	022	MW10	↓	9:00	↓	X	X	X		

10/31/19

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By:	Date/Time:	Received By:	Date/Time:
		10/30/19 4:00 pm		
Transmit Prelim Rush Results by (complete what you want):	Relinquished By:	Date/Time:	Received By:	Date/Time:
Email #1:	Walco	10/31/19 0915		10/31/19 0915
Email #2:	Relinquished By:	Date/Time:	Received By:	Date/Time:
Telephone:	Relinquished By:	Date/Time:	Received By:	Date/Time:
Fax:	Relinquished By:	Date/Time:	Received By:	Date/Time:

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

PACE Project No. 40198289

Receipt Temp = ROI °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present

Intact / Not Intact

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

Sample Preservation Receipt Form

Client Name: REI Engineering (Tomahawk Tissue) Project # Y0198289

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

Lab Lot# of pH paper: 10453581 Lab Std #ID of preservation (if pH adjusted): 405439

Initial when completed: JW Date/Time: 10/31/19 1035

Pace Lab #	Glass: AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	Vials: DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	WGFU	WPFU	General: 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					2						1		1	1				3										✓			✓		2.5 / 5 / 10
002					2						1		1	1				3										✓			✓		2.5 / 5 / 10
003	1				2						1		1	1				3										✓			✓		2.5 / 5 / 10
004	1				2						1		1	1				3										✓			5	1	2.5 / 5 / 10
005	X	10/31/19 JW			2						1		1	1				3										✓			✓		2.5 / 5 / 10
006					2						1		1	1				3										✓			✓		2.5 / 5 / 10
007					2						1		1	1				3										✓			✓		2.5 / 5 / 10
008					2						1		1	1				3										✓			✓		2.5 / 5 / 10
009					2						1		1	1				3										✓			✓		2.5 / 5 / 10
010					2						1		1	1				3										✓			✓		2.5 / 5 / 10
011	1				2						1		1	1				3										✓			✓		2.5 / 5 / 10
012					2																												2.5 / 5 / 10
013					2																												2.5 / 5 / 10
014					2																												2.5 / 5 / 10
015					2																												2.5 / 5 / 10
016					2																												2.5 / 5 / 10
017					2																												2.5 / 5 / 10
018					2																												2.5 / 5 / 10
019					2																												2.5 / 5 / 10
020					2																												2.5 / 5 / 10

10/31/19 JW

10/31/19 JW

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

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

10/31/19

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

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40198289

40198289

Client Name: REI Engineering (Tomahawk Tissue)

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

Tracking #: 2228031-1

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

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

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

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

Cooler Temperature Uncorr: Rot /Corr: —

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

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

Person examining contents:
Date: 10/31/19
Initials: JW

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:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☐Yes ☒No ☐N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 10-31-19

Page 3 of 3 10/31/19

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Brian Basten
PACE Wisconsin
1241 Bellevue Street
Suite 9
Green Bay WI 54302

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10497767
Sample Receipt Date: 11/01/2019
Client Project #: 40198289
Client Sub PO #: N/A
State Cert #: 999407970

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

November 21, 2019

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
November 21, 2019

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The reporting limits were based on signal-to-noise measurements. Estimated Maximum Possible Concentration (EMPC) values were treated as positives in the toxic equivalence calculations. Method blank and field sample results with reporting limits set to correspond to the lowest calibration points and a nominal 1-Liter sample amount were provided in Appendix A. The quantitation limits, adjusted for sample extraction amount or dilution, may be somewhat higher or lower than the reporting limits provided in Appendix A.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 56-91%. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show that PCDDs and PCDFs were not detected.

Laboratory spike samples were also prepared with the sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 102-124% with relative percent differences of 0.0-4.1%. These results were within the target ranges for the method. Matrix spikes were not prepared with the sample batch.

Pace Analytical™

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Minnesota - Pet	1240
Alabama	40770	Mississippi	MN00064
Alaska - DW	MN00064	Missouri - DW	10100
Alaska - UST	17-009	Montana	CERT0092
Arizona	AZ0014	Nebraska	NE-OS-18-06
Arkansas - DW	MN00064	Nevada	MN00064
Arkansas - WW	88-0680	New Hampshire	2081
CNMI Saipan	MP0003	New Jersey (NE	MN002
California	2929	New York	11647
Colorado	MN00064	North Carolina	27700
Connecticut	PH-0256	North Carolina -	27700
EPA Region 8+	via MN 027-053	North Carolina -	530
Florida (NELAP	E87605	North Dakota	R-036
Georgia	959	Ohio - DW	41244
Guam	17-001r	Ohio - VAP	CL101
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon - Primar	MN300001
Illinois	200011	Oregon - Secon	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky - DW	90062	South Dakota	NA
Kentucky - WW	90062	Tennessee	TN02818
Louisiana - DE	03086	Texas	T104704192
Louisiana - DW	MN00064	Utah (NELAP)	MN00064
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Massachusetts	M-MN064	West Virginia -	382
Michigan	9909	West Virginia -	9952C
Minnesota	027-053-137	Wisconsin	999407970
Minnesota - De	via MN 027-053	Wyoming - UST	2926.01

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Chain of Custody

WO# : 10497767

10497767

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WI

Cert. Needed: ☒ Yes ☐ N

Workorder: 40198289 **Workorder Name:** 8949 TOMAHAWK TISSUE

Owner Received Date: 10/31/2019 Results Requested By: 11/21/2019

Report To	Subcontract To
Brian Basten Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436	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	Requested Analysis: Dioxin/Furans 1613 (17 Compounds)	LAB USE ONLY
1	MW3	PS	10/30/2019 13:00	40198289003	Water	1	X	001
2	MW4	PS	10/30/2019 11:30	40198289004	Water	1	X	002
3	MW10	PS	10/30/2019 09:00	40198289011	Water	1	X	003
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	10/31/19 10:00	[signature] pace	11.01.19
2				
3				

Comments: 940

Cooler Temperature on Receipt 1.2 °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.*

Pace Analytical®	Document Name: Sample Condition Upon Receipt Form	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.29	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace Green Bay

Project #: WO#: 10497767

PM: SCU Due Date: 11/21/19

CLIENT: PASI-WI

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

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: pb **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☒ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: 1.4 °C	Average Corrected Temp (no temp blank only): ☐ See Exceptions
Correction Factor: -0.2	Cooler Temp Corrected w/temp blank: 1.2 °C	°C ☐ 1 Container

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

Date/Initials of Person Examining Contents: ALM 11.01.19
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 (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☒ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☑ Yes	☐ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☑ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# See Exception ☐
				Res. Chlorine / 0-6 Roll / 0-6 Strip / 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	13. See Exception ☐
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Sean C. Murphy **Date:** 11/01/19

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: ALM (2)

Pace Analytical®
www.pacelabs.com

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

CHAIN OF CUSTODY

40198289

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

(Please Print Clearly)	
Company Name:	REI Engineering Inc
Branch/Location:	Wausau WI
Project Contact:	Ken Lassa
Phone:	715-675-9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Keith Kleczew
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ken Lassa
Mail To Company:	REI Engineering
Mail To Address:	4080 N 20th Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: Dioxin/Furans	VOC	PAHs	RCRA Metals	Total Hardness	Total Alkalinity	Total Chloride	Total COD	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter	N	N	N	N	N	N	N	N			
							A	B	A	D	D	A	A	C			
001	MW1	10/30/19	200	W				X	X	X	X	X	X	X			
002	MW2		130					X	X	X	X	X	X	X			
003	MW3		100				X	X	X	X	X	X	X	X			
004	MW4		1130				X	X	X	X	X	X	X	X			
005	MW4A		1145					X	X	X	X	X	X	X			
006	MW5		1230					X	X	X	X	X	X	X			
007	MW6		1200					X	X	X	X	X	X	X			
008	MW7		1100					X	X	X	X	X	X	X			
009	MW8		1030					X	X	X	X	X	X	X			
010	MW9		930					X	X	X	X	X	X	X			
011	MW10		900	V			X	X	X	X	X	X	X	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:
[signature]	10/30/19 4:00 pm		
Waltco	10/31/19 0915	[signature] PACE	10/31/19 0919

PACE Project No.
40198289

Receipt Temp = 2.0 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

ORIGINAL

Report No.....10497767_1613FC_DFR

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

Page 2 of 2

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	REF Engineering
Branch/Location:	Wausau WI
Project Contact:	Ken Lussa
Phone:	715-675-9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Keith Kliberon
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	40198289
Mail To Contact:	Ken Lussa
Mail To Company:	REF Engineering
Mail To Address:	4080 N 20th Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

Matrix Codes

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

FILTERED? (YES/NO): N N N
PRESERVATION (CODE)*: C A A

Analyses Requested: Total Ammonia | Total Nitrate Nitrogen | Total Sulfide

	PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX
1	012	MW1	10/30/19	2000	W
2	013	MW2		1300	
3	014	MW3		1000	
4	015	MW4		1130	
5	016	MW4A		1145	
6	017	MW5		1230	
7	018	MW6		1200	
8	019	MW7		1100	
9	020	MW8		1030	
10	021	~~MW~~ MW9		930	
11	022	MW10		900	
			10/31/19		

CLIENT COMMENTS | LAB COMMENTS (Lab Use Only) | Profile #

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/30/19 4:00 pm		
Walker	10/31/19 0915		10/31/19 0915

PACE Project No.: 40198289

Receipt Temp = 2.2 °C

Sample Receipt pH OK / Adjusted

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

Version 6.0 06/14/06

ORIGINAL

Sample Preservation Receipt Form

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

Client Name: RET Engineering (Tomahawk Tissue) Project # 10098289

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

Initial when completed: JW Date/Time: 10/31/19 1035

Lab Lot# of pH paper: 105358 Lab Std #ID of preservation (if pH adjusted): 405439

Pace Lab #	Glass: AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	Vials: DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	WGFU	WPFU	General: 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					2						1		1	1				3										✓			✓		2.5 / 5 / 10
002					2						1		1	1				3										✓			✓		2.5 / 5 / 10
003	1				2						1		1	1				3										✓			✓		2.5 / 5 / 10
004	1				2						1		1	1				3										✓			5		(2.5) / 5 / 10
005	X	10/31/19			2						1		1	1				3										✓			✓		2.5 / 5 / 10
006					2						1		1	1				3										✓			✓		2.5 / 5 / 10
007					2						1		1	1				3										✓			✓		2.5 / 5 / 10
008					2						1		1	1				3										✓			✓		2.5 / 5 / 10
009					2						1		1	1				3										✓			✓		2.5 / 5 / 10
010					2						1		1	1				3										✓			✓		2.5 / 5 / 10
011	1				2						1		1	1				3										✓			✓		2.5 / 5 / 10
012					2																												2.5 / 5 / 10
013					2																												2.5 / 5 / 10
014					2																												2.5 / 5 / 10
015					2																												2.5 / 5 / 10
016					2																												2.5 / 5 / 10
017					2																												2.5 / 5 / 10
018					2																												2.5 / 5 / 10
019					2																												2.5 / 5 / 10
020					2																												2.5 / 5 / 10

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

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

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

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40198289

40198289

Client Name: REI Engineering (Tomahawk Tissue)

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

Tracking #: 2228031-1

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

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

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

Thermometer Used SR - NP **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Not /Corr: —

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

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

Person examining contents:
Date: 10/31/19
Initials: DW

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:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☐Yes ☒No ☐N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 10-31-19

Page 3 of 3 10/31/19

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKOT		
Lab Sample ID	BLANK-74596	Matrix	Water
Filename	F191120B_16	Dilution	NA
Total Amount Extracted	1050 mL	Extracted	11/06/2019 12:05
ICAL ID	F191106	Analyzed	11/21/2019 09:27
CCal Filename(s)	F191120A_17	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	10	2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	-----	10	2,3,7,8-TCDD-13C	2.00	77
				1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	ND	-----	10	2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	ND	-----	10	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	63
1,2,3,7,8-PeCDF	ND	-----	50	1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	ND	-----	50	2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	ND	-----	50	1,2,3,7,8,9-HxCDF-13C	2.00	75
				1,2,3,4,7,8-HxCDD-13C	2.00	68
1,2,3,7,8-PeCDD	ND	-----	50	1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	ND	-----	50	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	ND	-----	50	1,2,3,4,6,7,8-HpCDD-13C	2.00	86
1,2,3,6,7,8-HxCDF	ND	-----	50	OCDD-13C	4.00	70
2,3,4,6,7,8-HxCDF	ND	-----	50			
1,2,3,7,8,9-HxCDF	ND	-----	50	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	50	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	50	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	-----	50			
1,2,3,7,8,9-HxCDD	ND	-----	50			
Total HxCDD	ND	-----	50			
1,2,3,4,6,7,8-HpCDF	ND	-----	50	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	50	Equivalence: 0.00 pg/L		
Total HpCDF	ND	-----	50	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	50			
Total HpCDD	ND	-----	50			
OCDF	ND	-----	100			
OCDD	ND	-----	100			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW3		
Lab Sample ID	40198289003		
Filename	Y191111A_13		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/30/2019 13:00
ICAL ID	Y191104	Received	11/01/2019 09:40
CCal Filename(s)	Y191111A_03	Extracted	11/06/2019 12:05
Method Blank ID	BLANK-74596	Analyzed	11/11/2019 23:22

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	10	2,3,7,8-TCDF-13C	2.00	85
Total TCDF	ND	-----	10	2,3,7,8-TCDD-13C	2.00	77
				1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	ND	-----	10	2,3,4,7,8-PeCDF-13C	2.00	85
Total TCDD	ND	-----	10	1,2,3,7,8-PeCDD-13C	2.00	88
				1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	50	1,2,3,6,7,8-HxCDF-13C	2.00	87
2,3,4,7,8-PeCDF	ND	-----	50	2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	ND	-----	50	1,2,3,7,8,9-HxCDF-13C	2.00	83
				1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	50	1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	50	1,2,3,4,6,7,8-HpCDF-13C	2.00	74
				1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	ND	-----	50	1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	ND	-----	50	OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	ND	-----	50			
1,2,3,7,8,9-HxCDF	ND	-----	50	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	50	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	50	2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,6,7,8-HxCDD	ND	-----	50			
1,2,3,7,8,9-HxCDD	ND	-----	50			
Total HxCDD	ND	-----	50			
1,2,3,4,6,7,8-HpCDF	ND	-----	50	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	50	Equivalence: 0.00 pg/L		
Total HpCDF	ND	-----	50	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	50			
Total HpCDD	ND	-----	50			
OCDF	ND	-----	100			
OCDD	ND	-----	100			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW4		
Lab Sample ID	40198289004		
Filename	Y191111A_14		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/30/2019 11:30
ICAL ID	Y191104	Received	11/01/2019 09:40
CCal Filename(s)	Y191111A_03	Extracted	11/06/2019 12:05
Method Blank ID	BLANK-74596	Analyzed	11/12/2019 00:05

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	10	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	10	2,3,7,8-TCDD-13C	2.00	74
				1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	10	2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD	ND	-----	10	1,2,3,7,8-PeCDD-13C	2.00	86
				1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	ND	-----	50	1,2,3,6,7,8-HxCDF-13C	2.00	83
2,3,4,7,8-PeCDF	ND	-----	50	2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	50	1,2,3,7,8,9-HxCDF-13C	2.00	80
				1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	-----	50	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	50	1,2,3,4,6,7,8-HpCDF-13C	2.00	67
				1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	ND	-----	50	1,2,3,4,6,7,8-HpCDD-13C	2.00	65
1,2,3,6,7,8-HxCDF	ND	-----	50	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	50			
1,2,3,7,8,9-HxCDF	ND	-----	50	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	50	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	50	2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,6,7,8-HxCDD	ND	-----	50			
1,2,3,7,8,9-HxCDD	ND	-----	50			
Total HxCDD	ND	-----	50			
1,2,3,4,6,7,8-HpCDF	ND	-----	50	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	50	Equivalence: 0.00 pg/L		
Total HpCDF	57	-----	50	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	50			
Total HpCDD	ND	-----	50			
OCDF	ND	-----	100			
OCDD	ND	-----	100			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW10		
Lab Sample ID	40198289011		
Filename	Y191111A_15		
Injected By	SMT		
Total Amount Extracted	1060 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/30/2019 09:00
ICAL ID	Y191104	Received	11/01/2019 09:40
CCal Filename(s)	Y191111A_03	Extracted	11/06/2019 12:05
Method Blank ID	BLANK-74596	Analyzed	11/12/2019 00:48

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	10	2,3,7,8-TCDF-13C	2.00	83
Total TCDF	ND	-----	10	2,3,7,8-TCDD-13C	2.00	76
				1,2,3,7,8-PeCDF-13C	2.00	88
2,3,7,8-TCDD	ND	-----	10	2,3,4,7,8-PeCDF-13C	2.00	83
Total TCDD	ND	-----	10	1,2,3,7,8-PeCDD-13C	2.00	86
				1,2,3,4,7,8-HxCDF-13C	2.00	80
1,2,3,7,8-PeCDF	ND	-----	50	1,2,3,6,7,8-HxCDF-13C	2.00	87
2,3,4,7,8-PeCDF	ND	-----	50	2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	50	1,2,3,7,8,9-HxCDF-13C	2.00	82
				1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	-----	50	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	-----	50	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	-----	50	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	-----	50	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	50			
1,2,3,7,8,9-HxCDF	ND	-----	50	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	50	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	50	2,3,7,8-TCDD-37Cl4	0.20	95
1,2,3,6,7,8-HxCDD	ND	-----	50			
1,2,3,7,8,9-HxCDD	ND	-----	50			
Total HxCDD	ND	-----	50			
1,2,3,4,6,7,8-HpCDF	ND	-----	50	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	50	Equivalence: 0.00 pg/L		
Total HpCDF	ND	-----	50	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	50			
Total HpCDD	ND	-----	50			
OCDF	ND	-----	100			
OCDD	ND	-----	100			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

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Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

REPORT OF LABORATORY ANALYSIS

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
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Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW3		
Lab Sample ID	40198289003		
Filename	Y191111A_13		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/30/2019 13:00
ICAL ID	Y191104	Received	11/01/2019 09:40
CCal Filename(s)	Y191111A_03	Extracted	11/06/2019 12:05
Method Blank ID	BLANK-74596	Analyzed	11/11/2019 23:22

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.62		2,3,7,8-TCDF-13C	2.00	85
Total TCDF	ND	-----	0.62		2,3,7,8-TCDD-13C	2.00	77
					1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	ND	-----	0.83		2,3,4,7,8-PeCDF-13C	2.00	85
Total TCDD	ND	-----	0.83		1,2,3,7,8-PeCDD-13C	2.00	88
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	0.93		1,2,3,6,7,8-HxCDF-13C	2.00	87
2,3,4,7,8-PeCDF	ND	-----	0.94		2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	ND	-----	0.93		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	2.3		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	2.3		1,2,3,4,6,7,8-HpCDF-13C	2.00	74
					1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	ND	-----	1.3		1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	ND	-----	1.5		OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	ND	-----	2.0				
1,2,3,7,8,9-HxCDF	ND	-----	0.70		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.70		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	2.1		2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,6,7,8-HxCDD	ND	-----	2.1				
1,2,3,7,8,9-HxCDD	ND	-----	1.9				
Total HxCDD	ND	-----	1.9				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.97		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.67		Equivalence: 0.057 pg/L		
Total HpCDF	ND	-----	0.67		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	4.8	-----	0.70	J			
Total HpCDD	7.5	-----	0.70	J			
OCDF	ND	-----	2.0				
OCDD	9.2	-----	2.4	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW4		
Lab Sample ID	40198289004		
Filename	Y191111A_14		
Injected By	SMT		
Total Amount Extracted	1050 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/30/2019 11:30
ICAL ID	Y191104	Received	11/01/2019 09:40
CCal Filename(s)	Y191111A_03	Extracted	11/06/2019 12:05
Method Blank ID	BLANK-74596	Analyzed	11/12/2019 00:05

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	5.3	1.1	IJ	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	6.3	-----	1.1	J	2,3,7,8-TCDD-13C	2.00	74
					1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	1.6		2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD	4.6	-----	1.6	J	1,2,3,7,8-PeCDD-13C	2.00	86
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	ND	-----	0.61		1,2,3,6,7,8-HxCDF-13C	2.00	83
2,3,4,7,8-PeCDF	ND	-----	1.1		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	0.61		1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	-----	1.5		1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	1.5		1,2,3,4,6,7,8-HpCDF-13C	2.00	67
					1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	ND	-----	3.7		1,2,3,4,6,7,8-HpCDD-13C	2.00	65
1,2,3,6,7,8-HxCDF	ND	-----	3.1		OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	0.77				
1,2,3,7,8,9-HxCDF	ND	-----	0.89		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	21	-----	0.77	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.2		2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,6,7,8-HxCDD	ND	-----	0.77				
1,2,3,7,8,9-HxCDD	ND	-----	1.9				
Total HxCDD	5.0	-----	0.77	J			
1,2,3,4,6,7,8-HpCDF	7.6	-----	1.6	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.1		Equivalence: 0.76 pg/L		
Total HpCDF	65	-----	1.1		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	-----	5.4	1.8	IJ			
Total HpCDD	40	-----	1.8	J			
OCDF	34	-----	2.7	J			
OCDD	-----	71	1.8	IJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW10		
Lab Sample ID	40198289011		
Filename	Y191111A_15		
Injected By	SMT		
Total Amount Extracted	1060 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/30/2019 09:00
ICAL ID	Y191104	Received	11/01/2019 09:40
CCal Filename(s)	Y191111A_03	Extracted	11/06/2019 12:05
Method Blank ID	BLANK-74596	Analyzed	11/12/2019 00:48

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.68		2,3,7,8-TCDF-13C	2.00	83
Total TCDF	ND	-----	0.68		2,3,7,8-TCDD-13C	2.00	76
					1,2,3,7,8-PeCDF-13C	2.00	88
2,3,7,8-TCDD	ND	-----	0.56		2,3,4,7,8-PeCDF-13C	2.00	83
Total TCDD	ND	-----	0.56		1,2,3,7,8-PeCDD-13C	2.00	86
					1,2,3,4,7,8-HxCDF-13C	2.00	80
1,2,3,7,8-PeCDF	ND	-----	0.84		1,2,3,6,7,8-HxCDF-13C	2.00	87
2,3,4,7,8-PeCDF	ND	-----	1.0		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	0.84		1,2,3,7,8,9-HxCDF-13C	2.00	82
					1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	-----	1.8		1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	-----	1.8		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	-----	1.8		1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	-----	1.0		OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	1.1				
1,2,3,7,8,9-HxCDF	ND	-----	0.88		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.88		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.1		2,3,7,8-TCDD-37Cl4	0.20	95
1,2,3,6,7,8-HxCDD	ND	-----	1.5				
1,2,3,7,8,9-HxCDD	ND	-----	1.2				
Total HxCDD	ND	-----	1.1				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.8		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.4		Equivalence: 0.0058 pg/L		
Total HpCDF	ND	-----	1.4		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	2.0				
Total HpCDD	ND	-----	2.0				
OCDF	ND	-----	2.2				
OCDD	5.8	-----	2.3	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value

REPORT OF LABORATORY ANALYSIS

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Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKOT		
Lab Sample ID	BLANK-74596	Matrix	Water
Filename	F191120B_16	Dilution	NA
Total Amount Extracted	1050 mL	Extracted	11/06/2019 12:05
ICAL ID	F191106	Analyzed	11/21/2019 09:27
CCal Filename(s)	F191120A_17	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.62	2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	-----	0.62	2,3,7,8-TCDD-13C	2.00	77
				1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	ND	-----	0.91	2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	ND	-----	0.91	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	63
1,2,3,7,8-PeCDF	ND	-----	0.39	1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	ND	-----	0.28	2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	ND	-----	0.28	1,2,3,7,8,9-HxCDF-13C	2.00	75
				1,2,3,4,7,8-HxCDD-13C	2.00	68
1,2,3,7,8-PeCDD	ND	-----	0.41	1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	ND	-----	0.41	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	ND	-----	0.79	1,2,3,4,6,7,8-HpCDD-13C	2.00	86
1,2,3,6,7,8-HxCDF	ND	-----	0.57	OCDD-13C	4.00	70
2,3,4,6,7,8-HxCDF	ND	-----	0.57			
1,2,3,7,8,9-HxCDF	ND	-----	1.1	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.57	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.0	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	-----	0.82			
1,2,3,7,8,9-HxCDD	ND	-----	0.91			
Total HxCDD	ND	-----	0.82			
1,2,3,4,6,7,8-HpCDF	ND	-----	0.90	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.5	Equivalence: 0.00 pg/L		
Total HpCDF	ND	-----	0.90	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.4			
Total HpCDD	ND	-----	1.4			
OCDF	ND	-----	2.9			
OCDD	ND	-----	3.1			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

REPORT OF LABORATORY ANALYSIS

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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-74597		
Filename	Y191121A_07	Matrix	Water
Total Amount Extracted	1050 mL	Dilution	NA
ICAL ID	Y191104	Extracted	11/06/2019 12:05
CCal Filename	Y191120A_20	Analyzed	11/21/2019 09:03
Method Blank ID	BLANK-74596	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	111
2,3,7,8-TCDD	10	11	6.7	15.8	111
1,2,3,7,8-PeCDF	50	51	40.0	67.0	102
2,3,4,7,8-PeCDF	50	54	34.0	80.0	108
1,2,3,7,8-PeCDD	50	51	35.0	71.0	103
1,2,3,4,7,8-HxCDF	50	57	36.0	67.0	115
1,2,3,6,7,8-HxCDF	50	53	42.0	65.0	107
2,3,4,6,7,8-HxCDF	50	52	35.0	78.0	104
1,2,3,7,8,9-HxCDF	50	52	39.0	65.0	104
1,2,3,4,7,8-HxCDD	50	58	35.0	82.0	116
1,2,3,6,7,8-HxCDD	50	62	38.0	67.0	123
1,2,3,7,8,9-HxCDD	50	60	32.0	81.0	119
1,2,3,4,6,7,8-HpCDF	50	56	41.0	61.0	112
1,2,3,4,7,8,9-HpCDF	50	54	39.0	69.0	107
1,2,3,4,6,7,8-HpCDD	50	53	35.0	70.0	107
OCDF	100	120	63.0	170.0	124
OCDD	100	120	78.0	144.0	120
2,3,7,8-TCDD-37Cl4	10	9.8	3.1	19.1	98
2,3,7,8-TCDF-13C	100	94	22.0	152.0	94
2,3,7,8-TCDD-13C	100	85	20.0	175.0	85
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89
2,3,4,7,8-PeCDF-13C	100	86	13.0	328.0	86
1,2,3,7,8-PeCDD-13C	100	85	21.0	227.0	85
1,2,3,4,7,8-HxCDF-13C	100	85	19.0	202.0	85
1,2,3,6,7,8-HxCDF-13C	100	92	21.0	159.0	92
2,3,4,6,7,8-HxCDF-13C	100	97	22.0	176.0	97
1,2,3,7,8,9-HxCDF-13C	100	93	17.0	205.0	93
1,2,3,4,7,8-HxCDD-13C	100	83	21.0	193.0	83
1,2,3,6,7,8-HxCDD-13C	100	78	25.0	163.0	78
1,2,3,4,6,7,8-HpCDF-13C	100	77	21.0	158.0	77
1,2,3,4,7,8,9-HpCDF-13C	100	78	20.0	186.0	78
1,2,3,4,6,7,8-HpCDD-13C	100	73	26.0	166.0	73
OCDD-13C	200	120	26.0	397.0	60

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCSD-74598		
Filename	Y191121A_08	Matrix	Water
Total Amount Extracted	1040 mL	Dilution	NA
ICAL ID	Y191104	Extracted	11/06/2019 12:05
CCal Filename	Y191120A_20	Analyzed	11/21/2019 09:45
Method Blank ID	BLANK-74596	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	111
2,3,7,8-TCDD	10	11	6.7	15.8	108
1,2,3,7,8-PeCDF	50	51	40.0	67.0	102
2,3,4,7,8-PeCDF	50	55	34.0	80.0	110
1,2,3,7,8-PeCDD	50	52	35.0	71.0	104
1,2,3,4,7,8-HxCDF	50	57	36.0	67.0	114
1,2,3,6,7,8-HxCDF	50	52	42.0	65.0	104
2,3,4,6,7,8-HxCDF	50	52	35.0	78.0	104
1,2,3,7,8,9-HxCDF	50	52	39.0	65.0	104
1,2,3,4,7,8-HxCDD	50	57	35.0	82.0	113
1,2,3,6,7,8-HxCDD	50	59	38.0	67.0	118
1,2,3,7,8,9-HxCDD	50	61	32.0	81.0	121
1,2,3,4,6,7,8-HpCDF	50	57	41.0	61.0	114
1,2,3,4,7,8,9-HpCDF	50	52	39.0	69.0	105
1,2,3,4,6,7,8-HpCDD	50	52	35.0	70.0	105
OCDF	100	120	63.0	170.0	124
OCDD	100	120	78.0	144.0	118
2,3,7,8-TCDD-37Cl4	10	9.5	3.1	19.1	95
2,3,7,8-TCDF-13C	100	86	22.0	152.0	86
2,3,7,8-TCDD-13C	100	80	20.0	175.0	80
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89
2,3,4,7,8-PeCDF-13C	100	85	13.0	328.0	85
1,2,3,7,8-PeCDD-13C	100	87	21.0	227.0	87
1,2,3,4,7,8-HxCDF-13C	100	77	19.0	202.0	77
1,2,3,6,7,8-HxCDF-13C	100	85	21.0	159.0	85
2,3,4,6,7,8-HxCDF-13C	100	86	22.0	176.0	86
1,2,3,7,8,9-HxCDF-13C	100	85	17.0	205.0	85
1,2,3,4,7,8-HxCDD-13C	100	76	21.0	193.0	76
1,2,3,6,7,8-HxCDD-13C	100	72	25.0	163.0	72
1,2,3,4,6,7,8-HpCDF-13C	100	67	21.0	158.0	67
1,2,3,4,7,8,9-HpCDF-13C	100	72	20.0	186.0	72
1,2,3,4,6,7,8-HpCDD-13C	100	66	26.0	166.0	66
OCDD-13C	200	110	26.0	397.0	55

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B

Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Wisconsin

Spike 1 ID LCS-74597 Spike 2 ID LCSD-74598
Spike 1 Filename Y191121A_07 Spike 2 Filename Y191121A_08

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	111	111	0.0
2,3,7,8-TCDD	111	108	2.7
1,2,3,7,8-PeCDF	102	102	0.0
2,3,4,7,8-PeCDF	108	110	1.8
1,2,3,7,8-PeCDD	103	104	1.0
1,2,3,4,7,8-HxCDF	115	114	0.9
1,2,3,6,7,8-HxCDF	107	104	2.8
2,3,4,6,7,8-HxCDF	104	104	0.0
1,2,3,7,8,9-HxCDF	104	104	0.0
1,2,3,4,7,8-HxCDD	116	113	2.6
1,2,3,6,7,8-HxCDD	123	118	4.1
1,2,3,7,8,9-HxCDD	119	121	1.7
1,2,3,4,6,7,8-HpCDF	112	114	1.8
1,2,3,4,7,8,9-HpCDF	107	105	1.9
1,2,3,4,6,7,8-HpCDD	107	105	1.9
OCDF	124	124	0.0
OCDD	120	118	1.7

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

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

July 09, 2020

Ken Lassa
REI
4080 North 20th Avenue
Wausau, WI 54401

RE: Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Dear Ken Lassa:

Enclosed are the analytical results for sample(s) received by the laboratory on June 19, 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:

- Pace Analytical Services - Green Bay

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
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Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40209834001	**MW1**	Water	06/18/20 11:30	06/19/20 12:15
40209834002	**MW2**	Water	06/18/20 10:30	06/19/20 12:15
40209834003	**MW3**	Water	06/18/20 11:00	06/19/20 12:15
40209834004	**MW4**	Water	06/18/20 12:00	06/19/20 12:15
40209834005	**MW4A**	Water	06/18/20 13:30	06/19/20 12:15
40209834006	**MW5**	Water	06/18/20 12:30	06/19/20 12:15
40209834007	**MW6**	Water	06/18/20 13:00	06/19/20 12:15
40209834008	**MW7**	Water	06/18/20 09:00	06/19/20 12:15
40209834009	**MW8**	Water	06/18/20 09:30	06/19/20 12:15
40209834010	**MW9**	Water	06/18/20 10:00	06/19/20 12:15
40209834011	**MW10**	Water	06/18/20 10:15	06/19/20 12:15

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SAMPLE ANALYTE COUNT

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40209834001	**MW1**	EPA 6010	TXW	9	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834002	**MW2**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834003	**MW3**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834004	**MW4**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834005	**MW4A**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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SAMPLE ANALYTE COUNT

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834006	**MW5**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834007	**MW6**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834008	**MW7**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834009	**MW8**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834010	**MW9**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
40209834011	**MW10**	EPA 6010	TXW	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270 by HVI	TPO	21	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 350.1	TMK	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW1 **Lab ID: 40209834001** Collected: 06/18/20 11:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:18	7440-38-2	
Barium	**37.6**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:18	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:18	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:18	7440-47-3	
Copper	**7.5J**	ug/L	11.2	3.4	1	06/24/20 06:10	06/24/20 16:18	7440-50-8	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:18	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:18	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:18	7440-22-4	
Total Hardness by 2340B	**24200**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:18		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:43	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
	Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0063**	ug/L	0.031	0.0063	1	06/22/20 00:38	06/22/20 19:17	83-32-9	
Acenaphthylene	**<0.0051**	ug/L	0.026	0.0051	1	06/22/20 00:38	06/22/20 19:17	208-96-8	
Anthracene	**<0.011**	ug/L	0.054	0.011	1	06/22/20 00:38	06/22/20 19:17	120-12-7	
Benzo(a)anthracene	**<0.0078**	ug/L	0.039	0.0078	1	06/22/20 00:38	06/22/20 19:17	56-55-3	
Benzo(a)pyrene	**<0.011**	ug/L	0.054	0.011	1	06/22/20 00:38	06/22/20 19:17	50-32-8	
Benzo(b)fluoranthene	**<0.0059**	ug/L	0.030	0.0059	1	06/22/20 00:38	06/22/20 19:17	205-99-2	
Benzo(g,h,i)perylene	**<0.0070**	ug/L	0.035	0.0070	1	06/22/20 00:38	06/22/20 19:17	191-24-2	
Benzo(k)fluoranthene	**<0.0078**	ug/L	0.039	0.0078	1	06/22/20 00:38	06/22/20 19:17	207-08-9	
Chrysene	**<0.013**	ug/L	0.067	0.013	1	06/22/20 00:38	06/22/20 19:17	218-01-9	
Dibenz(a,h)anthracene	**<0.010**	ug/L	0.052	0.010	1	06/22/20 00:38	06/22/20 19:17	53-70-3	
Fluoranthene	**<0.011**	ug/L	0.055	0.011	1	06/22/20 00:38	06/22/20 19:17	206-44-0	
Fluorene	**<0.0082**	ug/L	0.041	0.0082	1	06/22/20 00:38	06/22/20 19:17	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.018**	ug/L	0.091	0.018	1	06/22/20 00:38	06/22/20 19:17	193-39-5	
1-Methylnaphthalene	**0.0074J**	ug/L	0.030	0.0061	1	06/22/20 00:38	06/22/20 19:17	90-12-0	
2-Methylnaphthalene	**0.012J**	ug/L	0.025	0.0051	1	06/22/20 00:38	06/22/20 19:17	91-57-6	
Naphthalene	**<0.019**	ug/L	0.094	0.019	1	06/22/20 00:38	06/22/20 19:17	91-20-3	
Phenanthrene	**<0.014**	ug/L	0.071	0.014	1	06/22/20 00:38	06/22/20 19:17	85-01-8	
Pyrene	**<0.0079**	ug/L	0.039	0.0079	1	06/22/20 00:38	06/22/20 19:17	129-00-0	
Total PAHs	**0.049**	ug/L			1	06/22/20 00:38	06/22/20 19:17		
Surrogates									
2-Fluorobiphenyl (S)	48	%	39-120		1	06/22/20 00:38	06/22/20 19:17	321-60-8	
Terphenyl-d14 (S)	28	%	10-159		1	06/22/20 00:38	06/22/20 19:17	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 00:30	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 00:30	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 00:30	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 00:30	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW1 **Lab ID: 40209834001** Collected: 06/18/20 11:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 00:30	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 00:30	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 00:30	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 00:30	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 00:30	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 00:30	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 00:30	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 00:30	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 00:30	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 00:30	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 00:30	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 00:30	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 00:30	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 00:30	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 00:30	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/23/20 00:30	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 00:30	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 00:30	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 00:30	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 00:30	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 00:30	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 00:30	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 00:30	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 00:30	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 00:30	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 00:30	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 00:30	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 00:30	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 00:30	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 00:30	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 00:30	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 00:30	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 00:30	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 00:30	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 00:30	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 00:30	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 00:30	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 00:30	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 00:30	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 00:30	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 00:30	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 00:30	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 00:30	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 00:30	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 00:30	75-69-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW1 **Lab ID: 40209834001** Collected: 06/18/20 11:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 00:30	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 00:30	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 00:30	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 00:30	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 00:30	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 00:30	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 00:30	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 00:30	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 00:30	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 00:30	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 00:30	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 00:30	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		06/23/20 00:30	460-00-4	
Dibromofluoromethane (S)	75	%	70-130		1		06/23/20 00:30	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		06/23/20 00:30	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**<2.2**	mg/L	10.0	2.2	5		06/22/20 14:39	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 14:39	14797-55-8	D3,H1
Sulfate	**5.7J**	mg/L	10.0	2.2	5		06/22/20 14:39	14808-79-8	D3,M0
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**17.8J**	mg/L	24.8	7.4	1		06/24/20 12:28		
350.1 Ammonia	Analytical Method: EPA 350.1								
	Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:01	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
	Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**<15.5**	mg/L	52.6	15.5	1	07/09/20 07:49	07/09/20 10:12		

Sample: MW2 **Lab ID: 40209834002** Collected: 06/18/20 10:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:30	7440-38-2	
Barium	**28.0**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:30	7440-39-3	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW2 **Lab ID: 40209834002** Collected: 06/18/20 10:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:30	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:30	7440-47-3	
Lead	**9.5J**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:30	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:30	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:30	7440-22-4	
Total Hardness by 2340B	**40200**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:30		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:45	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0055**	ug/L	0.028	0.0055	1	06/24/20 14:00	06/24/20 18:01	83-32-9	
Acenaphthylene	**<0.0045**	ug/L	0.023	0.0045	1	06/24/20 14:00	06/24/20 18:01	208-96-8	
Anthracene	**<0.0095**	ug/L	0.048	0.0095	1	06/24/20 14:00	06/24/20 18:01	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.034	0.0069	1	06/24/20 14:00	06/24/20 18:01	56-55-3	
Benzo(a)pyrene	**<0.0096**	ug/L	0.048	0.0096	1	06/24/20 14:00	06/24/20 18:01	50-32-8	
Benzo(b)fluoranthene	**<0.0052**	ug/L	0.026	0.0052	1	06/24/20 14:00	06/24/20 18:01	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	06/24/20 14:00	06/24/20 18:01	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.034	0.0069	1	06/24/20 14:00	06/24/20 18:01	207-08-9	
Chrysene	**<0.012**	ug/L	0.059	0.012	1	06/24/20 14:00	06/24/20 18:01	218-01-9	
Dibenz(a,h)anthracene	**<0.0091**	ug/L	0.046	0.0091	1	06/24/20 14:00	06/24/20 18:01	53-70-3	
Fluoranthene	**<0.0097**	ug/L	0.048	0.0097	1	06/24/20 14:00	06/24/20 18:01	206-44-0	
Fluorene	**<0.0072**	ug/L	0.036	0.0072	1	06/24/20 14:00	06/24/20 18:01	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.080	0.016	1	06/24/20 14:00	06/24/20 18:01	193-39-5	
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	06/24/20 14:00	06/24/20 18:01	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	06/24/20 14:00	06/24/20 18:01	91-57-6	
Naphthalene	**<0.017**	ug/L	0.083	0.017	1	06/24/20 14:00	06/24/20 18:01	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	06/24/20 14:00	06/24/20 18:01	85-01-8	
Pyrene	**<0.0070**	ug/L	0.035	0.0070	1	06/24/20 14:00	06/24/20 18:01	129-00-0	
Total PAHs	**0.011**	ug/L			1	06/24/20 14:00	06/24/20 18:01		
Surrogates									
2-Fluorobiphenyl (S)	35	%	39-120		1	06/24/20 14:00	06/24/20 18:01	321-60-8	1q
Terphenyl-d14 (S)	13	%	10-159		1	06/24/20 14:00	06/24/20 18:01	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 00:52	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 00:52	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 00:52	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 00:52	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 00:52	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 00:52	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 00:52	563-58-6	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW2 **Lab ID: 40209834002** Collected: 06/18/20 10:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 00:52	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 00:52	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 00:52	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 00:52	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 00:52	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 00:52	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 00:52	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 00:52	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 00:52	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 00:52	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 00:52	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 00:52	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/23/20 00:52	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 00:52	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 00:52	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 00:52	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 00:52	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 00:52	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 00:52	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 00:52	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 00:52	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 00:52	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 00:52	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 00:52	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 00:52	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 00:52	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 00:52	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 00:52	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 00:52	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 00:52	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 00:52	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 00:52	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 00:52	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 00:52	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 00:52	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 00:52	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 00:52	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 00:52	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 00:52	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 00:52	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 00:52	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 00:52	75-69-4	
Vinyl chloride	**0.68J**	ug/L	1.0	0.17	1		06/23/20 00:52	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 00:52	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 00:52	10061-01-5	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW2 **Lab ID: 40209834002** Collected: 06/18/20 10:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 00:52	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 00:52	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 00:52	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 00:52	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 00:52	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 00:52	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 00:52	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 00:52	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 00:52	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		06/23/20 00:52	460-00-4	
Dibromofluoromethane (S)	84	%	70-130		1		06/23/20 00:52	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		06/23/20 00:52	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**<2.2**	mg/L	10.0	2.2	5		06/22/20 15:24	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 15:24	14797-55-8	D3,H1
Sulfate	**3.3J**	mg/L	10.0	2.2	5		06/22/20 15:24	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**45.6**	mg/L	24.8	7.4	1		06/24/20 12:29		
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:04	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**39.6J**	mg/L	52.6	15.5	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW3 **Lab ID: 40209834003** Collected: 06/18/20 11:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:32	7440-38-2	
Barium	**358**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:32	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:32	7440-43-9	
Chromium	**2.7J**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:32	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:32	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW3 **Lab ID: 40209834003** Collected: 06/18/20 11:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:32	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:32	7440-22-4	
Total Hardness by 2340B	**531000**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:32		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:48	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**0.011J**	ug/L	0.028	0.0057	1	06/22/20 00:38	06/22/20 21:27	83-32-9	
Acenaphthylene	**<0.0047**	ug/L	0.023	0.0047	1	06/22/20 00:38	06/22/20 21:27	208-96-8	
Anthracene	**<0.0098**	ug/L	0.049	0.0098	1	06/22/20 00:38	06/22/20 21:27	120-12-7	
Benzo(a)anthracene	**0.020J**	ug/L	0.035	0.0071	1	06/22/20 00:38	06/22/20 21:27	56-55-3	
Benzo(a)pyrene	**0.028J**	ug/L	0.049	0.0098	1	06/22/20 00:38	06/22/20 21:27	50-32-8	
Benzo(b)fluoranthene	**0.070**	ug/L	0.027	0.0054	1	06/22/20 00:38	06/22/20 21:27	205-99-2	
Benzo(g,h,i)perylene	**0.040**	ug/L	0.032	0.0063	1	06/22/20 00:38	06/22/20 21:27	191-24-2	
Benzo(k)fluoranthene	**0.033J**	ug/L	0.035	0.0071	1	06/22/20 00:38	06/22/20 21:27	207-08-9	
Chrysene	**0.047J**	ug/L	0.061	0.012	1	06/22/20 00:38	06/22/20 21:27	218-01-9	
Dibenz(a,h)anthracene	**<0.0094**	ug/L	0.047	0.0094	1	06/22/20 00:38	06/22/20 21:27	53-70-3	
Fluoranthene	**0.025J**	ug/L	0.050	0.010	1	06/22/20 00:38	06/22/20 21:27	206-44-0	
Fluorene	**0.013J**	ug/L	0.037	0.0074	1	06/22/20 00:38	06/22/20 21:27	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.030J**	ug/L	0.082	0.016	1	06/22/20 00:38	06/22/20 21:27	193-39-5	
1-Methylnaphthalene	**0.53**	ug/L	0.028	0.0055	1	06/22/20 00:38	06/22/20 21:27	90-12-0	
2-Methylnaphthalene	**0.031**	ug/L	0.023	0.0046	1	06/22/20 00:38	06/22/20 21:27	91-57-6	
Naphthalene	**14.1**	ug/L	0.086	0.017	1	06/22/20 00:38	06/22/20 21:27	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.064	0.013	1	06/22/20 00:38	06/22/20 21:27	85-01-8	
Pyrene	**0.016J**	ug/L	0.036	0.0071	1	06/22/20 00:38	06/22/20 21:27	129-00-0	
Total PAHs	**15.0**	ug/L			1	06/22/20 00:38	06/22/20 21:27		
Surrogates									
2-Fluorobiphenyl (S)	41	%	39-120		1	06/22/20 00:38	06/22/20 21:27	321-60-8	
Terphenyl-d14 (S)	38	%	10-159		1	06/22/20 00:38	06/22/20 21:27	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:14	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:14	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:14	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 01:14	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:14	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:14	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 01:14	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 01:14	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 01:14	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 01:14	120-82-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW3 **Lab ID: 40209834003** Collected: 06/18/20 11:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,2,4-Trimethylbenzene	**2.1J**	ug/L	2.8	0.84	1		06/23/20 01:14	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 01:14	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 01:14	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:14	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:14	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:14	78-87-5	
1,3,5-Trimethylbenzene	**0.94J**	ug/L	2.9	0.87	1		06/23/20 01:14	108-67-8	
1,3-Dichlorobenzene	**1.2J**	ug/L	2.1	0.63	1		06/23/20 01:14	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 01:14	142-28-9	
1,4-Dichlorobenzene	**6.6**	ug/L	3.1	0.94	1		06/23/20 01:14	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 01:14	594-20-7	
2-Chlorotoluene	**5.4**	ug/L	5.0	0.93	1		06/23/20 01:14	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 01:14	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 01:14	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:14	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 01:14	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 01:14	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 01:14	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 01:14	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 01:14	56-23-5	
Chlorobenzene	**15.7**	ug/L	2.4	0.71	1		06/23/20 01:14	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 01:14	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 01:14	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 01:14	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 01:14	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 01:14	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 01:14	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 01:14	108-20-3	
Ethylbenzene	**3.2**	ug/L	1.1	0.32	1		06/23/20 01:14	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 01:14	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 01:14	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 01:14	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 01:14	75-09-2	
Naphthalene	**47.2**	ug/L	5.0	1.2	1		06/23/20 01:14	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 01:14	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 01:14	127-18-4	
Toluene	**4.4**	ug/L	0.90	0.27	1		06/23/20 01:14	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 01:14	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 01:14	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 01:14	75-01-4	
cis-1,2-Dichloroethene	**0.54J**	ug/L	1.0	0.27	1		06/23/20 01:14	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 01:14	10061-01-5	
m&p-Xylene	**3.3**	ug/L	2.0	0.47	1		06/23/20 01:14	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:14	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 01:14	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW3 **Lab ID: 40209834003** Collected: 06/18/20 11:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
o-Xylene	**4.4**	ug/L	1.0	0.26	1		06/23/20 01:14	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 01:14	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 01:14	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 01:14	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 01:14	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 01:14	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	85	%	70-130		1		06/23/20 01:14	460-00-4	
Dibromofluoromethane (S)	72	%	70-130		1		06/23/20 01:14	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		06/23/20 01:14	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**7.9J**	mg/L	10.0	2.2	5		06/22/20 15:38	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 15:38	14797-55-8	D3,H1
Sulfate	**<2.2**	mg/L	10.0	2.2	5		06/22/20 15:38	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**569**	mg/L	248	74.4	10		06/24/20 12:30		
350.1 Ammonia	Analytical Method: EPA 350.1								
	Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:05	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
	Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**119**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW4 **Lab ID: 40209834004** Collected: 06/18/20 12:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:35	7440-38-2	
Barium	**93.1**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:35	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:35	7440-43-9	
Chromium	**3.0J**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:35	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:35	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:35	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:35	7440-22-4	
Total Hardness by 2340B	**128000**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:35		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW4 **Lab ID: 40209834004** Collected: 06/18/20 12:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:50	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**0.0085J**	ug/L	0.027	0.0055	1	06/22/20 00:38	06/22/20 19:54	83-32-9	
Acenaphthylene	**<0.0045**	ug/L	0.022	0.0045	1	06/22/20 00:38	06/22/20 19:54	208-96-8	
Anthracene	**<0.0094**	ug/L	0.047	0.0094	1	06/22/20 00:38	06/22/20 19:54	120-12-7	
Benzo(a)anthracene	**<0.0068**	ug/L	0.034	0.0068	1	06/22/20 00:38	06/22/20 19:54	56-55-3	
Benzo(a)pyrene	**<0.0095**	ug/L	0.047	0.0095	1	06/22/20 00:38	06/22/20 19:54	50-32-8	
Benzo(b)fluoranthene	**<0.0052**	ug/L	0.026	0.0052	1	06/22/20 00:38	06/22/20 19:54	205-99-2	
Benzo(g,h,i)perylene	**<0.0061**	ug/L	0.031	0.0061	1	06/22/20 00:38	06/22/20 19:54	191-24-2	
Benzo(k)fluoranthene	**<0.0068**	ug/L	0.034	0.0068	1	06/22/20 00:38	06/22/20 19:54	207-08-9	
Chrysene	**<0.012**	ug/L	0.059	0.012	1	06/22/20 00:38	06/22/20 19:54	218-01-9	
Dibenz(a,h)anthracene	**<0.0090**	ug/L	0.045	0.0090	1	06/22/20 00:38	06/22/20 19:54	53-70-3	
Fluoranthene	**<0.0096**	ug/L	0.048	0.0096	1	06/22/20 00:38	06/22/20 19:54	206-44-0	
Fluorene	**0.021J**	ug/L	0.036	0.0072	1	06/22/20 00:38	06/22/20 19:54	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.079	0.016	1	06/22/20 00:38	06/22/20 19:54	193-39-5	
1-Methylnaphthalene	**0.41**	ug/L	0.027	0.0053	1	06/22/20 00:38	06/22/20 19:54	90-12-0	
2-Methylnaphthalene	**0.52**	ug/L	0.022	0.0044	1	06/22/20 00:38	06/22/20 19:54	91-57-6	
Naphthalene	**0.27**	ug/L	0.083	0.017	1	06/22/20 00:38	06/22/20 19:54	91-20-3	
Phenanthrene	**<0.012**	ug/L	0.062	0.012	1	06/22/20 00:38	06/22/20 19:54	85-01-8	
Pyrene	**<0.0069**	ug/L	0.034	0.0069	1	06/22/20 00:38	06/22/20 19:54	129-00-0	
Total PAHs	**1.2**	ug/L			1	06/22/20 00:38	06/22/20 19:54		
Surrogates									
2-Fluorobiphenyl (S)	44	%	39-120		1	06/22/20 00:38	06/22/20 19:54	321-60-8	
Terphenyl-d14 (S)	31	%	10-159		1	06/22/20 00:38	06/22/20 19:54	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:36	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:36	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:36	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 01:36	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:36	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:36	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 01:36	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 01:36	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 01:36	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 01:36	120-82-1	
1,2,4-Trimethylbenzene	**6.2**	ug/L	2.8	0.84	1		06/23/20 01:36	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 01:36	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 01:36	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:36	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:36	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:36	78-87-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW4 **Lab ID: 40209834004** Collected: 06/18/20 12:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,3,5-Trimethylbenzene	**2.1J**	ug/L	2.9	0.87	1		06/23/20 01:36	108-67-8	
1,3-Dichlorobenzene	**2.9**	ug/L	2.1	0.63	1		06/23/20 01:36	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 01:36	142-28-9	
1,4-Dichlorobenzene	**13.8**	ug/L	3.1	0.94	1		06/23/20 01:36	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 01:36	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 01:36	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 01:36	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 01:36	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:36	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 01:36	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 01:36	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 01:36	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 01:36	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 01:36	56-23-5	
Chlorobenzene	**10.7**	ug/L	2.4	0.71	1		06/23/20 01:36	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 01:36	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 01:36	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 01:36	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 01:36	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 01:36	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 01:36	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 01:36	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 01:36	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 01:36	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 01:36	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 01:36	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 01:36	75-09-2	
Naphthalene	**3.1J**	ug/L	5.0	1.2	1		06/23/20 01:36	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 01:36	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 01:36	127-18-4	
Toluene	**0.59J**	ug/L	0.90	0.27	1		06/23/20 01:36	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 01:36	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 01:36	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 01:36	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:36	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 01:36	10061-01-5	
m&p-Xylene	**0.83J**	ug/L	2.0	0.47	1		06/23/20 01:36	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:36	104-51-8	
n-Propylbenzene	**1.1J**	ug/L	5.0	0.81	1		06/23/20 01:36	103-65-1	
o-Xylene	**1.5**	ug/L	1.0	0.26	1		06/23/20 01:36	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 01:36	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 01:36	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 01:36	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 01:36	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 01:36	10061-02-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW4 **Lab ID: 40209834004** Collected: 06/18/20 12:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		06/23/20 01:36	460-00-4	
Dibromofluoromethane (S)	83	%	70-130		1		06/23/20 01:36	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		06/23/20 01:36	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**4.0J**	mg/L	10.0	2.2	5		06/22/20 15:53	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 15:53	14797-55-8	D3,H1
Sulfate	**5.1J**	mg/L	10.0	2.2	5		06/22/20 15:53	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**84.2**	mg/L	24.8	7.4	1		06/24/20 12:31		
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:07	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**29.0J**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW4A **Lab ID: 40209834005** Collected: 06/18/20 13:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:37	7440-38-2	
Barium	**50.8**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:37	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:37	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:37	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:37	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:37	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:37	7440-22-4	
Total Hardness by 2340B	**197000**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:37		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:52	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW4A **Lab ID: 40209834005** Collected: 06/18/20 13:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	06/22/20 00:38	06/22/20 20:13	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	06/22/20 00:38	06/22/20 20:13	208-96-8	
Anthracene	**<0.0096**	ug/L	0.048	0.0096	1	06/22/20 00:38	06/22/20 20:13	120-12-7	
Benzo(a)anthracene	**0.0083J**	ug/L	0.035	0.0069	1	06/22/20 00:38	06/22/20 20:13	56-55-3	
Benzo(a)pyrene	**<0.0097**	ug/L	0.048	0.0097	1	06/22/20 00:38	06/22/20 20:13	50-32-8	
Benzo(b)fluoranthene	**0.0059J**	ug/L	0.026	0.0053	1	06/22/20 00:38	06/22/20 20:13	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	06/22/20 00:38	06/22/20 20:13	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.035	0.0069	1	06/22/20 00:38	06/22/20 20:13	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	06/22/20 00:38	06/22/20 20:13	218-01-9	
Dibenz(a,h)anthracene	**<0.0092**	ug/L	0.046	0.0092	1	06/22/20 00:38	06/22/20 20:13	53-70-3	
Fluoranthene	**0.015J**	ug/L	0.049	0.0098	1	06/22/20 00:38	06/22/20 20:13	206-44-0	
Fluorene	**0.0077J**	ug/L	0.037	0.0073	1	06/22/20 00:38	06/22/20 20:13	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.081	0.016	1	06/22/20 00:38	06/22/20 20:13	193-39-5	
1-Methylnaphthalene	**0.0057J**	ug/L	0.027	0.0054	1	06/22/20 00:38	06/22/20 20:13	90-12-0	
2-Methylnaphthalene	**0.0085J**	ug/L	0.022	0.0045	1	06/22/20 00:38	06/22/20 20:13	91-57-6	
Naphthalene	**<0.017**	ug/L	0.084	0.017	1	06/22/20 00:38	06/22/20 20:13	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	06/22/20 00:38	06/22/20 20:13	85-01-8	
Pyrene	**0.011J**	ug/L	0.035	0.0070	1	06/22/20 00:38	06/22/20 20:13	129-00-0	
Total PAHs	**0.11**	ug/L			1	06/22/20 00:38	06/22/20 20:13		
Surrogates									
2-Fluorobiphenyl (S)	59	%	39-120		1	06/22/20 00:38	06/22/20 20:13	321-60-8	
Terphenyl-d14 (S)	62	%	10-159		1	06/22/20 00:38	06/22/20 20:13	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:58	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:58	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:58	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 01:58	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:58	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:58	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 01:58	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 01:58	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 01:58	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 01:58	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 01:58	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 01:58	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 01:58	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:58	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:58	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 01:58	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 01:58	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 01:58	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 01:58	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/23/20 01:58	106-46-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW4A **Lab ID: 40209834005** Collected: 06/18/20 13:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 01:58	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 01:58	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 01:58	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 01:58	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 01:58	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 01:58	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 01:58	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 01:58	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 01:58	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 01:58	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:58	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 01:58	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 01:58	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 01:58	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 01:58	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 01:58	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 01:58	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 01:58	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 01:58	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 01:58	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 01:58	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 01:58	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 01:58	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 01:58	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 01:58	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 01:58	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 01:58	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 01:58	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 01:58	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 01:58	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 01:58	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 01:58	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 01:58	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 01:58	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 01:58	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 01:58	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 01:58	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 01:58	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 01:58	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 01:58	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 01:58	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		06/23/20 01:58	460-00-4	
Dibromofluoromethane (S)	78	%	70-130		1		06/23/20 01:58	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		06/23/20 01:58	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW4A **Lab ID: 40209834005** Collected: 06/18/20 13:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**2.0J**	mg/L	2.0	0.43	1		06/22/20 16:08	16887-00-6	
Nitrate as N	**<0.044**	mg/L	0.15	0.044	1		06/22/20 16:08	14797-55-8	H1
Sulfate	**6.5**	mg/L	2.0	0.44	1		06/22/20 16:08	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**207**	mg/L	24.8	7.4	1		06/24/20 12:32		
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:08	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**46.2J**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW5 **Lab ID: 40209834006** Collected: 06/18/20 12:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:40	7440-38-2	
Barium	**53.7**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:40	7440-39-3	
Cadmium	**1.6J**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:40	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:40	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:40	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:40	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:40	7440-22-4	
Total Hardness by 2340B	**159000**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:40		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:54	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0054**	ug/L	0.027	0.0054	1	06/22/20 00:38	06/22/20 20:31	83-32-9	
Acenaphthylene	**<0.0044**	ug/L	0.022	0.0044	1	06/22/20 00:38	06/22/20 20:31	208-96-8	
Anthracene	**<0.0093**	ug/L	0.047	0.0093	1	06/22/20 00:38	06/22/20 20:31	120-12-7	
Benzo(a)anthracene	**<0.0067**	ug/L	0.034	0.0067	1	06/22/20 00:38	06/22/20 20:31	56-55-3	
Benzo(a)pyrene	**<0.0094**	ug/L	0.047	0.0094	1	06/22/20 00:38	06/22/20 20:31	50-32-8	
Benzo(b)fluoranthene	**<0.0051**	ug/L	0.026	0.0051	1	06/22/20 00:38	06/22/20 20:31	205-99-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW5 **Lab ID: 40209834006** Collected: 06/18/20 12:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Benzo(g,h,i)perylene	**<0.0061**	ug/L	0.030	0.0061	1	06/22/20 00:38	06/22/20 20:31	191-24-2	
Benzo(k)fluoranthene	**<0.0067**	ug/L	0.034	0.0067	1	06/22/20 00:38	06/22/20 20:31	207-08-9	
Chrysene	**<0.012**	ug/L	0.058	0.012	1	06/22/20 00:38	06/22/20 20:31	218-01-9	
Dibenz(a,h)anthracene	**<0.0089**	ug/L	0.045	0.0089	1	06/22/20 00:38	06/22/20 20:31	53-70-3	
Fluoranthene	**<0.0095**	ug/L	0.048	0.0095	1	06/22/20 00:38	06/22/20 20:31	206-44-0	
Fluorene	**0.0082J**	ug/L	0.036	0.0071	1	06/22/20 00:38	06/22/20 20:31	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.079	0.016	1	06/22/20 00:38	06/22/20 20:31	193-39-5	
1-Methylnaphthalene	**0.0064J**	ug/L	0.026	0.0053	1	06/22/20 00:38	06/22/20 20:31	90-12-0	
2-Methylnaphthalene	**0.024**	ug/L	0.022	0.0044	1	06/22/20 00:38	06/22/20 20:31	91-57-6	
Naphthalene	**<0.016**	ug/L	0.082	0.016	1	06/22/20 00:38	06/22/20 20:31	91-20-3	
Phenanthrene	**<0.012**	ug/L	0.062	0.012	1	06/22/20 00:38	06/22/20 20:31	85-01-8	
Pyrene	**<0.0068**	ug/L	0.034	0.0068	1	06/22/20 00:38	06/22/20 20:31	129-00-0	
Total PAHs	**0.067**	ug/L			1	06/22/20 00:38	06/22/20 20:31		
Surrogates									
2-Fluorobiphenyl (S)	41	%	39-120		1	06/22/20 00:38	06/22/20 20:31	321-60-8	
Terphenyl-d14 (S)	21	%	10-159		1	06/22/20 00:38	06/22/20 20:31	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 02:20	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 02:20	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 02:20	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 02:20	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 02:20	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 02:20	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 02:20	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 02:20	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 02:20	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 02:20	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 02:20	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 02:20	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 02:20	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 02:20	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 02:20	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 02:20	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 02:20	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 02:20	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 02:20	142-28-9	
1,4-Dichlorobenzene	**1.3J**	ug/L	3.1	0.94	1		06/23/20 02:20	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 02:20	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 02:20	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 02:20	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 02:20	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 02:20	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 02:20	74-97-5	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW5 **Lab ID: 40209834006** Collected: 06/18/20 12:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 02:20	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 02:20	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 02:20	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 02:20	56-23-5	
Chlorobenzene	**0.95J**	ug/L	2.4	0.71	1		06/23/20 02:20	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 02:20	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 02:20	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 02:20	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 02:20	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 02:20	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 02:20	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 02:20	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 02:20	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 02:20	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 02:20	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 02:20	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 02:20	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 02:20	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 02:20	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 02:20	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 02:20	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 02:20	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 02:20	75-69-4	
Vinyl chloride	**1.7**	ug/L	1.0	0.17	1		06/23/20 02:20	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 02:20	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 02:20	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 02:20	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 02:20	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 02:20	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 02:20	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 02:20	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 02:20	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 02:20	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 02:20	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 02:20	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	85	%	70-130		1		06/23/20 02:20	460-00-4	
Dibromofluoromethane (S)	73	%	70-130		1		06/23/20 02:20	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		06/23/20 02:20	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**2.7J**	mg/L	10.0	2.2	5		06/22/20 16:23	16887-00-6	D3
Nitrate as N	**0.70J**	mg/L	0.75	0.22	5		06/22/20 16:23	14797-55-8	D3,H1
Sulfate	**3.1J**	mg/L	10.0	2.2	5		06/22/20 16:23	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW5 **Lab ID: 40209834006** Collected: 06/18/20 12:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**197**	mg/L	49.6	14.9	2		06/24/20 12:33		
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:09	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**37.6J**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW6 **Lab ID: 40209834007** Collected: 06/18/20 13:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:42	7440-38-2	
Barium	**22.8**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:42	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:42	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:42	7440-47-3	
Lead	**11.6J**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:42	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:42	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:42	7440-22-4	
Total Hardness by 2340B	**107000**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:42		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:57	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**0.0090J**	ug/L	0.028	0.0057	1	06/24/20 14:00	06/24/20 18:19	83-32-9	B
Acenaphthylene	**<0.0047**	ug/L	0.023	0.0047	1	06/24/20 14:00	06/24/20 18:19	208-96-8	
Anthracene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 18:19	120-12-7	
Benzo(a)anthracene	**<0.0071**	ug/L	0.035	0.0071	1	06/24/20 14:00	06/24/20 18:19	56-55-3	
Benzo(a)pyrene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 18:19	50-32-8	
Benzo(b)fluoranthene	**<0.0054**	ug/L	0.027	0.0054	1	06/24/20 14:00	06/24/20 18:19	205-99-2	
Benzo(g,h,i)perylene	**<0.0063**	ug/L	0.032	0.0063	1	06/24/20 14:00	06/24/20 18:19	191-24-2	
Benzo(k)fluoranthene	**<0.0071**	ug/L	0.035	0.0071	1	06/24/20 14:00	06/24/20 18:19	207-08-9	
Chrysene	**<0.012**	ug/L	0.061	0.012	1	06/24/20 14:00	06/24/20 18:19	218-01-9	
Dibenz(a,h)anthracene	**<0.0094**	ug/L	0.047	0.0094	1	06/24/20 14:00	06/24/20 18:19	53-70-3	
Fluoranthene	**<0.010**	ug/L	0.050	0.010	1	06/24/20 14:00	06/24/20 18:19	206-44-0	
Fluorene	**0.013J**	ug/L	0.037	0.0074	1	06/24/20 14:00	06/24/20 18:19	86-73-7	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW6 **Lab ID: 40209834007** Collected: 06/18/20 13:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.082	0.016	1	06/24/20 14:00	06/24/20 18:19	193-39-5	
1-Methylnaphthalene	**0.15**	ug/L	0.028	0.0055	1	06/24/20 14:00	06/24/20 18:19	90-12-0	
2-Methylnaphthalene	**0.11**	ug/L	0.023	0.0046	1	06/24/20 14:00	06/24/20 18:19	91-57-6	
Naphthalene	**0.42**	ug/L	0.086	0.017	1	06/24/20 14:00	06/24/20 18:19	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.064	0.013	1	06/24/20 14:00	06/24/20 18:19	85-01-8	
Pyrene	**<0.0071**	ug/L	0.036	0.0071	1	06/24/20 14:00	06/24/20 18:19	129-00-0	
Total PAHs	**0.72**	ug/L			1	06/24/20 14:00	06/24/20 18:19		
Surrogates									
2-Fluorobiphenyl (S)	55	%	39-120		1	06/24/20 14:00	06/24/20 18:19	321-60-8	
Terphenyl-d14 (S)	13	%	10-159		1	06/24/20 14:00	06/24/20 18:19	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 02:42	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 02:42	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 02:42	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 02:42	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 02:42	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 02:42	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 02:42	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 02:42	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 02:42	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 02:42	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 02:42	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 02:42	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 02:42	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 02:42	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 02:42	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 02:42	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 02:42	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 02:42	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 02:42	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/23/20 02:42	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 02:42	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 02:42	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 02:42	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 02:42	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 02:42	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 02:42	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 02:42	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 02:42	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 02:42	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 02:42	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 02:42	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 02:42	75-00-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW6 **Lab ID: 40209834007** Collected: 06/18/20 13:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 02:42	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 02:42	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 02:42	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 02:42	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 02:42	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 02:42	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 02:42	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 02:42	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 02:42	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 02:42	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 02:42	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 02:42	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 02:42	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 02:42	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 02:42	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 02:42	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 02:42	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 02:42	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 02:42	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 02:42	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 02:42	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 02:42	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 02:42	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 02:42	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 02:42	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 02:42	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 02:42	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 02:42	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 02:42	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		06/23/20 02:42	460-00-4	
Dibromofluoromethane (S)	82	%	70-130		1		06/23/20 02:42	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		06/23/20 02:42	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**2.5J**	mg/L	10.0	2.2	5		06/22/20 16:38	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 16:38	14797-55-8	D3,H1
Sulfate	**<2.2**	mg/L	10.0	2.2	5		06/22/20 16:38	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**89.8**	mg/L	49.6	14.9	2		06/24/20 12:42		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW6 **Lab ID: 40209834007** Collected: 06/18/20 13:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:10	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**39.8J**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW7 **Lab ID: 40209834008** Collected: 06/18/20 09:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:45	7440-38-2	
Barium	**8.9**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:45	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:45	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:45	7440-47-3	
Lead	**12.0J**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:45	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:45	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:45	7440-22-4	
Total Hardness by 2340B	**37400**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:45		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 10:59	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	06/24/20 14:00	06/24/20 19:50	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	06/24/20 14:00	06/24/20 19:50	208-96-8	
Anthracene	**<0.0097**	ug/L	0.048	0.0097	1	06/24/20 14:00	06/24/20 19:50	120-12-7	
Benzo(a)anthracene	**<0.0070**	ug/L	0.035	0.0070	1	06/24/20 14:00	06/24/20 19:50	56-55-3	
Benzo(a)pyrene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 19:50	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.027	0.0053	1	06/24/20 14:00	06/24/20 19:50	205-99-2	
Benzo(g,h,i)perylene	**<0.0063**	ug/L	0.031	0.0063	1	06/24/20 14:00	06/24/20 19:50	191-24-2	
Benzo(k)fluoranthene	**<0.0070**	ug/L	0.035	0.0070	1	06/24/20 14:00	06/24/20 19:50	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	06/24/20 14:00	06/24/20 19:50	218-01-9	
Dibenz(a,h)anthracene	**<0.0093**	ug/L	0.046	0.0093	1	06/24/20 14:00	06/24/20 19:50	53-70-3	
Fluoranthene	**<0.0099**	ug/L	0.049	0.0099	1	06/24/20 14:00	06/24/20 19:50	206-44-0	
Fluorene	**<0.0074**	ug/L	0.037	0.0074	1	06/24/20 14:00	06/24/20 19:50	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.082	0.016	1	06/24/20 14:00	06/24/20 19:50	193-39-5	
1-Methylnaphthalene	**<0.0055**	ug/L	0.027	0.0055	1	06/24/20 14:00	06/24/20 19:50	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.023	0.0045	1	06/24/20 14:00	06/24/20 19:50	91-57-6	
Naphthalene	**<0.017**	ug/L	0.085	0.017	1	06/24/20 14:00	06/24/20 19:50	91-20-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW7 **Lab ID: 40209834008** Collected: 06/18/20 09:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Phenanthrene	**<0.013**	ug/L	0.064	0.013	1	06/24/20 14:00	06/24/20 19:50	85-01-8	
Pyrene	**<0.0071**	ug/L	0.035	0.0071	1	06/24/20 14:00	06/24/20 19:50	129-00-0	
Total PAHs	**0.066**	ug/L			1	06/24/20 14:00	06/24/20 19:50		
Surrogates									
2-Fluorobiphenyl (S)	42	%	39-120		1	06/24/20 14:00	06/24/20 19:50	321-60-8	
Terphenyl-d14 (S)	18	%	10-159		1	06/24/20 14:00	06/24/20 19:50	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/24/20 23:40	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/24/20 23:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/24/20 23:40	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/24/20 23:40	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/24/20 23:40	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/24/20 23:40	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/24/20 23:40	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/24/20 23:40	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/24/20 23:40	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/24/20 23:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/24/20 23:40	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/24/20 23:40	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/24/20 23:40	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/24/20 23:40	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/24/20 23:40	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/24/20 23:40	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/24/20 23:40	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/24/20 23:40	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/24/20 23:40	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/24/20 23:40	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/24/20 23:40	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/24/20 23:40	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/24/20 23:40	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/24/20 23:40	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/24/20 23:40	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/24/20 23:40	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/24/20 23:40	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/24/20 23:40	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/24/20 23:40	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/24/20 23:40	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/24/20 23:40	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/24/20 23:40	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/24/20 23:40	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/24/20 23:40	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/24/20 23:40	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/24/20 23:40	74-95-3	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW7 **Lab ID: 40209834008** Collected: 06/18/20 09:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/24/20 23:40	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/24/20 23:40	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/24/20 23:40	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/24/20 23:40	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/24/20 23:40	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/24/20 23:40	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/24/20 23:40	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/24/20 23:40	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/24/20 23:40	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/24/20 23:40	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/24/20 23:40	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/24/20 23:40	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/24/20 23:40	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/24/20 23:40	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/24/20 23:40	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/24/20 23:40	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/24/20 23:40	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/24/20 23:40	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/24/20 23:40	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/24/20 23:40	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/24/20 23:40	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/24/20 23:40	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/24/20 23:40	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/24/20 23:40	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/24/20 23:40	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		06/24/20 23:40	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		06/24/20 23:40	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		06/24/20 23:40	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**0.77J**	mg/L	2.0	0.43	1		06/22/20 17:37	16887-00-6	
Nitrate as N	**<0.044**	mg/L	0.15	0.044	1		06/22/20 17:37	14797-55-8	H1
Sulfate	**7.5**	mg/L	2.0	0.44	1		06/22/20 17:37	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**30.7**	mg/L	24.8	7.4	1		06/24/20 12:45		
350.1 Ammonia	Analytical Method: EPA 350.1								
	Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:11	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW7 **Lab ID: 40209834008** Collected: 06/18/20 09:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**20.4J**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW8 **Lab ID: 40209834009** Collected: 06/18/20 09:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:47	7440-38-2	
Barium	**8.0**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:47	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:47	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:47	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:47	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:47	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:47	7440-22-4	
Total Hardness by 2340B	**6710**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:47		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 11:06	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	06/24/20 14:00	06/24/20 20:09	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	06/24/20 14:00	06/24/20 20:09	208-96-8	
Anthracene	**<0.0096**	ug/L	0.048	0.0096	1	06/24/20 14:00	06/24/20 20:09	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.035	0.0069	1	06/24/20 14:00	06/24/20 20:09	56-55-3	
Benzo(a)pyrene	**<0.0097**	ug/L	0.048	0.0097	1	06/24/20 14:00	06/24/20 20:09	50-32-8	
Benzo(b)fluoranthene	**0.0090J**	ug/L	0.026	0.0053	1	06/24/20 14:00	06/24/20 20:09	205-99-2	B
Benzo(g,h,i)perylene	**0.0096J**	ug/L	0.031	0.0062	1	06/24/20 14:00	06/24/20 20:09	191-24-2	B
Benzo(k)fluoranthene	**0.013J**	ug/L	0.035	0.0069	1	06/24/20 14:00	06/24/20 20:09	207-08-9	B
Chrysene	**0.017J**	ug/L	0.060	0.012	1	06/24/20 14:00	06/24/20 20:09	218-01-9	
Dibenz(a,h)anthracene	**<0.0092**	ug/L	0.046	0.0092	1	06/24/20 14:00	06/24/20 20:09	53-70-3	
Fluoranthene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 20:09	206-44-0	
Fluorene	**<0.0073**	ug/L	0.037	0.0073	1	06/24/20 14:00	06/24/20 20:09	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.081	0.016	1	06/24/20 14:00	06/24/20 20:09	193-39-5	
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	06/24/20 14:00	06/24/20 20:09	90-12-0	
2-Methylnaphthalene	**0.0045J**	ug/L	0.022	0.0045	1	06/24/20 14:00	06/24/20 20:09	91-57-6	B
Naphthalene	**<0.017**	ug/L	0.084	0.017	1	06/24/20 14:00	06/24/20 20:09	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	06/24/20 14:00	06/24/20 20:09	85-01-8	
Pyrene	**<0.0070**	ug/L	0.035	0.0070	1	06/24/20 14:00	06/24/20 20:09	129-00-0	
Total PAHs	**0.12**	ug/L			1	06/24/20 14:00	06/24/20 20:09		

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW8 **Lab ID: 40209834009** Collected: 06/18/20 09:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Surrogates									
2-Fluorobiphenyl (S)	53	%	39-120		1	06/24/20 14:00	06/24/20 20:09	321-60-8	
Terphenyl-d14 (S)	14	%	10-159		1	06/24/20 14:00	06/24/20 20:09	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 03:26	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 03:26	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 03:26	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 03:26	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 03:26	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 03:26	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 03:26	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 03:26	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 03:26	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 03:26	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 03:26	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 03:26	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 03:26	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 03:26	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 03:26	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 03:26	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 03:26	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 03:26	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 03:26	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/23/20 03:26	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 03:26	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 03:26	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 03:26	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 03:26	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 03:26	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 03:26	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 03:26	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 03:26	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 03:26	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 03:26	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 03:26	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 03:26	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 03:26	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 03:26	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 03:26	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 03:26	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 03:26	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 03:26	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 03:26	100-41-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW8 **Lab ID: 40209834009** Collected: 06/18/20 09:30 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 03:26	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 03:26	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 03:26	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 03:26	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 03:26	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 03:26	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 03:26	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 03:26	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 03:26	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 03:26	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 03:26	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 03:26	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 03:26	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 03:26	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 03:26	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 03:26	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 03:26	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 03:26	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 03:26	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 03:26	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 03:26	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 03:26	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		06/23/20 03:26	460-00-4	
Dibromofluoromethane (S)	70	%	70-130		1		06/23/20 03:26	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		06/23/20 03:26	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**0.76J**	mg/L	2.0	0.43	1		06/22/20 17:52	16887-00-6	
Nitrate as N	**0.048J**	mg/L	0.15	0.044	1		06/22/20 17:52	14797-55-8	H1
Sulfate	**1.6J**	mg/L	2.0	0.44	1		06/22/20 17:52	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**<7.4**	mg/L	24.8	7.4	1		06/24/20 12:46		
350.1 Ammonia	Analytical Method: EPA 350.1								
	Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:12	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
	Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**<14.7**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW9 **Lab ID: 40209834010** Collected: 06/18/20 10:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:50	7440-38-2	
Barium	**37.2**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:50	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:50	7440-43-9	
Chromium	**5.9J**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:50	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:50	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:50	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:50	7440-22-4	
Total Hardness by 2340B	**19200**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:50		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 11:08	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
	Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0056**	ug/L	0.028	0.0056	1	06/24/20 14:00	06/24/20 20:27	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.023	0.0046	1	06/24/20 14:00	06/24/20 20:27	208-96-8	
Anthracene	**<0.0096**	ug/L	0.048	0.0096	1	06/24/20 14:00	06/24/20 20:27	120-12-7	
Benzo(a)anthracene	**<0.0069**	ug/L	0.035	0.0069	1	06/24/20 14:00	06/24/20 20:27	56-55-3	
Benzo(a)pyrene	**<0.0097**	ug/L	0.048	0.0097	1	06/24/20 14:00	06/24/20 20:27	50-32-8	
Benzo(b)fluoranthene	**<0.0053**	ug/L	0.026	0.0053	1	06/24/20 14:00	06/24/20 20:27	205-99-2	
Benzo(g,h,i)perylene	**<0.0062**	ug/L	0.031	0.0062	1	06/24/20 14:00	06/24/20 20:27	191-24-2	
Benzo(k)fluoranthene	**<0.0069**	ug/L	0.035	0.0069	1	06/24/20 14:00	06/24/20 20:27	207-08-9	
Chrysene	**<0.012**	ug/L	0.060	0.012	1	06/24/20 14:00	06/24/20 20:27	218-01-9	
Dibenz(a,h)anthracene	**<0.0092**	ug/L	0.046	0.0092	1	06/24/20 14:00	06/24/20 20:27	53-70-3	
Fluoranthene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 20:27	206-44-0	
Fluorene	**<0.0073**	ug/L	0.037	0.0073	1	06/24/20 14:00	06/24/20 20:27	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.081	0.016	1	06/24/20 14:00	06/24/20 20:27	193-39-5	
1-Methylnaphthalene	**<0.0054**	ug/L	0.027	0.0054	1	06/24/20 14:00	06/24/20 20:27	90-12-0	
2-Methylnaphthalene	**<0.0045**	ug/L	0.022	0.0045	1	06/24/20 14:00	06/24/20 20:27	91-57-6	
Naphthalene	**<0.017**	ug/L	0.084	0.017	1	06/24/20 14:00	06/24/20 20:27	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.063	0.013	1	06/24/20 14:00	06/24/20 20:27	85-01-8	
Pyrene	**<0.0070**	ug/L	0.035	0.0070	1	06/24/20 14:00	06/24/20 20:27	129-00-0	
Total PAHs	**0.033**	ug/L			1	06/24/20 14:00	06/24/20 20:27		
Surrogates									
2-Fluorobiphenyl (S)	60	%	39-120		1	06/24/20 14:00	06/24/20 20:27	321-60-8	
Terphenyl-d14 (S)	61	%	10-159		1	06/24/20 14:00	06/24/20 20:27	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 03:48	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/23/20 03:48	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 03:48	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/23/20 03:48	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/23/20 03:48	75-34-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW9 **Lab ID: 40209834010** Collected: 06/18/20 10:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 03:48	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/23/20 03:48	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/23/20 03:48	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/23/20 03:48	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/23/20 03:48	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/23/20 03:48	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/23/20 03:48	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/23/20 03:48	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 03:48	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 03:48	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/23/20 03:48	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/23/20 03:48	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/23/20 03:48	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/23/20 03:48	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/23/20 03:48	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/23/20 03:48	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/23/20 03:48	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/23/20 03:48	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/23/20 03:48	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/23/20 03:48	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/23/20 03:48	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/23/20 03:48	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/23/20 03:48	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/23/20 03:48	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/23/20 03:48	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 03:48	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/23/20 03:48	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/23/20 03:48	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/23/20 03:48	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/23/20 03:48	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/23/20 03:48	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/23/20 03:48	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/23/20 03:48	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/23/20 03:48	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/23/20 03:48	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/23/20 03:48	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/23/20 03:48	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/23/20 03:48	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/23/20 03:48	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/23/20 03:48	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/23/20 03:48	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/23/20 03:48	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 03:48	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/23/20 03:48	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/23/20 03:48	75-01-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW9 **Lab ID: 40209834010** Collected: 06/18/20 10:00 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/23/20 03:48	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/23/20 03:48	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/23/20 03:48	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/23/20 03:48	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/23/20 03:48	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/23/20 03:48	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/23/20 03:48	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/23/20 03:48	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/23/20 03:48	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/23/20 03:48	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/23/20 03:48	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		06/23/20 03:48	460-00-4	
Dibromofluoromethane (S)	77	%	70-130		1		06/23/20 03:48	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		06/23/20 03:48	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**<2.2**	mg/L	10.0	2.2	5		06/22/20 18:07	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 18:07	14797-55-8	D3,H1
Sulfate	**10.2**	mg/L	10.0	2.2	5		06/22/20 18:07	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**<7.4**	mg/L	24.8	7.4	1		06/24/20 12:47		
350.1 Ammonia	Analytical Method: EPA 350.1								
	Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:13	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
	Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**137**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:13		

Sample: MW10 **Lab ID: 40209834011** Collected: 06/18/20 10:15 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	06/24/20 06:10	06/24/20 16:52	7440-38-2	
Barium	**34.5**	ug/L	5.0	1.5	1	06/24/20 06:10	06/24/20 16:52	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	06/24/20 06:10	06/24/20 16:52	7440-43-9	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW10 **Lab ID: 40209834011** Collected: 06/18/20 10:15 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Green Bay								
Chromium	**<2.5**	ug/L	10.0	2.5	1	06/24/20 06:10	06/24/20 16:52	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	06/24/20 06:10	06/24/20 16:52	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	06/24/20 06:10	06/24/20 16:52	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	06/24/20 06:10	06/24/20 16:52	7440-22-4	
Total Hardness by 2340B	**77800**	ug/L	2000	150	1	06/24/20 06:10	06/24/20 16:52		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.084**	ug/L	0.28	0.084	1	07/01/20 10:05	07/02/20 11:11	7439-97-6	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510 Pace Analytical Services - Green Bay								
Acenaphthene	**<0.0057**	ug/L	0.028	0.0057	1	06/24/20 14:00	06/24/20 20:45	83-32-9	
Acenaphthylene	**<0.0047**	ug/L	0.023	0.0047	1	06/24/20 14:00	06/24/20 20:45	208-96-8	
Anthracene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 20:45	120-12-7	
Benzo(a)anthracene	**<0.0071**	ug/L	0.035	0.0071	1	06/24/20 14:00	06/24/20 20:45	56-55-3	
Benzo(a)pyrene	**<0.0098**	ug/L	0.049	0.0098	1	06/24/20 14:00	06/24/20 20:45	50-32-8	
Benzo(b)fluoranthene	**<0.0054**	ug/L	0.027	0.0054	1	06/24/20 14:00	06/24/20 20:45	205-99-2	
Benzo(g,h,i)perylene	**<0.0063**	ug/L	0.032	0.0063	1	06/24/20 14:00	06/24/20 20:45	191-24-2	
Benzo(k)fluoranthene	**<0.0071**	ug/L	0.035	0.0071	1	06/24/20 14:00	06/24/20 20:45	207-08-9	
Chrysene	**<0.012**	ug/L	0.061	0.012	1	06/24/20 14:00	06/24/20 20:45	218-01-9	
Dibenz(a,h)anthracene	**<0.0094**	ug/L	0.047	0.0094	1	06/24/20 14:00	06/24/20 20:45	53-70-3	
Fluoranthene	**<0.010**	ug/L	0.050	0.010	1	06/24/20 14:00	06/24/20 20:45	206-44-0	
Fluorene	**<0.0074**	ug/L	0.037	0.0074	1	06/24/20 14:00	06/24/20 20:45	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.016**	ug/L	0.082	0.016	1	06/24/20 14:00	06/24/20 20:45	193-39-5	
1-Methylnaphthalene	**<0.0055**	ug/L	0.028	0.0055	1	06/24/20 14:00	06/24/20 20:45	90-12-0	
2-Methylnaphthalene	**<0.0046**	ug/L	0.023	0.0046	1	06/24/20 14:00	06/24/20 20:45	91-57-6	
Naphthalene	**<0.017**	ug/L	0.086	0.017	1	06/24/20 14:00	06/24/20 20:45	91-20-3	
Phenanthrene	**<0.013**	ug/L	0.064	0.013	1	06/24/20 14:00	06/24/20 20:45	85-01-8	
Pyrene	**<0.0071**	ug/L	0.036	0.0071	1	06/24/20 14:00	06/24/20 20:45	129-00-0	
Total PAHs	**0.038**	ug/L			1	06/24/20 14:00	06/24/20 20:45		
Surrogates									
2-Fluorobiphenyl (S)	55	%	39-120		1	06/24/20 14:00	06/24/20 20:45	321-60-8	
Terphenyl-d14 (S)	50	%	10-159		1	06/24/20 14:00	06/24/20 20:45	1718-51-0	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		06/24/20 14:24	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		06/24/20 14:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		06/24/20 14:24	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		06/24/20 14:24	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		06/24/20 14:24	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		06/24/20 14:24	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		06/24/20 14:24	563-58-6	
1,2,3-Trichlorobenzene	**<2.2**	ug/L	7.4	2.2	1		06/24/20 14:24	87-61-6	

REPORT OF LABORATORY ANALYSIS

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

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW10 **Lab ID: 40209834011** Collected: 06/18/20 10:15 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		06/24/20 14:24	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		06/24/20 14:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		06/24/20 14:24	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		06/24/20 14:24	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		06/24/20 14:24	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/24/20 14:24	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		06/24/20 14:24	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		06/24/20 14:24	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		06/24/20 14:24	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		06/24/20 14:24	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		06/24/20 14:24	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		06/24/20 14:24	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		06/24/20 14:24	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		06/24/20 14:24	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		06/24/20 14:24	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		06/24/20 14:24	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		06/24/20 14:24	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		06/24/20 14:24	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		06/24/20 14:24	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		06/24/20 14:24	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		06/24/20 14:24	74-83-9	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		06/24/20 14:24	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		06/24/20 14:24	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		06/24/20 14:24	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		06/24/20 14:24	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		06/24/20 14:24	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		06/24/20 14:24	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		06/24/20 14:24	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		06/24/20 14:24	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		06/24/20 14:24	108-20-3	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		06/24/20 14:24	100-41-4	
Hexachloro-1,3-butadiene	**<1.5**	ug/L	4.9	1.5	1		06/24/20 14:24	87-68-3	
Isopropylbenzene (Cumene)	**<1.7**	ug/L	5.6	1.7	1		06/24/20 14:24	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		06/24/20 14:24	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		06/24/20 14:24	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		06/24/20 14:24	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		06/24/20 14:24	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		06/24/20 14:24	127-18-4	
Toluene	**<0.27**	ug/L	0.90	0.27	1		06/24/20 14:24	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		06/24/20 14:24	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		06/24/20 14:24	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		06/24/20 14:24	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		06/24/20 14:24	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		06/24/20 14:24	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		06/24/20 14:24	179601-23-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Sample: MW10 **Lab ID: 40209834011** Collected: 06/18/20 10:15 Received: 06/19/20 12:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		06/24/20 14:24	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		06/24/20 14:24	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		06/24/20 14:24	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		06/24/20 14:24	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		06/24/20 14:24	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		06/24/20 14:24	98-06-6	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		06/24/20 14:24	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		06/24/20 14:24	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		06/24/20 14:24	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		06/24/20 14:24	1868-53-7	
Toluene-d8 (S)	107	%	70-130		1		06/24/20 14:24	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**<2.2**	mg/L	10.0	2.2	5		06/22/20 18:22	16887-00-6	D3
Nitrate as N	**<0.22**	mg/L	0.75	0.22	5		06/22/20 18:22	14797-55-8	D3,H1
Sulfate	**7.1J**	mg/L	10.0	2.2	5		06/22/20 18:22	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**57.2**	mg/L	24.8	7.4	1		06/24/20 12:52		
350.1 Ammonia	Analytical Method: EPA 350.1								
	Pace Analytical Services - Green Bay								
Nitrogen, Ammonia	**<0.26**	mg/L	0.87	0.26	1		06/22/20 16:13	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
	Pace Analytical Services - Green Bay								
Chemical Oxygen Demand	**33.3J**	mg/L	50.0	14.7	1	07/09/20 07:49	07/09/20 10:14		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 359142
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2077102 Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.084	0.28	07/02/20 10:27	

LABORATORY CONTROL SAMPLE: 2077103

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.7	114	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2077104 2077105

Parameter	Units	40210293030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.084	5	5	5.6	5.2	112	105	85-115	6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358503
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2073394 Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	06/24/20 16:13	
Barium	ug/L	<1.5	5.0	06/24/20 16:13	
Cadmium	ug/L	<1.3	5.0	06/24/20 16:13	
Chromium	ug/L	<2.5	10.0	06/24/20 16:13	
Copper	ug/L	<3.4	11.2	06/24/20 16:13	
Lead	ug/L	<5.9	19.7	06/24/20 16:13	
Selenium	ug/L	<12.2	40.8	06/24/20 16:13	
Silver	ug/L	<3.2	10.7	06/24/20 16:13	
Total Hardness by 2340B	ug/L	<150	2000	06/24/20 16:13	

LABORATORY CONTROL SAMPLE: 2073395

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	520	104	80-120	
Barium	ug/L	500	510	102	80-120	
Cadmium	ug/L	500	520	104	80-120	
Chromium	ug/L	500	508	102	80-120	
Copper	ug/L	500	524	105	80-120	
Lead	ug/L	500	513	103	80-120	
Selenium	ug/L	500	512	102	80-120	
Silver	ug/L	250	261	105	80-120	
Total Hardness by 2340B	ug/L		33900			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073396 2073397

Parameter	Units	40209834001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<8.3	500	500	503	505	100	101	75-125	0	20	
Barium	ug/L	37.6	500	500	542	538	101	100	75-125	1	20	
Cadmium	ug/L	<1.3	500	500	501	498	100	99	75-125	1	20	
Chromium	ug/L	<2.5	500	500	499	500	100	100	75-125	0	20	
Copper	ug/L	7.5J	500	500	520	520	103	103	75-125	0	20	
Lead	ug/L	<5.9	500	500	492	487	98	97	75-125	1	20	
Selenium	ug/L	<12.2	500	500	494	489	99	98	75-125	1	20	
Silver	ug/L	<3.2	250	250	254	253	101	101	75-125	0	20	
Total Hardness by 2340B	ug/L	24200			58600	58300				0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358248
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834009, 40209834010

METHOD BLANK: 2072550
Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834009, 40209834010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	06/22/20 17:11	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	06/22/20 17:11	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	06/22/20 17:11	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	06/22/20 17:11	
1,1-Dichloroethane	ug/L	<0.27	1.0	06/22/20 17:11	
1,1-Dichloroethene	ug/L	<0.24	1.0	06/22/20 17:11	
1,1-Dichloropropene	ug/L	<0.54	1.8	06/22/20 17:11	
1,2,3-Trichlorobenzene	ug/L	<2.2	7.4	06/22/20 17:11	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	06/22/20 17:11	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	06/22/20 17:11	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	06/22/20 17:11	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	06/22/20 17:11	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	06/22/20 17:11	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	06/22/20 17:11	
1,2-Dichloroethane	ug/L	<0.28	1.0	06/22/20 17:11	
1,2-Dichloropropane	ug/L	<0.28	1.0	06/22/20 17:11	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	06/22/20 17:11	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	06/22/20 17:11	
1,3-Dichloropropane	ug/L	<0.83	2.8	06/22/20 17:11	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	06/22/20 17:11	
2,2-Dichloropropane	ug/L	<2.3	7.6	06/22/20 17:11	
2-Chlorotoluene	ug/L	<0.93	5.0	06/22/20 17:11	
4-Chlorotoluene	ug/L	<0.76	2.5	06/22/20 17:11	
Benzene	ug/L	<0.25	1.0	06/22/20 17:11	
Bromobenzene	ug/L	<0.24	1.0	06/22/20 17:11	
Bromochloromethane	ug/L	<0.36	5.0	06/22/20 17:11	
Bromodichloromethane	ug/L	<0.36	1.2	06/22/20 17:11	
Bromoform	ug/L	<4.0	13.2	06/22/20 17:11	
Bromomethane	ug/L	<0.97	5.0	06/22/20 17:11	
Carbon tetrachloride	ug/L	<1.1	3.6	06/22/20 17:11	
Chlorobenzene	ug/L	<0.71	2.4	06/22/20 17:11	
Chloroethane	ug/L	<1.3	5.0	06/22/20 17:11	
Chloroform	ug/L	<1.3	5.0	06/22/20 17:11	
Chloromethane	ug/L	<2.2	7.3	06/22/20 17:11	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	06/22/20 17:11	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	06/22/20 17:11	
Dibromochloromethane	ug/L	<2.6	8.7	06/22/20 17:11	
Dibromomethane	ug/L	<0.94	3.1	06/22/20 17:11	
Dichlorodifluoromethane	ug/L	<0.50	5.0	06/22/20 17:11	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

METHOD BLANK: 2072550 Matrix: Water

Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834009, 40209834010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	<1.9	6.3	06/22/20 17:11	
Ethylbenzene	ug/L	<0.32	1.1	06/22/20 17:11	
Hexachloro-1,3-butadiene	ug/L	<1.5	4.9	06/22/20 17:11	
Isopropylbenzene (Cumene)	ug/L	<1.7	5.6	06/22/20 17:11	
m&p-Xylene	ug/L	<0.47	2.0	06/22/20 17:11	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	06/22/20 17:11	
Methylene Chloride	ug/L	<0.58	5.0	06/22/20 17:11	
n-Butylbenzene	ug/L	<0.71	2.4	06/22/20 17:11	
n-Propylbenzene	ug/L	<0.81	5.0	06/22/20 17:11	
Naphthalene	ug/L	<1.2	5.0	06/22/20 17:11	
o-Xylene	ug/L	<0.26	1.0	06/22/20 17:11	
p-Isopropyltoluene	ug/L	<0.80	2.7	06/22/20 17:11	
sec-Butylbenzene	ug/L	<0.85	5.0	06/22/20 17:11	
Styrene	ug/L	<3.0	10.0	06/22/20 17:11	
tert-Butylbenzene	ug/L	<0.30	1.0	06/22/20 17:11	
Tetrachloroethene	ug/L	<0.33	1.1	06/22/20 17:11	
Toluene	ug/L	<0.27	0.90	06/22/20 17:11	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	06/22/20 17:11	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	06/22/20 17:11	
Trichloroethene	ug/L	<0.26	1.0	06/22/20 17:11	
Trichlorofluoromethane	ug/L	<0.21	1.0	06/22/20 17:11	
Vinyl chloride	ug/L	<0.17	1.0	06/22/20 17:11	
4-Bromofluorobenzene (S)	%	83	70-130	06/22/20 17:11	
Dibromofluoromethane (S)	%	70	70-130	06/22/20 17:11	
Toluene-d8 (S)	%	93	70-130	06/22/20 17:11	

LABORATORY CONTROL SAMPLE: 2072551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	42.7	85	64-131	
1,1,2-Trichloroethane	ug/L	50	54.6	109	70-130	
1,1-Dichloroethane	ug/L	50	43.0	86	69-163	
1,1-Dichloroethene	ug/L	50	48.9	98	77-123	
1,2,4-Trichlorobenzene	ug/L	50	46.4	93	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.3	101	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.3	105	70-130	
1,2-Dichlorobenzene	ug/L	50	54.8	110	70-130	
1,2-Dichloroethane	ug/L	50	47.2	94	78-142	
1,2-Dichloropropane	ug/L	50	52.4	105	86-134	
1,3-Dichlorobenzene	ug/L	50	53.4	107	70-130	
1,4-Dichlorobenzene	ug/L	50	55.5	111	70-130	
Benzene	ug/L	50	48.6	97	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

LABORATORY CONTROL SAMPLE: 2072551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	50	53.9	108	70-130	
Bromoform	ug/L	50	58.4	117	70-130	
Bromomethane	ug/L	50	46.5	93	39-129	
Carbon tetrachloride	ug/L	50	51.9	104	70-132	
Chlorobenzene	ug/L	50	57.9	116	70-130	
Chloroethane	ug/L	50	44.1	88	66-140	
Chloroform	ug/L	50	45.2	90	75-132	
Chloromethane	ug/L	50	43.6	87	32-143	
cis-1,2-Dichloroethene	ug/L	50	43.5	87	70-130	
cis-1,3-Dichloropropene	ug/L	50	49.2	98	70-130	
Dibromochloromethane	ug/L	50	54.9	110	70-130	
Dichlorodifluoromethane	ug/L	50	50.9	102	10-141	
Ethylbenzene	ug/L	50	57.9	116	80-120	
Isopropylbenzene (Cumene)	ug/L	50	58.5	117	70-130	
m&p-Xylene	ug/L	100	119	119	70-130	
Methyl-tert-butyl ether	ug/L	50	37.7	75	61-129	
Methylene Chloride	ug/L	50	45.1	90	70-130	
o-Xylene	ug/L	50	57.0	114	70-130	
Styrene	ug/L	50	58.5	117	70-130	
Tetrachloroethene	ug/L	50	62.2	124	70-130	
Toluene	ug/L	50	56.1	112	80-120	
trans-1,2-Dichloroethene	ug/L	50	45.1	90	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.9	96	69-130	
Trichloroethene	ug/L	50	59.5	119	70-130	
Trichlorofluoromethane	ug/L	50	52.5	105	75-145	
Vinyl chloride	ug/L	50	51.0	102	51-140	
4-Bromofluorobenzene (S)	%			98	70-130	
Dibromofluoromethane (S)	%			83	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2072778 2072779

Parameter	Units	40209814017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	0.31J	50	50	47.7	45.2	95	90	70-130	5	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	40.9	45.2	82	90	64-137	10	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	51.6	53.2	103	106	70-137	3	20	
1,1-Dichloroethane	ug/L	5.6	50	50	46.8	47.5	82	84	69-163	2	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	46.7	48.4	93	97	77-129	4	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	48.6	50.7	97	101	68-130	4	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	45.8	49.2	92	98	60-130	7	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	50.9	51.6	102	103	70-130	1	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	52.3	55.3	105	111	70-130	6	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	45.9	46.9	92	94	78-145	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2072778 2072779

Parameter	Units	40209814017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloropropane	ug/L	<0.28	50	50	50.0	50.5	100	101	86-135	1	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	51.6	54.2	103	108	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	53.4	56.0	107	112	70-130	5	20	
Benzene	ug/L	0.45J	50	50	47.7	49.2	94	97	70-136	3	20	
Bromodichloromethane	ug/L	<0.36	50	50	51.9	52.9	104	106	70-130	2	20	
Bromoform	ug/L	<4.0	50	50	54.9	57.1	110	114	69-130	4	20	
Bromomethane	ug/L	<0.97	50	50	47.3	48.4	95	97	39-138	2	20	
Carbon tetrachloride	ug/L	<1.1	50	50	49.0	50.4	98	101	70-142	3	20	
Chlorobenzene	ug/L	<0.71	50	50	55.9	56.7	112	113	70-130	1	20	
Chloroethane	ug/L	<1.3	50	50	42.5	43.8	85	88	61-149	3	20	
Chloroform	ug/L	<1.3	50	50	44.2	44.5	88	89	75-133	1	20	
Chloromethane	ug/L	<2.2	50	50	44.8	44.5	90	89	32-143	1	20	
cis-1,2-Dichloroethene	ug/L	1.6	50	50	43.9	44.0	85	85	70-130	0	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	47.6	49.5	95	99	70-130	4	20	
Dibromochloromethane	ug/L	<2.6	50	50	52.3	54.4	105	109	70-130	4	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	47.3	47.5	95	95	10-141	1	20	
Ethylbenzene	ug/L	<0.32	50	50	54.1	56.0	108	112	80-120	3	20	
Isopropylbenzene (Cumene)	ug/L	<1.7	50	50	54.9	57.5	110	115	70-130	5	20	
m&p-Xylene	ug/L	<0.47	100	100	111	116	111	116	70-130	5	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	37.7	38.2	75	76	61-136	1	20	
Methylene Chloride	ug/L	<0.58	50	50	43.4	44.8	87	90	68-137	3	20	
o-Xylene	ug/L	<0.26	50	50	53.5	55.6	107	111	70-130	4	20	
Styrene	ug/L	<3.0	50	50	53.8	57.7	108	115	70-130	7	20	
Tetrachloroethene	ug/L	<0.33	50	50	58.7	59.9	117	120	70-130	2	20	
Toluene	ug/L	<0.27	50	50	53.9	55.1	108	110	80-120	2	20	
trans-1,2-Dichloroethene	ug/L	<0.46	50	50	44.1	44.6	88	89	70-130	1	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	45.7	47.6	91	95	69-130	4	20	
Trichloroethene	ug/L	1.8	50	50	60.6	59.9	118	116	70-130	1	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	51.0	51.6	102	103	74-157	1	20	
Vinyl chloride	ug/L	2.4	50	50	52.3	53.3	100	102	51-140	2	20	
4-Bromofluorobenzene (S)	%						97	96	70-130			
Dibromofluoromethane (S)	%						80	73	70-130			
Toluene-d8 (S)	%						94	94	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358375
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834011

METHOD BLANK: 2072891 Matrix: Water
Associated Lab Samples: 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	06/24/20 06:54	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	06/24/20 06:54	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	06/24/20 06:54	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	06/24/20 06:54	
1,1-Dichloroethane	ug/L	<0.27	1.0	06/24/20 06:54	
1,1-Dichloroethene	ug/L	<0.24	1.0	06/24/20 06:54	
1,1-Dichloropropene	ug/L	<0.54	1.8	06/24/20 06:54	
1,2,3-Trichlorobenzene	ug/L	<2.2	7.4	06/24/20 06:54	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	06/24/20 06:54	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	06/24/20 06:54	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	06/24/20 06:54	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	06/24/20 06:54	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	06/24/20 06:54	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	06/24/20 06:54	
1,2-Dichloroethane	ug/L	<0.28	1.0	06/24/20 06:54	
1,2-Dichloropropane	ug/L	<0.28	1.0	06/24/20 06:54	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	06/24/20 06:54	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	06/24/20 06:54	
1,3-Dichloropropane	ug/L	<0.83	2.8	06/24/20 06:54	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	06/24/20 06:54	
2,2-Dichloropropane	ug/L	<2.3	7.6	06/24/20 06:54	
2-Chlorotoluene	ug/L	<0.93	5.0	06/24/20 06:54	
4-Chlorotoluene	ug/L	<0.76	2.5	06/24/20 06:54	
Benzene	ug/L	<0.25	1.0	06/24/20 06:54	
Bromobenzene	ug/L	<0.24	1.0	06/24/20 06:54	
Bromochloromethane	ug/L	<0.36	5.0	06/24/20 06:54	
Bromodichloromethane	ug/L	<0.36	1.2	06/24/20 06:54	
Bromoform	ug/L	<4.0	13.2	06/24/20 06:54	
Bromomethane	ug/L	<0.97	5.0	06/24/20 06:54	
Carbon tetrachloride	ug/L	<1.1	3.6	06/24/20 06:54	
Chlorobenzene	ug/L	<0.71	2.4	06/24/20 06:54	
Chloroethane	ug/L	<1.3	5.0	06/24/20 06:54	
Chloroform	ug/L	<1.3	5.0	06/24/20 06:54	
Chloromethane	ug/L	<2.2	7.3	06/24/20 06:54	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	06/24/20 06:54	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	06/24/20 06:54	
Dibromochloromethane	ug/L	<2.6	8.7	06/24/20 06:54	
Dibromomethane	ug/L	<0.94	3.1	06/24/20 06:54	
Dichlorodifluoromethane	ug/L	<0.50	5.0	06/24/20 06:54	
Diisopropyl ether	ug/L	<1.9	6.3	06/24/20 06:54	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

METHOD BLANK: 2072891 Matrix: Water
Associated Lab Samples: 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.32	1.1	06/24/20 06:54	
Hexachloro-1,3-butadiene	ug/L	2.3J	4.9	06/24/20 06:54	
Isopropylbenzene (Cumene)	ug/L	<1.7	5.6	06/24/20 06:54	
m&p-Xylene	ug/L	<0.47	2.0	06/24/20 06:54	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	06/24/20 06:54	
Methylene Chloride	ug/L	<0.58	5.0	06/24/20 06:54	
n-Butylbenzene	ug/L	<0.71	2.4	06/24/20 06:54	
n-Propylbenzene	ug/L	<0.81	5.0	06/24/20 06:54	
Naphthalene	ug/L	<1.2	5.0	06/24/20 06:54	
o-Xylene	ug/L	<0.26	1.0	06/24/20 06:54	
p-Isopropyltoluene	ug/L	<0.80	2.7	06/24/20 06:54	
sec-Butylbenzene	ug/L	<0.85	5.0	06/24/20 06:54	
Styrene	ug/L	<3.0	10.0	06/24/20 06:54	
tert-Butylbenzene	ug/L	<0.30	1.0	06/24/20 06:54	
Tetrachloroethene	ug/L	<0.33	1.1	06/24/20 06:54	
Toluene	ug/L	<0.27	0.90	06/24/20 06:54	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	06/24/20 06:54	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	06/24/20 06:54	
Trichloroethene	ug/L	<0.26	1.0	06/24/20 06:54	
Trichlorofluoromethane	ug/L	<0.21	1.0	06/24/20 06:54	
Vinyl chloride	ug/L	<0.17	1.0	06/24/20 06:54	
4-Bromofluorobenzene (S)	%	107	70-130	06/24/20 06:54	
Dibromofluoromethane (S)	%	96	70-130	06/24/20 06:54	
Toluene-d8 (S)	%	106	70-130	06/24/20 06:54	

LABORATORY CONTROL SAMPLE: 2072892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.6	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.0	104	64-131	
1,1,2-Trichloroethane	ug/L	50	56.7	113	70-130	
1,1-Dichloroethane	ug/L	50	51.3	103	69-163	
1,1-Dichloroethene	ug/L	50	51.1	102	77-123	
1,2,4-Trichlorobenzene	ug/L	50	51.5	103	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.3	103	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.8	102	70-130	
1,2-Dichlorobenzene	ug/L	50	47.0	94	70-130	
1,2-Dichloroethane	ug/L	50	48.2	96	78-142	
1,2-Dichloropropane	ug/L	50	58.6	117	86-134	
1,3-Dichlorobenzene	ug/L	50	46.1	92	70-130	
1,4-Dichlorobenzene	ug/L	50	47.5	95	70-130	
Benzene	ug/L	50	49.1	98	70-130	
Bromodichloromethane	ug/L	50	61.7	123	70-130	
Bromoform	ug/L	50	52.8	106	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

LABORATORY CONTROL SAMPLE: 2072892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	47.3	95	39-129	
Carbon tetrachloride	ug/L	50	49.7	99	70-132	
Chlorobenzene	ug/L	50	51.6	103	70-130	
Chloroethane	ug/L	50	50.3	101	66-140	
Chloroform	ug/L	50	49.6	99	75-132	
Chloromethane	ug/L	50	38.2	76	32-143	
cis-1,2-Dichloroethene	ug/L	50	46.2	92	70-130	
cis-1,3-Dichloropropene	ug/L	50	54.0	108	70-130	
Dibromochloromethane	ug/L	50	50.2	100	70-130	
Dichlorodifluoromethane	ug/L	50	40.7	81	10-141	
Ethylbenzene	ug/L	50	58.9	118	80-120	
Isopropylbenzene (Cumene)	ug/L	50	50.4	101	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methyl-tert-butyl ether	ug/L	50	43.4	87	61-129	
Methylene Chloride	ug/L	50	51.3	103	70-130	
o-Xylene	ug/L	50	54.6	109	70-130	
Styrene	ug/L	50	53.6	107	70-130	
Tetrachloroethene	ug/L	50	56.6	113	70-130	
Toluene	ug/L	50	57.4	115	80-120	
trans-1,2-Dichloroethene	ug/L	50	51.2	102	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.8	100	69-130	
Trichloroethene	ug/L	50	58.6	117	70-130	
Trichlorofluoromethane	ug/L	50	53.9	108	75-145	
Vinyl chloride	ug/L	50	48.3	97	51-140	
4-Bromofluorobenzene (S)	%			116	70-130	
Dibromofluoromethane (S)	%			92	70-130	
Toluene-d8 (S)	%			107	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073422 2073423

Parameter	Units	40209924002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	50.8	50.9	102	102	70-130	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	54.2	57.5	108	115	64-137	6	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	58.3	60.3	117	121	70-137	3	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	53.4	52.8	107	106	69-163	1	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	54.1	53.9	108	108	77-129	0	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	55.7	55.7	111	111	68-130	0	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	52.6	54.6	105	109	60-130	4	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	53.0	55.1	106	110	70-130	4	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	48.3	48.8	97	98	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	49.5	51.3	99	103	78-145	4	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	60.2	61.1	120	122	86-135	1	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	47.3	48.4	95	97	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073422 2073423

Parameter	Units	40209924002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	ug/L	<0.94	50	50	48.8	49.5	98	99	70-130	2	20	
Benzene	ug/L	<0.25	50	50	51.4	51.3	103	103	70-136	0	20	
Bromodichloromethane	ug/L	<0.36	50	50	64.2	64.3	128	129	70-130	0	20	
Bromoform	ug/L	<4.0	50	50	54.6	56.8	109	114	69-130	4	20	
Bromomethane	ug/L	<0.97	50	50	51.2	44.7	102	89	39-138	13	20	
Carbon tetrachloride	ug/L	<1.1	50	50	51.7	52.1	103	104	70-142	1	20	
Chlorobenzene	ug/L	<0.71	50	50	53.5	54.5	107	109	70-130	2	20	
Chloroethane	ug/L	<1.3	50	50	52.3	50.7	105	101	61-149	3	20	
Chloroform	ug/L	<1.3	50	50	51.5	51.2	103	102	75-133	1	20	
Chloromethane	ug/L	<2.2	50	50	39.1	39.1	78	78	32-143	0	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	48.2	48.2	96	96	70-130	0	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	56.0	56.8	112	114	70-130	2	20	
Dibromochloromethane	ug/L	<2.6	50	50	51.6	53.1	103	106	70-130	3	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	41.7	41.2	83	82	10-141	1	20	
Ethylbenzene	ug/L	<0.32	50	50	60.4	61.5	121	123	80-120	2	20	M1
Isopropylbenzene (Cumene)	ug/L	<1.7	50	50	52.2	53.0	104	106	70-130	2	20	
m&p-Xylene	ug/L	<0.47	100	100	115	116	115	116	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	45.9	46.4	92	93	61-136	1	20	
Methylene Chloride	ug/L	<0.58	50	50	53.3	52.5	107	105	68-137	2	20	
o-Xylene	ug/L	<0.26	50	50	56.4	57.0	113	114	70-130	1	20	
Styrene	ug/L	<3.0	50	50	55.0	55.7	110	111	70-130	1	20	
Tetrachloroethene	ug/L	<0.33	50	50	59.3	60.7	119	121	70-130	2	20	
Toluene	ug/L	<0.27	50	50	59.1	59.7	118	119	80-120	1	20	
trans-1,2-Dichloroethene	ug/L	<0.46	50	50	53.8	53.9	108	108	70-130	0	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	51.8	53.4	104	107	69-130	3	20	
Trichloroethene	ug/L	<0.26	50	50	61.5	61.6	123	123	70-130	0	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	56.7	56.2	113	112	74-157	1	20	
Vinyl chloride	ug/L	<0.17	50	50	50.1	48.7	100	97	51-140	3	20	
4-Bromofluorobenzene (S)	%						117	116	70-130			
Dibromofluoromethane (S)	%						93	92	70-130			
Toluene-d8 (S)	%						107	108	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358504
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834008

METHOD BLANK: 2073398 Matrix: Water
Associated Lab Samples: 40209834008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	06/24/20 16:54	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	06/24/20 16:54	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	06/24/20 16:54	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	06/24/20 16:54	
1,1-Dichloroethane	ug/L	<0.27	1.0	06/24/20 16:54	
1,1-Dichloroethene	ug/L	<0.24	1.0	06/24/20 16:54	
1,1-Dichloropropene	ug/L	<0.54	1.8	06/24/20 16:54	
1,2,3-Trichlorobenzene	ug/L	<2.2	7.4	06/24/20 16:54	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	06/24/20 16:54	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	06/24/20 16:54	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	06/24/20 16:54	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	06/24/20 16:54	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	06/24/20 16:54	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	06/24/20 16:54	
1,2-Dichloroethane	ug/L	<0.28	1.0	06/24/20 16:54	
1,2-Dichloropropane	ug/L	<0.28	1.0	06/24/20 16:54	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	06/24/20 16:54	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	06/24/20 16:54	
1,3-Dichloropropane	ug/L	<0.83	2.8	06/24/20 16:54	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	06/24/20 16:54	
2,2-Dichloropropane	ug/L	<2.3	7.6	06/24/20 16:54	
2-Chlorotoluene	ug/L	<0.93	5.0	06/24/20 16:54	
4-Chlorotoluene	ug/L	<0.76	2.5	06/24/20 16:54	
Benzene	ug/L	<0.25	1.0	06/24/20 16:54	
Bromobenzene	ug/L	<0.24	1.0	06/24/20 16:54	
Bromochloromethane	ug/L	<0.36	5.0	06/24/20 16:54	
Bromodichloromethane	ug/L	<0.36	1.2	06/24/20 16:54	
Bromoform	ug/L	<4.0	13.2	06/24/20 16:54	
Bromomethane	ug/L	<0.97	5.0	06/24/20 16:54	
Carbon tetrachloride	ug/L	<1.1	3.6	06/24/20 16:54	
Chlorobenzene	ug/L	<0.71	2.4	06/24/20 16:54	
Chloroethane	ug/L	<1.3	5.0	06/24/20 16:54	
Chloroform	ug/L	<1.3	5.0	06/24/20 16:54	
Chloromethane	ug/L	<2.2	7.3	06/24/20 16:54	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	06/24/20 16:54	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	06/24/20 16:54	
Dibromochloromethane	ug/L	<2.6	8.7	06/24/20 16:54	
Dibromomethane	ug/L	<0.94	3.1	06/24/20 16:54	
Dichlorodifluoromethane	ug/L	<0.50	5.0	06/24/20 16:54	
Diisopropyl ether	ug/L	<1.9	6.3	06/24/20 16:54	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

METHOD BLANK: 2073398 Matrix: Water
Associated Lab Samples: 40209834008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.32	1.1	06/24/20 16:54	
Hexachloro-1,3-butadiene	ug/L	<1.5	4.9	06/24/20 16:54	
Isopropylbenzene (Cumene)	ug/L	<1.7	5.6	06/24/20 16:54	
m&p-Xylene	ug/L	<0.47	2.0	06/24/20 16:54	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	06/24/20 16:54	
Methylene Chloride	ug/L	<0.58	5.0	06/24/20 16:54	
n-Butylbenzene	ug/L	<0.71	2.4	06/24/20 16:54	
n-Propylbenzene	ug/L	<0.81	5.0	06/24/20 16:54	
Naphthalene	ug/L	<1.2	5.0	06/24/20 16:54	
o-Xylene	ug/L	<0.26	1.0	06/24/20 16:54	
p-Isopropyltoluene	ug/L	<0.80	2.7	06/24/20 16:54	
sec-Butylbenzene	ug/L	<0.85	5.0	06/24/20 16:54	
Styrene	ug/L	<3.0	10.0	06/24/20 16:54	
tert-Butylbenzene	ug/L	<0.30	1.0	06/24/20 16:54	
Tetrachloroethene	ug/L	<0.33	1.1	06/24/20 16:54	
Toluene	ug/L	<0.27	0.90	06/24/20 16:54	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	06/24/20 16:54	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	06/24/20 16:54	
Trichloroethene	ug/L	<0.26	1.0	06/24/20 16:54	
Trichlorofluoromethane	ug/L	<0.21	1.0	06/24/20 16:54	
Vinyl chloride	ug/L	<0.17	1.0	06/24/20 16:54	
4-Bromofluorobenzene (S)	%	85	70-130	06/24/20 16:54	
Dibromofluoromethane (S)	%	99	70-130	06/24/20 16:54	
Toluene-d8 (S)	%	95	70-130	06/24/20 16:54	

LABORATORY CONTROL SAMPLE: 2073399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	60.0	120	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.6	107	64-131	
1,1,2-Trichloroethane	ug/L	50	56.0	112	70-130	
1,1-Dichloroethane	ug/L	50	46.7	93	69-163	
1,1-Dichloroethene	ug/L	50	49.9	100	77-123	
1,2,4-Trichlorobenzene	ug/L	50	53.6	107	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	53.4	107	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	61.9	124	70-130	
1,2-Dichlorobenzene	ug/L	50	53.4	107	70-130	
1,2-Dichloroethane	ug/L	50	50.6	101	78-142	
1,2-Dichloropropane	ug/L	50	51.4	103	86-134	
1,3-Dichlorobenzene	ug/L	50	55.7	111	70-130	
1,4-Dichlorobenzene	ug/L	50	54.6	109	70-130	
Benzene	ug/L	50	45.5	91	70-130	
Bromodichloromethane	ug/L	50	56.3	113	70-130	
Bromoform	ug/L	50	61.6	123	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

LABORATORY CONTROL SAMPLE: 2073399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	48.3	97	39-129	
Carbon tetrachloride	ug/L	50	60.4	121	70-132	
Chlorobenzene	ug/L	50	53.9	108	70-130	
Chloroethane	ug/L	50	39.9	80	66-140	
Chloroform	ug/L	50	52.7	105	75-132	
Chloromethane	ug/L	50	32.7	65	32-143	
cis-1,2-Dichloroethene	ug/L	50	48.0	96	70-130	
cis-1,3-Dichloropropene	ug/L	50	54.9	110	70-130	
Dibromochloromethane	ug/L	50	59.5	119	70-130	
Dichlorodifluoromethane	ug/L	50	28.1	56	10-141	
Ethylbenzene	ug/L	50	52.9	106	80-120	
Isopropylbenzene (Cumene)	ug/L	50	55.0	110	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methyl-tert-butyl ether	ug/L	50	51.4	103	61-129	
Methylene Chloride	ug/L	50	42.7	85	70-130	
o-Xylene	ug/L	50	54.3	109	70-130	
Styrene	ug/L	50	55.0	110	70-130	
Tetrachloroethene	ug/L	50	59.8	120	70-130	
Toluene	ug/L	50	55.6	111	80-120	
trans-1,2-Dichloroethene	ug/L	50	52.5	105	70-130	
trans-1,3-Dichloropropene	ug/L	50	52.6	105	69-130	
Trichloroethene	ug/L	50	61.2	122	70-130	
Trichlorofluoromethane	ug/L	50	57.2	114	75-145	
Vinyl chloride	ug/L	50	38.3	77	51-140	
4-Bromofluorobenzene (S)	%			92	70-130	
Dibromofluoromethane (S)	%			103	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2074011 2074012

Parameter	Units	40209814011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<2.4	500	500	560	564	112	113	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/L	<2.8	500	500	541	513	108	103	64-137	5	20	
1,1,2-Trichloroethane	ug/L	<5.5	500	500	526	523	105	105	70-137	1	20	
1,1-Dichloroethane	ug/L	8.3J	500	500	448	457	88	90	69-163	2	20	
1,1-Dichloroethene	ug/L	3.8J	500	500	485	547	96	109	77-129	12	20	
1,2,4-Trichlorobenzene	ug/L	<9.5	500	500	531	519	106	104	68-130	2	20	
1,2-Dibromo-3-chloropropane	ug/L	<17.6	500	500	611	524	122	105	60-130	15	20	
1,2-Dibromoethane (EDB)	ug/L	<8.3	500	500	582	576	116	115	70-130	1	20	
1,2-Dichlorobenzene	ug/L	<7.1	500	500	541	514	108	103	70-130	5	20	
1,2-Dichloroethane	ug/L	<2.8	500	500	480	483	96	97	78-145	1	20	
1,2-Dichloropropane	ug/L	<2.8	500	500	481	509	96	102	86-135	6	20	
1,3-Dichlorobenzene	ug/L	<6.3	500	500	560	532	112	106	70-130	5	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2074011 2074012

Parameter	Units	40209814011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	ug/L	<9.4	500	500	535	517	107	103	70-130	3	20	
Benzene	ug/L	<2.5	500	500	437	442	87	88	70-136	1	20	
Bromodichloromethane	ug/L	<3.6	500	500	560	532	112	106	70-130	5	20	
Bromoform	ug/L	<39.7	500	500	628	615	126	123	69-130	2	20	
Bromomethane	ug/L	<9.7	500	500	541	525	108	105	39-138	3	20	
Carbon tetrachloride	ug/L	<10.8	500	500	563	580	113	116	70-142	3	20	
Chlorobenzene	ug/L	<7.1	500	500	526	530	105	106	70-130	1	20	
Chloroethane	ug/L	<13.4	500	500	411	429	82	86	61-149	4	20	
Chloroform	ug/L	<12.7	500	500	512	522	102	104	75-133	2	20	
Chloromethane	ug/L	<21.9	500	500	403	396	81	79	32-143	2	20	
cis-1,2-Dichloroethene	ug/L	977	500	500	1390	1380	82	81	70-130	0	20	
cis-1,3-Dichloropropene	ug/L	<36.3	500	500	555	526	111	105	70-130	5	20	
Dibromochloromethane	ug/L	<26.0	500	500	579	545	116	109	70-130	6	20	
Dichlorodifluoromethane	ug/L	<5.0	500	500	403	401	81	80	10-141	1	20	
Ethylbenzene	ug/L	<3.2	500	500	514	513	103	103	80-120	0	20	
Isopropylbenzene (Cumene)	ug/L	<16.9	500	500	528	537	106	107	70-130	2	20	
m&p-Xylene	ug/L	<4.7	1000	1000	1050	1070	105	107	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<12.5	500	500	508	490	102	98	61-136	4	20	
Methylene Chloride	ug/L	<5.8	500	500	436	433	87	87	68-137	1	20	
o-Xylene	ug/L	<2.6	500	500	520	536	104	107	70-130	3	20	
Styrene	ug/L	<30.1	500	500	531	531	106	106	70-130	0	20	
Tetrachloroethene	ug/L	<3.3	500	500	565	562	113	112	70-130	0	20	
Toluene	ug/L	<2.7	500	500	536	551	107	110	80-120	3	20	
trans-1,2-Dichloroethene	ug/L	<4.6	500	500	509	513	101	102	70-130	1	20	
trans-1,3-Dichloropropene	ug/L	<43.7	500	500	512	491	102	98	69-130	4	20	
Trichloroethene	ug/L	51.9	500	500	622	595	114	109	70-130	4	20	
Trichlorofluoromethane	ug/L	<2.1	500	500	580	596	116	119	74-157	3	20	
Vinyl chloride	ug/L	118	500	500	503	537	77	84	51-140	7	20	
4-Bromofluorobenzene (S)	%						93	95	70-130			
Dibromofluoromethane (S)	%						103	98	70-130			
Toluene-d8 (S)	%						98	96	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358201
QC Batch Method: EPA 3510
Analysis Method: EPA 8270 by HVI
Analysis Description: 8270 Water PAH by HVI
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834003, 40209834004, 40209834005, 40209834006

METHOD BLANK: 2072415 Matrix: Water
Associated Lab Samples: 40209834001, 40209834003, 40209834004, 40209834005, 40209834006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	06/22/20 15:00	
2-Methylnaphthalene	ug/L	<0.0049	0.024	06/22/20 15:00	
Acenaphthene	ug/L	<0.0061	0.030	06/22/20 15:00	
Acenaphthylene	ug/L	<0.0050	0.025	06/22/20 15:00	
Anthracene	ug/L	<0.010	0.052	06/22/20 15:00	
Benzo(a)anthracene	ug/L	<0.0076	0.038	06/22/20 15:00	
Benzo(a)pyrene	ug/L	<0.011	0.053	06/22/20 15:00	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	06/22/20 15:00	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	06/22/20 15:00	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	06/22/20 15:00	
Chrysene	ug/L	<0.013	0.065	06/22/20 15:00	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	06/22/20 15:00	
Fluoranthene	ug/L	<0.011	0.053	06/22/20 15:00	
Fluorene	ug/L	<0.0080	0.040	06/22/20 15:00	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	06/22/20 15:00	
Naphthalene	ug/L	<0.018	0.092	06/22/20 15:00	
Phenanthrene	ug/L	<0.014	0.069	06/22/20 15:00	
Pyrene	ug/L	<0.0076	0.038	06/22/20 15:00	
Total PAHs	ug/L	0.0075		06/22/20 15:00	
2-Fluorobiphenyl (S)	%	65	39-120	06/22/20 15:00	
Terphenyl-d14 (S)	%	103	10-159	06/22/20 15:00	

LABORATORY CONTROL SAMPLE & LCSD: 2072416 2072417

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1-Methylnaphthalene	ug/L	2	1.0	1.2	52	61	37-120	16	25	
2-Methylnaphthalene	ug/L	2	1.0	1.3	52	64	38-120	20	25	
Acenaphthene	ug/L	2	1.3	1.6	64	79	49-120	21	24	
Acenaphthylene	ug/L	2	1.2	1.4	58	70	43-85	19	26	
Anthracene	ug/L	2	1.3	1.7	65	84	57-110	25	28	
Benzo(a)anthracene	ug/L	2	1.6	1.8	81	92	47-118	13	27	
Benzo(a)pyrene	ug/L	2	1.7	1.9	84	97	70-120	15	20	
Benzo(b)fluoranthene	ug/L	2	1.6	1.8	78	90	54-97	15	21	
Benzo(g,h,i)perylene	ug/L	2	1.2	1.2	60	62	26-74	2	42	
Benzo(k)fluoranthene	ug/L	2	1.8	2.1	92	107	73-126	15	22	
Chrysene	ug/L	2	1.8	2.0	88	101	75-151	14	20	
Dibenz(a,h)anthracene	ug/L	2	1.2	1.1	60	56	13-72	7	50	
Fluoranthene	ug/L	2	1.6	1.6	79	78	63-120	1	20	
Fluorene	ug/L	2	1.3	1.7	67	83	53-120	21	26	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

LABORATORY CONTROL SAMPLE & LCSD: 2072416 2072417

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/L	2	1.7	1.9	83	94	51-101	12	27	
Naphthalene	ug/L	2	1.1	1.4	55	70	41-120	24	24	
Phenanthrene	ug/L	2	1.4	1.6	69	80	47-100	16	22	
Pyrene	ug/L	2	1.5	1.5	76	76	70-128	1	20	
Total PAHs	ug/L		25.3	28.9				13		
2-Fluorobiphenyl (S)	%				55	72	39-120			
Terphenyl-d14 (S)	%				90	90	10-159			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358570
QC Batch Method: EPA 3510
Analysis Method: EPA 8270 by HVI
Analysis Description: 8270 Water PAH by HVI
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834002, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2073743 Matrix: Water
Associated Lab Samples: 40209834002, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	06/24/20 16:50	
2-Methylnaphthalene	ug/L	0.0076J	0.024	06/24/20 16:50	
Acenaphthene	ug/L	0.0073J	0.030	06/24/20 16:50	
Acenaphthylene	ug/L	<0.0050	0.025	06/24/20 16:50	
Anthracene	ug/L	<0.010	0.052	06/24/20 16:50	
Benzo(a)anthracene	ug/L	<0.0076	0.038	06/24/20 16:50	
Benzo(a)pyrene	ug/L	<0.011	0.053	06/24/20 16:50	
Benzo(b)fluoranthene	ug/L	0.0080J	0.029	06/24/20 16:50	
Benzo(g,h,i)perylene	ug/L	0.0098J	0.034	06/24/20 16:50	
Benzo(k)fluoranthene	ug/L	0.011J	0.038	06/24/20 16:50	
Chrysene	ug/L	<0.013	0.065	06/24/20 16:50	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	06/24/20 16:50	
Fluoranthene	ug/L	<0.011	0.053	06/24/20 16:50	
Fluorene	ug/L	0.015J	0.040	06/24/20 16:50	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	06/24/20 16:50	
Naphthalene	ug/L	<0.018	0.092	06/24/20 16:50	
Phenanthrene	ug/L	0.014J	0.069	06/24/20 16:50	
Pyrene	ug/L	<0.0076	0.038	06/24/20 16:50	
Total PAHs	ug/L	0.14		06/24/20 16:50	
2-Fluorobiphenyl (S)	%	71	39-120	06/24/20 16:50	
Terphenyl-d14 (S)	%	98	10-159	06/24/20 16:50	

LABORATORY CONTROL SAMPLE: 2073744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	2	1.0	52	37-120	
2-Methylnaphthalene	ug/L	2	1.1	53	38-120	
Acenaphthene	ug/L	2	1.3	63	49-120	
Acenaphthylene	ug/L	2	1.2	58	43-85	
Anthracene	ug/L	2	1.6	79	57-110	
Benzo(a)anthracene	ug/L	2	1.6	80	47-118	
Benzo(a)pyrene	ug/L	2	1.9	94	70-120	
Benzo(b)fluoranthene	ug/L	2	1.8	89	54-97	
Benzo(g,h,i)perylene	ug/L	2	1.4	68	26-74	
Benzo(k)fluoranthene	ug/L	2	2.3	113	73-126	
Chrysene	ug/L	2	2.1	105	75-151	
Dibenz(a,h)anthracene	ug/L	2	1.3	63	13-72	
Fluoranthene	ug/L	2	1.9	93	63-120	
Fluorene	ug/L	2	1.2	62	53-120	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

LABORATORY CONTROL SAMPLE: 2073744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/L	2	1.9	96	51-101	
Naphthalene	ug/L	2	1.1	54	41-120	
Phenanthrene	ug/L	2	1.5	74	47-100	
Pyrene	ug/L	2	1.7	84	70-128	
Total PAHs	ug/L		27.6			
2-Fluorobiphenyl (S)	%			65	39-120	
Terphenyl-d14 (S)	%			96	10-159	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073745 2073746

Parameter	Units	40209947005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/L	<0.0059	2	2	1.1	1.0	54	51	16-120	6	28	
2-Methylnaphthalene	ug/L	0.0082J	2	2	1.1	1.1	52	54	29-120	2	31	
Acenaphthene	ug/L	<0.0061	2	2	1.3	1.3	66	63	33-120	4	30	
Acenaphthylene	ug/L	<0.0050	2	2	1.1	1.1	57	55	21-85	5	26	
Anthracene	ug/L	<0.010	2	2	1.3	1.2	67	62	16-114	8	36	
Benzo(a)anthracene	ug/L	0.010J	2	2	0.92	0.83	45	41	10-118	10	35	
Benzo(a)pyrene	ug/L	<0.011	2	2	0.73	0.76	36	37	10-120	3	37	
Benzo(b)fluoranthene	ug/L	0.021J	2	2	0.76	0.70	37	34	10-97	9	36	
Benzo(g,h,i)perylene	ug/L	0.010J	2	2	0.53	0.45	26	22	10-74	15	45	
Benzo(k)fluoranthene	ug/L	0.0096J	2	2	1.2	1.0	59	51	10-126	15	41	
Chrysene	ug/L	0.020J	2	2	1.5	1.3	75	66	10-161	12	30	
Dibenz(a,h)anthracene	ug/L	<0.010	2	2	0.50	0.41	25	20	10-72	19	50	
Fluoranthene	ug/L	0.036J	2	2	1.4	1.2	68	58	35-120	15	33	
Fluorene	ug/L	<0.0080	2	2	1.3	1.3	65	66	17-120	2	33	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	2	2	0.57	0.52	28	25	10-101	9	41	
Naphthalene	ug/L	0.049J	2	2	1.3	1.1	61	51	24-120	17	30	
Phenanthrene	ug/L	0.019J	2	2	1.2	1.1	60	57	15-100	6	30	
Pyrene	ug/L	0.030J	2	2	1.2	1.2	58	59	14-137	2	31	
Total PAHs	ug/L	0.24			19.0	17.7				7		
2-Fluorobiphenyl (S)	%						67	63	39-120			
Terphenyl-d14 (S)	%						59	60	10-159			

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358183
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2071955 Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	06/22/20 11:11	
Nitrate as N	mg/L	<0.044	0.15	06/22/20 11:11	
Sulfate	mg/L	<0.44	2.0	06/22/20 11:11	

LABORATORY CONTROL SAMPLE: 2071956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.2	106	90-110	
Nitrate as N	mg/L	1.5	1.6	107	90-110	
Sulfate	mg/L	20	21.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2071957 2071958

Parameter	Units	40209814011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	28.1	20	20	48.6	48.6	103	102	90-110	0	15	
Nitrate as N	mg/L	<0.44	15	15	15.5	16.0	104	107	90-110	3	15	
Sulfate	mg/L	175	200	200	371	379	98	102	90-110	2	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2071959 2071960

Parameter	Units	40209834001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	<2.2	100	100	111	111	109	110	90-110	0	15	
Nitrate as N	mg/L	<0.22	7.5	7.5	8.1	8.1	107	108	90-110	0	15	
Sulfate	mg/L	5.7J	100	100	117	117	111	112	90-110	0	15	M0

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358487 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006

METHOD BLANK: 2073326 Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.4	24.8	06/24/20 12:01	

LABORATORY CONTROL SAMPLE: 2073327

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	99.1	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073328 2073329

Parameter	Units	40209789001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	2110	2500	2500	4590	4600	99	99	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073330 2073331

Parameter	Units	40209834006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	197	200	200	402	403	102	103	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358488 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2073332 Matrix: Water
Associated Lab Samples: 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.4	24.8	06/24/20 12:40	

LABORATORY CONTROL SAMPLE: 2073333

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	102	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073334 2073335

Parameter	Units	40209834007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	89.8	200	200	292	287	101	99	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073336 2073337

Parameter	Units	40209983002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	228	200	200	426	426	99	99	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 358309
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2072679 Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	<0.26	0.87	06/22/20 15:51	

LABORATORY CONTROL SAMPLE: 2072680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	10	10.4	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2072681 2072682

Parameter	Units	40209390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	<0.26	10	10	10.5	10.4	103	102	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2072683 2072684

Parameter	Units	40209834001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	<0.26	10	10	9.7	9.8	97	98	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

QC Batch: 359670 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

METHOD BLANK: 2079952 Matrix: Water
Associated Lab Samples: 40209834001, 40209834002, 40209834003, 40209834004, 40209834005, 40209834006, 40209834007, 40209834008, 40209834009, 40209834010, 40209834011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<14.7	50.0	07/09/20 10:12	

LABORATORY CONTROL SAMPLE: 2079953

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	490	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2079954 2079955

Parameter	Units	40209834001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<15.5	526	526	511	499	96	94	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2079956 2079957

Parameter	Units	40209834002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	39.6J	526	526	538	536	95	94	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALIFIERS

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

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.

BATCH QUALIFIERS

Batch: 358205

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-extraction and re-analysis).
B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H1	Analysis conducted outside the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40209834001	MW1	EPA 3010	358503	EPA 6010	358574
40209834002	MW2	EPA 3010	358503	EPA 6010	358574
40209834003	MW3	EPA 3010	358503	EPA 6010	358574
40209834004	MW4	EPA 3010	358503	EPA 6010	358574
40209834005	MW4A	EPA 3010	358503	EPA 6010	358574
40209834006	MW5	EPA 3010	358503	EPA 6010	358574
40209834007	MW6	EPA 3010	358503	EPA 6010	358574
40209834008	MW7	EPA 3010	358503	EPA 6010	358574
40209834009	MW8	EPA 3010	358503	EPA 6010	358574
40209834010	MW9	EPA 3010	358503	EPA 6010	358574
40209834011	MW10	EPA 3010	358503	EPA 6010	358574
40209834001	MW1	EPA 7470	359142	EPA 7470	359175
40209834002	MW2	EPA 7470	359142	EPA 7470	359175
40209834003	MW3	EPA 7470	359142	EPA 7470	359175
40209834004	MW4	EPA 7470	359142	EPA 7470	359175
40209834005	MW4A	EPA 7470	359142	EPA 7470	359175
40209834006	MW5	EPA 7470	359142	EPA 7470	359175
40209834007	MW6	EPA 7470	359142	EPA 7470	359175
40209834008	MW7	EPA 7470	359142	EPA 7470	359175
40209834009	MW8	EPA 7470	359142	EPA 7470	359175
40209834010	MW9	EPA 7470	359142	EPA 7470	359175
40209834011	MW10	EPA 7470	359142	EPA 7470	359175
40209834001	MW1	EPA 3510	358201	EPA 8270 by HVI	358205
40209834002	MW2	EPA 3510	358570	EPA 8270 by HVI	358597
40209834003	MW3	EPA 3510	358201	EPA 8270 by HVI	358205
40209834004	MW4	EPA 3510	358201	EPA 8270 by HVI	358205
40209834005	MW4A	EPA 3510	358201	EPA 8270 by HVI	358205
40209834006	MW5	EPA 3510	358201	EPA 8270 by HVI	358205
40209834007	MW6	EPA 3510	358570	EPA 8270 by HVI	358597
40209834008	MW7	EPA 3510	358570	EPA 8270 by HVI	358597
40209834009	MW8	EPA 3510	358570	EPA 8270 by HVI	358597
40209834010	MW9	EPA 3510	358570	EPA 8270 by HVI	358597
40209834011	MW10	EPA 3510	358570	EPA 8270 by HVI	358597
40209834001	MW1	EPA 8260	358248		
40209834002	MW2	EPA 8260	358248		
40209834003	MW3	EPA 8260	358248		
40209834004	MW4	EPA 8260	358248		
40209834005	MW4A	EPA 8260	358248		
40209834006	MW5	EPA 8260	358248		
40209834007	MW6	EPA 8260	358248		
40209834008	MW7	EPA 8260	358504		
40209834009	MW8	EPA 8260	358248		
40209834010	MW9	EPA 8260	358248		
40209834011	MW10	EPA 8260	358375		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 8949 TOMAHAWK TISSUE
Pace Project No.: 40209834

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40209834001	MW1	EPA 300.0	358183		
40209834002	MW2	EPA 300.0	358183		
40209834003	MW3	EPA 300.0	358183		
40209834004	MW4	EPA 300.0	358183		
40209834005	MW4A	EPA 300.0	358183		
40209834006	MW5	EPA 300.0	358183		
40209834007	MW6	EPA 300.0	358183		
40209834008	MW7	EPA 300.0	358183		
40209834009	MW8	EPA 300.0	358183		
40209834010	MW9	EPA 300.0	358183		
40209834011	MW10	EPA 300.0	358183		
40209834001	MW1	EPA 310.2	358487		
40209834002	MW2	EPA 310.2	358487		
40209834003	MW3	EPA 310.2	358487		
40209834004	MW4	EPA 310.2	358487		
40209834005	MW4A	EPA 310.2	358487		
40209834006	MW5	EPA 310.2	358487		
40209834007	MW6	EPA 310.2	358488		
40209834008	MW7	EPA 310.2	358488		
40209834009	MW8	EPA 310.2	358488		
40209834010	MW9	EPA 310.2	358488		
40209834011	MW10	EPA 310.2	358488		
40209834001	MW1	EPA 350.1	358309		
40209834002	MW2	EPA 350.1	358309		
40209834003	MW3	EPA 350.1	358309		
40209834004	MW4	EPA 350.1	358309		
40209834005	MW4A	EPA 350.1	358309		
40209834006	MW5	EPA 350.1	358309		
40209834007	MW6	EPA 350.1	358309		
40209834008	MW7	EPA 350.1	358309		
40209834009	MW8	EPA 350.1	358309		
40209834010	MW9	EPA 350.1	358309		
40209834011	MW10	EPA 350.1	358309		
40209834001	MW1	EPA 410.4	359670	EPA 410.4	359711
40209834002	MW2	EPA 410.4	359670	EPA 410.4	359711
40209834003	MW3	EPA 410.4	359670	EPA 410.4	359711
40209834004	MW4	EPA 410.4	359670	EPA 410.4	359711
40209834005	MW4A	EPA 410.4	359670	EPA 410.4	359711
40209834006	MW5	EPA 410.4	359670	EPA 410.4	359711
40209834007	MW6	EPA 410.4	359670	EPA 410.4	359711
40209834008	MW7	EPA 410.4	359670	EPA 410.4	359711
40209834009	MW8	EPA 410.4	359670	EPA 410.4	359711
40209834010	MW9	EPA 410.4	359670	EPA 410.4	359711
40209834011	MW10	EPA 410.4	359670	EPA 410.4	359711

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

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

40209834

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

(Please Print Clearly)	
Company Name:	REI engineering
Branch/Location:	wausau
Project Contact:	Ken Lassa
Phone:	715 675 9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Paul Busher
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ken Lassa
Mail To Company:	klass@REIengineering.com
Mail To Address:	4080 N 20th Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested	Y/N	Pick Letter	Dioxin/Furans	VOC's	PAH's	RCRA metals	Total hardness	Total Alkalinity	Total chloride	Total COD	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
								A	B	A	D	D	A	A	C			
001	MW1	6-18-20	11:30	W					X	X	X	X	X	X	X			
002	MW2		10:30						X	X	X	X	X	X	X			
003	MW3		11:00					X	X	X	X	X	X	X	X			
004	MW4		12:00					X	X	X	X	X	X	X	X			
005	MW4A		1:30						X	X	X	X	X	X	X			
006	MW5		12:30						X	X	X	X	X	X	X			
007	MW6		1:00						X	X	X	X	X	X	X			
008	MW7		9:00						X	X	X	X	X	X	X			
009	MW8		9:30						X	X	X	X	X	X	X			
010	MW9		10:00						X	X	X	X	X	X	X			
011	MW10		10:15					X	X	X	X	X	X	X	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:
	6/19/20 - 1215		6-19-20 1215
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
40209834
Receipt Temp = KOL °C
Sample Receipt pH
OK / Adjusted
Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

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CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	REI engineering
Branch/Location:	Lewson WI
Project Contact:	Ken Lassa
Phone:	715-675-9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Paul Bushman
Sampled By (Sign):	
PO #:	Regulatory Program:

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

Quote #:	
Mail To Contact:	klassa@REIengineering.com
Mail To Company:	REI engineering
Mail To Address:	4080 N 7th Ave Lewson WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: Total Ammonia	Total Nitrate Nitrogen	Total Sulfide	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	FILTERED? (YES/NO)				N	N	N			
	PRESERVATION (CODE)*				C	A	H			
001	MW1	6-18-20	11:30	W	X	X	X			
002	MW2		10:30		X	X	X			
003	MW3		11:00		X	X	X			
004	MW4		12:00		X	X	X			
005	MW4A		11:30		X	X	X			
006	MW5		12:30		X	X	X			
007	MW6		1:00		X	X	X			
008	MW7		9:00		X	X	X			
009	MW8		9:30		X	X	X			
010	MW9		10:00		X	X	X			
011	MW10		10:15		X	X	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:
	6/19/20 12:15		6-17-20 12:15
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No. 41009884

Receipt Temp = ROI °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present

Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: REI Project # 40209834

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

Lab Lot# of pH paper: 10052791 Lab Std #ID of preservation (if pH adjusted):

	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						22				1		1	1				3											X			X		2.5 / 5 / 10
002						22				1		1	1				3											X			X		2.5 / 5 / 10
003	1					22				1		1	1				3											X			X		2.5 / 5 / 10
004	1					22				1		1	1				3											X			X		2.5 / 5 / 10
005						22				1		1	1				3											X			X		2.5 / 5 / 10
006						22				1		1	1				3											X			X		2.5 / 5 / 10
007						22				1		1	1				3											X			X		2.5 / 5 / 10
008						22				1		1	1				3											X			X		2.5 / 5 / 10
009						22				1		1	1				3											X			X		2.5 / 5 / 10
010	1					22				1		1	1				3											X			X		2.5 / 5 / 10
011						22				1		1	1				3											X			X		2.5 / 5 / 10
012																																2.5 / 5 / 10
013																																2.5 / 5 / 10
014																																2.5 / 5 / 10
015																	JL 6/19/20															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#: 40209834

40209834

Client Name: REI Engineering

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: 1.0 /Corr:

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

Person examining contents:
Date: 6/19/20 /Initials: JL

Labeled By Initials: VC

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:	☐Yes ☑No ☐N/A	12. Sample 003 no time on one vial. Sample 008 no time/Date on two vials. Sample 005 BP3S wrong time "10:15", BP3U ID wrong "MW-7A" JL 6/19/20 Sample 004 BP3S no time or date. VC 6/19/20
-Includes date/time/ID/Analysis Matrix: W		
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

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Brian Basten
PACE Wisconsin
1241 Bellevue Street
Suite 9
Green Bay WI 54302

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10522455
Sample Receipt Date: 06/20/2020
Client Project #: 40209834
Client Sub PO #: N/A
State Cert #: 999407970

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

July 08, 2020

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
July 8, 2020

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The estimated detection limits (EDLs) were based on signal-to-noise measurements. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations. Method blank and field sample results with reporting limits set to correspond to the lowest calibration points and adjusted for sample amount were provided in Appendix A.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 43-92%. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained or "P" where polychlorinated diphenyl ethers were present. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These levels were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

Laboratory spike samples were also prepared with the sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 103-125% with relative percent differences of 0.0-6.8%. These results were within the target ranges for the method. Matrix spikes were not prepared with the sample batch.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Minnesota - De	via MN-ELAP
Alabama	40770	Minnesota - Pet	1240
Alaska - DW	MN00064	Mississippi	MN00064
Alaska - UST	17-009	Missouri - DW	10100
Arizona	AZ0014	Montana	CERT0092
Arkansas - DW	MN00064	Nebraska	NE-OS-18-06
Arkansas - WW	19-039-0 (88-06	Nevada	MN000642020-
CNMI Saipan	MP0003	New Hampshire	208120-B (2081
California	2929	New Jersey (NE	NLC 190003 (M
Colorado	MN00064	New York	11647
Connecticut	PH-0256	North Carolina -	27700
EPA Region 8+	via MN 027-053	North Carolina -	530
Florida (NELAP	E87605	North Dakota	R-036
Georgia	959	Ohio - DW	41244
Guam	20-001R	Ohio - VAP	CL101
Hawaii	MN00064	Oklahoma	2019-041 (9507
Idaho	MN00064	Oregon - Primar	MN300001-012
Illinois	004575 (20001	Oregon - Secon	MN200001-013
Indiana	C-MN-01	Pennsylvania	018 (68-00563)
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003001 (740
Kentucky - DW	90062	Tennessee	TN02818
Kentucky - WW	90062	Texas	T104704192
Louisiana - DE	03086 (84596)	Utah (NELAP)	MN000642019-
Louisiana - DH	LA006	Vermont	VT-027053137
Louisiana - DW	MN00064	Virginia	10570 (460163)
Maine	2019018 (238)(	Washington	C486-20 (C486)
Maryland	322	West Virginia -	382
Massachusetts	M-MN064	West Virginia -	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	1857409	Wyoming - UST	2926.01

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

Pace Analytical
www.pacelabs.com

Workorder: 40209834 **Workorder Name:** 8949 TOMAHAWK TISSUE

State Of Origin: WI
Cert. Needed: [X] Yes ☐ No
Owner Received Date: 6/19/2020 **Results Requested By:** 7/13/2020

Report To

Brian Basten
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

Requested Analysis

WO# : 10522455

10522455

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	# Preserved Containers: Unpreserved	Dioxins/Furans 1613 (17	LAB USE ONLY
1	MW3	PS	6/18/2020 11:00	40209834003	Water	1	X	001
2	MW4	PS	6/18/2020 12:00	40209834004	Water	1	X	002
3	MW10	PS	6/18/2020 10:15	40209834011	Water	1	X	003
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Erik Wisth/Pace	6/19/2020	Pace	6/19/20 1340
2				
3				

Comments

Cooler Temperature on Receipt 0.2 °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.*

Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR) - MN	Document Revised: 27Mar2020 Page 1 of 1
	Document No.: ENV-FRM-MIN4-0150 Rev.00	Pace Analytical Services - Minneapolis

Sample Condition Upon Receipt

Client Name: Pace GB

Project #: WO#: 10522455

PM: SCU Due Date: 07/13/20

CLIENT: PASI-WI

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

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) **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:** 0.2 °C **Average Corrected Temp (no temp blank only):** ☐See Exceptions

Correction Factor: True **Cooler Temp Corrected w/temp blank:** 0.2 °C ☐1 Container

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** CEG 6/20/20

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 (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☐Yes	☐No	☒N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other_____
Rush Turn Around Time Requested?	☐Yes	☒No		6.
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used?	☒Yes	☐No		8.
-Pace Containers Used?	☐Yes	☒No		
Containers Intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC?	☒Yes	☐No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐
Matrix: ☒Water ☐Soil ☐Oil ☐Other_____				
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐Yes	☐No	☒N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No pH Paper Lot# See Exception ☐
				Res. Chlorine / 0-6 Roll / 0-6 Strip / 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐Yes	☐No	☒N/A	13. See Exception ☐
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	
Trip Blank Present?	☐Yes	☐No	☒N/A	14.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 06/23/20

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: _____

Pace Analytical®
www.pacelabs.com

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

10522455 Page 1 of 2

40209834

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	RET engineering
Branch/Location:	wausau
Project Contact:	Ken Lassa
Phone:	715 675 9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Paul Busher
Sampled By (Sign):	Paul
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Ken Lassa
Mail To Company:	klass@RETengineering.com
Mail To Address:	4080 N 20th Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

Matrix Codes
A = Air; B = Biota; C = Charcoal; O = Oil; S = Soil; SI = 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	Dioxin/furans	VOC's	PAH's	RCRA metals	Total hardness	Total Alkalinity	Total chloride	TOTAL COD	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW1	6-18-20	11:30	W		X	X	X	X	X	X	X			
002	MW2		10:30			X	X	X	X	X	X	X			
003	MW3		11:00		X	X	X	X	X	X	X	X		001	
004	MW4		12:00		X	X	X	X	X	X	X	X		002	
005	MW4A		1:30			X	X	X	X	X	X	X			
006	MW5		12:30			X	X	X	X	X	X	X			
007	MW6		1:00			X	X	X	X	X	X	X			
008	MW7		9:00			X	X	X	X	X	X	X			
009	MW8		9:30			X	X	X	X	X	X	X			
010	MW9		10:00			X	X	X	X	X	X	X			
011	MW10		10:15		X	X	X	X	X	X	X	X		003	

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:
	6/19/20 - 1215		6-19-20 1215
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
40209834

Receipt Temp = 10.1 °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/04/06

ORIGINAL

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

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	REI engineering
Branch/Location:	Wausau WI
Project Contact:	Ken Cassa
Phone:	715-675-9784
Project Number:	8949
Project Name:	Tomahawk Tissue
Project State:	WI
Sampled By (Print):	Paul Bussler
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	klesse@REIengineering.com
Mail To Company:	REI engineering
Mail To Address:	4080 Nth 76th St Ave Wausau WI 54401
Invoice To Contact:	SAA
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Total Ammonia	Total Nitrate Nitrogen	Total Sulfate	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	A	A	A	A			
					C	A	A	A	A			
001	MW1	6-18-20	11:30	W			X	X	X			
002	MW2		10:30				X	X	X			
003	MW3		11:00				X	X	X			
004	MW4		12:05				X	X	X			
005	MW4A		10:30				X	X	X			
006	MW5		12:30				X	X	X			
007	MW6		1:00				X	X	X			
008	MW7		9:00				X	X	X			
009	MW8		9:30				X	X	X			
010	MW9		10:00				X	X	X			
011	MW10		10:15				X	X	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:
	6/19/20 12:15		6-17-20 12:15
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.: 40094884
Receipt Temp = 1.0 °C
Sample Receipt pH: OK / Adjusted
Cooler Custody Seal: Present / Not Present
Intact / Not Intact

Version 6.0 6/14/06
ORIGINAL

Sample Preservation Receipt Form

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

Client Name: REI Project # 40209834

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

Lab Lot# of pH paper: 10052791 Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	Vials: VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: 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						2				1		1	1				3											X			X		2.5 / 5 / 10
002						2				1		1	1				3											X			X		2.5 / 5 / 10
003	1				2	2				1		1	1				3											X			X		2.5 / 5 / 10
004	1				2	2				1		1	1				3											X			X		2.5 / 5 / 10
005						2				1		1	1				3											X			X		2.5 / 5 / 10
006						2				1		1	1				3											X			X		2.5 / 5 / 10
007						2				1		1	1				3											X			X		2.5 / 5 / 10
008						2				1		1	1				3											X			X		2.5 / 5 / 10
009						2				1		1	1				3											X			X		2.5 / 5 / 10
010	1					2				1		1	1				3											X			X		2.5 / 5 / 10
011						2				1		1	1				3											X			X		2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015															JL 6/19/20																	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 #:

AFFIX WORKORDER LABEL HERE

Client Name: REI Engineering

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: 12.0 /Corr:

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

Person examining contents:
Date: 6/19/20 /Initials: JL

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:		8.
For Analysis: ☑Yes ☐No MS/MSD:	☐Yes ☑No ☐N/A	
Correct Containers Used:	☑Yes ☐No	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. Sample 003 no time on one vial. Sample 008 no time/Date on two vials. Sample 005 BP3U wrong time "10:15", BP3U ID wrong "MW-7A" JL 6/19/20
-Includes date/time/ID/Analysis Matrix: W		
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

Page 2 of 2

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Pace Analytical™

Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKLJ	Matrix	Water
Lab Sample ID	BLANK-80582	Dilution	NA
Filename	U200702A_06	Extracted	06/30/2020 13:10
Total Amount Extracted	1040 mL	Analyzed	07/02/2020 14:02
ICAL ID	U200419	Injected By	SMT
CCal Filename(s)	U200702A_02		

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	9.6	2,3,7,8-TCDF-13C	2.00	109
Total TCDF	ND	-----	9.6	2,3,7,8-TCDD-13C	2.00	98
				1,2,3,7,8-PeCDF-13C	2.00	104
2,3,7,8-TCDD	ND	-----	9.6	2,3,4,7,8-PeCDF-13C	2.00	103
Total TCDD	ND	-----	9.6	1,2,3,7,8-PeCDD-13C	2.00	105
				1,2,3,4,7,8-HxCDF-13C	2.00	102
1,2,3,7,8-PeCDF	ND	-----	48	1,2,3,6,7,8-HxCDF-13C	2.00	94
2,3,4,7,8-PeCDF	ND	-----	48	2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	ND	-----	48	1,2,3,7,8,9-HxCDF-13C	2.00	114
				1,2,3,4,7,8-HxCDD-13C	2.00	99
1,2,3,7,8-PeCDD	ND	-----	48	1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	48	1,2,3,4,6,7,8-HpCDF-13C	2.00	87
				1,2,3,4,7,8,9-HpCDF-13C	2.00	96
1,2,3,4,7,8-HxCDF	ND	-----	48	1,2,3,4,6,7,8-HpCDD-13C	2.00	95
1,2,3,6,7,8-HxCDF	ND	-----	48	OCDD-13C	4.00	79
2,3,4,6,7,8-HxCDF	ND	-----	48			
1,2,3,7,8,9-HxCDF	ND	-----	48	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	48	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	48	2,3,7,8-TCDD-37Cl4	0.20	104
1,2,3,6,7,8-HxCDD	ND	-----	48			
1,2,3,7,8,9-HxCDD	ND	-----	48			
Total HxCDD	ND	-----	48			
1,2,3,4,6,7,8-HpCDF	ND	-----	48	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	48	Equivalence: 0.00 pg/L		
Total HpCDF	ND	-----	48	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	48			
Total HpCDD	ND	-----	48			
OCDF	ND	-----	96			
OCDD	ND	-----	96			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW3		
Lab Sample ID	40209834003		
Filename	U200702A_14		
Injected By	SMT		
Total Amount Extracted	1040 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/18/2020 11:00
ICAL ID	U200419	Received	06/20/2020 13:10
CCal Filename(s)	U200702A_02	Extracted	06/30/2020 13:10
Method Blank ID	BLANK-80582	Analyzed	07/02/2020 19:35

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	9.6	2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	-----	9.6	2,3,7,8-TCDD-13C	2.00	66
				1,2,3,7,8-PeCDF-13C	2.00	67
2,3,7,8-TCDD	ND	-----	9.6	2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	-----	9.6	1,2,3,7,8-PeCDD-13C	2.00	68
				1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	-----	48	1,2,3,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,8-PeCDF	ND	-----	48	2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	-----	48	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	59
1,2,3,7,8-PeCDD	ND	-----	48	1,2,3,6,7,8-HxCDD-13C	2.00	57
Total PeCDD	ND	-----	48	1,2,3,4,6,7,8-HpCDF-13C	2.00	55
				1,2,3,4,7,8,9-HpCDF-13C	2.00	63
1,2,3,4,7,8-HxCDF	ND	-----	48	1,2,3,4,6,7,8-HpCDD-13C	2.00	60
1,2,3,6,7,8-HxCDF	ND	-----	48	OCDD-13C	4.00	43
2,3,4,6,7,8-HxCDF	ND	-----	48			
1,2,3,7,8,9-HxCDF	ND	-----	48	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	48	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	48	2,3,7,8-TCDD-37Cl4	0.20	94
1,2,3,6,7,8-HxCDD	ND	-----	48			
1,2,3,7,8,9-HxCDD	ND	-----	48			
Total HxCDD	ND	-----	48			
1,2,3,4,6,7,8-HpCDF	ND	-----	48	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	48	Equivalence: 0.00 pg/L		
Total HpCDF	ND	-----	48	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	48			
Total HpCDD	ND	-----	48			
OCDF	ND	-----	96			
OCDD	ND	-----	96			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Pace Analytical™

Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW4		
Lab Sample ID	40209834004		
Filename	U200702A_15		
Injected By	SMT		
Total Amount Extracted	1020 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/18/2020 12:00
ICAL ID	U200419	Received	06/20/2020 13:10
CCal Filename(s)	U200702A_02	Extracted	06/30/2020 13:10
Method Blank ID	BLANK-80582	Analyzed	07/02/2020 20:17

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	9.8	2,3,7,8-TCDF-13C	2.00	88
Total TCDF	ND	-----	9.8	2,3,7,8-TCDD-13C	2.00	79
				1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	9.8	2,3,4,7,8-PeCDF-13C	2.00	81
Total TCDD	ND	-----	9.8	1,2,3,7,8-PeCDD-13C	2.00	87
				1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	49	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	49	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	ND	-----	49	1,2,3,7,8,9-HxCDF-13C	2.00	92
				1,2,3,4,7,8-HxCDD-13C	2.00	70
1,2,3,7,8-PeCDD	ND	-----	49	1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	49	1,2,3,4,6,7,8-HpCDF-13C	2.00	70
				1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	ND	-----	49	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	-----	49	OCDD-13C	4.00	64
2,3,4,6,7,8-HxCDF	ND	-----	49			
1,2,3,7,8,9-HxCDF	ND	-----	49	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	49	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	49	2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	ND	-----	49			
1,2,3,7,8,9-HxCDD	ND	-----	49			
Total HxCDD	ND	-----	49			
1,2,3,4,6,7,8-HpCDF	ND	-----	49	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	49	Equivalence: 0.00 pg/L		
Total HpCDF	55	-----	49	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	49			
Total HpCDD	ND	-----	49			
OCDF	ND	-----	98			
OCDD	ND	-----	98			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW10		
Lab Sample ID	40209834011		
Filename	U200702A_16		
Injected By	SMT		
Total Amount Extracted	1030 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/18/2020 10:15
ICAL ID	U200419	Received	06/20/2020 13:10
CCal Filename(s)	U200702A_02	Extracted	06/30/2020 13:10
Method Blank ID	BLANK-80582	Analyzed	07/02/2020 20:58

Native Isomers	Conc pg/L	EMPC pg/L	RL pg/L
2,3,7,8-TCDF	ND	-----	9.7
Total TCDF	ND	-----	9.7
2,3,7,8-TCDD	ND	-----	9.7
Total TCDD	ND	-----	9.7
1,2,3,7,8-PeCDF	ND	-----	49
2,3,4,7,8-PeCDF	ND	-----	49
Total PeCDF	ND	-----	49
1,2,3,7,8-PeCDD	ND	-----	49
Total PeCDD	ND	-----	49
1,2,3,4,7,8-HxCDF	ND	-----	49
1,2,3,6,7,8-HxCDF	ND	-----	49
2,3,4,6,7,8-HxCDF	ND	-----	49
1,2,3,7,8,9-HxCDF	ND	-----	49
Total HxCDF	ND	-----	49
1,2,3,4,7,8-HxCDD	ND	-----	49
1,2,3,6,7,8-HxCDD	ND	-----	49
1,2,3,7,8,9-HxCDD	ND	-----	49
Total HxCDD	ND	-----	49
1,2,3,4,6,7,8-HpCDF	ND	-----	49
1,2,3,4,7,8,9-HpCDF	ND	-----	49
Total HpCDF	ND	-----	49
1,2,3,4,6,7,8-HpCDD	ND	-----	49
Total HpCDD	ND	-----	49
OCDF	ND	-----	97
OCDD	ND	-----	97

Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF-13C	2.00	61
2,3,7,8-TCDD-13C	2.00	59
1,2,3,7,8-PeCDF-13C	2.00	64
2,3,4,7,8-PeCDF-13C	2.00	60
1,2,3,7,8-PeCDD-13C	2.00	66
1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,6,7,8-HxCDF-13C	2.00	69
1,2,3,7,8,9-HxCDF-13C	2.00	72
1,2,3,4,7,8-HxCDD-13C	2.00	56
1,2,3,6,7,8-HxCDD-13C	2.00	59
1,2,3,4,6,7,8-HpCDF-13C	2.00	56
1,2,3,4,7,8,9-HpCDF-13C	2.00	58
1,2,3,4,6,7,8-HpCDD-13C	2.00	59
OCDD-13C	4.00	47
1,2,3,4-TCDD-13C	2.00	NA
1,2,3,7,8,9-HxCDD-13C	2.00	NA
2,3,7,8-TCDD-37Cl4	0.20	77

Total 2,3,7,8-TCDD
Equivalence: 0.00 pg/L
(Lower-bound - Using ITE Factors)

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

REPORT OF LABORATORY ANALYSIS

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
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Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW3		
Lab Sample ID	40209834003		
Filename	U200702A_14		
Injected By	SMT		
Total Amount Extracted	1040 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/18/2020 11:00
ICAL ID	U200419	Received	06/20/2020 13:10
CCal Filename(s)	U200702A_02	Extracted	06/30/2020 13:10
Method Blank ID	BLANK-80582	Analyzed	07/02/2020 19:35

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.2		2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	-----	1.2		2,3,7,8-TCDD-13C	2.00	66
					1,2,3,7,8-PeCDF-13C	2.00	67
2,3,7,8-TCDD	ND	-----	1.4		2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	-----	1.4		1,2,3,7,8-PeCDD-13C	2.00	68
					1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	-----	0.98		1,2,3,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,8-PeCDF	ND	-----	0.61		2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	-----	0.61		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	59
1,2,3,7,8-PeCDD	ND	-----	0.69		1,2,3,6,7,8-HxCDD-13C	2.00	57
Total PeCDD	ND	-----	0.69		1,2,3,4,6,7,8-HpCDF-13C	2.00	55
					1,2,3,4,7,8,9-HpCDF-13C	2.00	63
1,2,3,4,7,8-HxCDF	ND	-----	1.1		1,2,3,4,6,7,8-HpCDD-13C	2.00	60
1,2,3,6,7,8-HxCDF	ND	-----	0.83		OCDD-13C	4.00	43
2,3,4,6,7,8-HxCDF	ND	-----	1.1				
1,2,3,7,8,9-HxCDF	ND	-----	0.45		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.45		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.46		2,3,7,8-TCDD-37Cl4	0.20	94
1,2,3,6,7,8-HxCDD	ND	-----	0.94				
1,2,3,7,8,9-HxCDD	ND	-----	0.60				
Total HxCDD	ND	-----	0.46				
1,2,3,4,6,7,8-HpCDF	-----	1.1	1.1	IJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.0		Equivalence: 0.13 pg/L		
Total HpCDF	6.8	-----	1.0	BJ	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	7.8	-----	2.1	J			
Total HpCDD	13	-----	2.1	BJ			
OCDF	8.7	-----	2.9	BJ			
OCDD	35	-----	5.5	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW4		
Lab Sample ID	40209834004		
Filename	U200702A_15		
Injected By	SMT		
Total Amount Extracted	1020 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/18/2020 12:00
ICAL ID	U200419	Received	06/20/2020 13:10
CCal Filename(s)	U200702A_02	Extracted	06/30/2020 13:10
Method Blank ID	BLANK-80582	Analyzed	07/02/2020 20:17

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	4.3	-----	0.85	J	2,3,7,8-TCDF-13C	2.00	88
Total TCDF	13	-----	0.85		2,3,7,8-TCDD-13C	2.00	79
					1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	1.9		2,3,4,7,8-PeCDF-13C	2.00	81
Total TCDD	3.2	-----	1.9	J	1,2,3,7,8-PeCDD-13C	2.00	87
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	0.59		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	0.89	-----	0.48	J	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	4.7	-----	0.48	J	1,2,3,7,8,9-HxCDF-13C	2.00	92
					1,2,3,4,7,8-HxCDD-13C	2.00	70
1,2,3,7,8-PeCDD	ND	-----	0.63		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	3.4	-----	0.63	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	70
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	ND	-----	0.75		1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	-----	0.80		OCDD-13C	4.00	64
2,3,4,6,7,8-HxCDF	ND	-----	0.82				
1,2,3,7,8,9-HxCDF	ND	-----	0.29		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	26	-----	0.29	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.95		2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	ND	-----	0.56				
1,2,3,7,8,9-HxCDD	ND	-----	0.55				
Total HxCDD	5.5	-----	0.55	J			
1,2,3,4,6,7,8-HpCDF	6.4	-----	1.1	BJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	1.9	1.5	PJ	Equivalence: 1.1 pg/L		
Total HpCDF	61	-----	1.1		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	5.5	-----	1.4	J			
Total HpCDD	28	-----	1.4	J			
OCDF	-----	26	2.3	IJ			
OCDD	55	-----	2.8	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
P = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 1613B Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	MW10		
Lab Sample ID	40209834011		
Filename	U200702A_16		
Injected By	SMT		
Total Amount Extracted	1030 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	06/18/2020 10:15
ICAL ID	U200419	Received	06/20/2020 13:10
CCal Filename(s)	U200702A_02	Extracted	06/30/2020 13:10
Method Blank ID	BLANK-80582	Analyzed	07/02/2020 20:58

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.3		2,3,7,8-TCDF-13C	2.00	61
Total TCDF	ND	-----	1.3		2,3,7,8-TCDD-13C	2.00	59
					1,2,3,7,8-PeCDF-13C	2.00	64
2,3,7,8-TCDD	ND	-----	1.6		2,3,4,7,8-PeCDF-13C	2.00	60
Total TCDD	ND	-----	1.6		1,2,3,7,8-PeCDD-13C	2.00	66
					1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	ND	-----	0.89		1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	ND	-----	0.69		2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	ND	-----	0.69		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	56
1,2,3,7,8-PeCDD	ND	-----	0.93		1,2,3,6,7,8-HxCDD-13C	2.00	59
Total PeCDD	ND	-----	0.93		1,2,3,4,6,7,8-HpCDF-13C	2.00	56
					1,2,3,4,7,8,9-HpCDF-13C	2.00	58
1,2,3,4,7,8-HxCDF	ND	-----	0.60		1,2,3,4,6,7,8-HpCDD-13C	2.00	59
1,2,3,6,7,8-HxCDF	ND	-----	0.53		OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	ND	-----	0.67				
1,2,3,7,8,9-HxCDF	ND	-----	1.1		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.53		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.61		2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,6,7,8-HxCDD	ND	-----	0.54				
1,2,3,7,8,9-HxCDD	ND	-----	0.54				
Total HxCDD	ND	-----	0.54				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.94		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.87		Equivalence: 0.021 pg/L		
Total HpCDF	ND	-----	0.87		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	-----	2.1	1.5	IJ			
Total HpCDD	2.3	-----	1.5	BJ			
OCDF	ND	-----	3.5				
OCDD	ND	-----	4.6				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKLJ		
Lab Sample ID	BLANK-80582	Matrix	Water
Filename	U200702A_06	Dilution	NA
Total Amount Extracted	1040 mL	Extracted	06/30/2020 13:10
ICAL ID	U200419	Analyzed	07/02/2020 14:02
CCal Filename(s)	U200702A_02	Injected By	SMT

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.56		2,3,7,8-TCDF-13C	2.00	109
Total TCDF	ND	-----	0.56		2,3,7,8-TCDD-13C	2.00	98
					1,2,3,7,8-PeCDF-13C	2.00	104
2,3,7,8-TCDD	ND	-----	0.93		2,3,4,7,8-PeCDF-13C	2.00	103
Total TCDD	ND	-----	0.93		1,2,3,7,8-PeCDD-13C	2.00	105
					1,2,3,4,7,8-HxCDF-13C	2.00	102
1,2,3,7,8-PeCDF	ND	-----	0.43		1,2,3,6,7,8-HxCDF-13C	2.00	94
2,3,4,7,8-PeCDF	ND	-----	0.41		2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	ND	-----	0.41		1,2,3,7,8,9-HxCDF-13C	2.00	114
					1,2,3,4,7,8-HxCDD-13C	2.00	99
1,2,3,7,8-PeCDD	ND	-----	0.44		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	0.44		1,2,3,4,6,7,8-HpCDF-13C	2.00	87
					1,2,3,4,7,8,9-HpCDF-13C	2.00	96
1,2,3,4,7,8-HxCDF	ND	-----	0.54		1,2,3,4,6,7,8-HpCDD-13C	2.00	95
1,2,3,6,7,8-HxCDF	ND	-----	0.44		OCDD-13C	4.00	79
2,3,4,6,7,8-HxCDF	ND	-----	0.41				
1,2,3,7,8,9-HxCDF	ND	-----	0.56		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.41		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.29		2,3,7,8-TCDD-37Cl4	0.20	104
1,2,3,6,7,8-HxCDD	ND	-----	0.39				
1,2,3,7,8,9-HxCDD	ND	-----	0.40				
Total HxCDD	ND	-----	0.29				
1,2,3,4,6,7,8-HpCDF	2.0	-----	0.50	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.61		Equivalence: 0.063 pg/L		
Total HpCDF	2.0	-----	0.50	J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	-----	0.96	0.56	IJ			
Total HpCDD	2.2	-----	0.56	J			
OCDF	27	-----	1.00	J			
OCDD	-----	6.0	0.93	IJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-80583		
Filename	U200702A_03	Matrix	Water
Total Amount Extracted	1040 mL	Dilution	NA
ICAL ID	U200419	Extracted	06/30/2020 13:10
CCal Filename	U200702A_02	Analyzed	07/02/2020 11:58
Method Blank ID	BLANK-80582	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	107
2,3,7,8-TCDD	10	11	6.7	15.8	111
1,2,3,7,8-PeCDF	50	53	40.0	67.0	107
2,3,4,7,8-PeCDF	50	52	34.0	80.0	103
1,2,3,7,8-PeCDD	50	53	35.0	71.0	106
1,2,3,4,7,8-HxCDF	50	58	36.0	67.0	116
1,2,3,6,7,8-HxCDF	50	53	42.0	65.0	107
2,3,4,6,7,8-HxCDF	50	53	35.0	78.0	106
1,2,3,7,8,9-HxCDF	50	53	39.0	65.0	106
1,2,3,4,7,8-HxCDD	50	57	35.0	82.0	114
1,2,3,6,7,8-HxCDD	50	62	38.0	67.0	124
1,2,3,7,8,9-HxCDD	50	59	32.0	81.0	119
1,2,3,4,6,7,8-HpCDF	50	57	41.0	61.0	114
1,2,3,4,7,8,9-HpCDF	50	53	39.0	69.0	107
1,2,3,4,6,7,8-HpCDD	50	52	35.0	70.0	103
OCDF	100	120	63.0	170.0	122
OCDD	100	120	78.0	144.0	116
2,3,7,8-TCDD-37Cl4	10	9.0	3.1	19.1	90
2,3,7,8-TCDF-13C	100	93	22.0	152.0	93
2,3,7,8-TCDD-13C	100	84	20.0	175.0	84
1,2,3,7,8-PeCDF-13C	100	91	21.0	192.0	91
2,3,4,7,8-PeCDF-13C	100	92	13.0	328.0	92
1,2,3,7,8-PeCDD-13C	100	90	21.0	227.0	90
1,2,3,4,7,8-HxCDF-13C	100	88	19.0	202.0	88
1,2,3,6,7,8-HxCDF-13C	100	79	21.0	159.0	79
2,3,4,6,7,8-HxCDF-13C	100	91	22.0	176.0	91
1,2,3,7,8,9-HxCDF-13C	100	99	17.0	205.0	99
1,2,3,4,7,8-HxCDD-13C	100	83	21.0	193.0	83
1,2,3,6,7,8-HxCDD-13C	100	69	25.0	163.0	69
1,2,3,4,6,7,8-HpCDF-13C	100	73	21.0	158.0	73
1,2,3,4,7,8,9-HpCDF-13C	100	81	20.0	186.0	81
1,2,3,4,6,7,8-HpCDD-13C	100	84	26.0	166.0	84
OCDD-13C	200	140	26.0	397.0	72

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCSD-80584		
Filename	U200702A_04	Matrix	Water
Total Amount Extracted	1040 mL	Dilution	NA
ICAL ID	U200419	Extracted	06/30/2020 13:10
CCal Filename	U200702A_02	Analyzed	07/02/2020 12:39
Method Blank ID	BLANK-80582	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	112
2,3,7,8-TCDD	10	11	6.7	15.8	114
1,2,3,7,8-PeCDF	50	53	40.0	67.0	107
2,3,4,7,8-PeCDF	50	55	34.0	80.0	110
1,2,3,7,8-PeCDD	50	53	35.0	71.0	106
1,2,3,4,7,8-HxCDF	50	61	36.0	67.0	121
1,2,3,6,7,8-HxCDF	50	56	42.0	65.0	112
2,3,4,6,7,8-HxCDF	50	55	35.0	78.0	110
1,2,3,7,8,9-HxCDF	50	55	39.0	65.0	110
1,2,3,4,7,8-HxCDD	50	61	35.0	82.0	122
1,2,3,6,7,8-HxCDD	50	61	38.0	67.0	122
1,2,3,7,8,9-HxCDD	50	62	32.0	81.0	125
1,2,3,4,6,7,8-HpCDF	50	58	41.0	61.0	116
1,2,3,4,7,8,9-HpCDF	50	57	39.0	69.0	114
1,2,3,4,6,7,8-HpCDD	50	54	35.0	70.0	108
OCDF	100	120	63.0	170.0	124
OCDD	100	120	78.0	144.0	123
2,3,7,8-TCDD-37Cl4	10	10	3.1	19.1	101
2,3,7,8-TCDF-13C	100	110	22.0	152.0	111
2,3,7,8-TCDD-13C	100	100	20.0	175.0	100
1,2,3,7,8-PeCDF-13C	100	110	21.0	192.0	106
2,3,4,7,8-PeCDF-13C	100	110	13.0	328.0	106
1,2,3,7,8-PeCDD-13C	100	110	21.0	227.0	106
1,2,3,4,7,8-HxCDF-13C	100	100	19.0	202.0	102
1,2,3,6,7,8-HxCDF-13C	100	93	21.0	159.0	93
2,3,4,6,7,8-HxCDF-13C	100	110	22.0	176.0	106
1,2,3,7,8,9-HxCDF-13C	100	110	17.0	205.0	113
1,2,3,4,7,8-HxCDD-13C	100	95	21.0	193.0	95
1,2,3,6,7,8-HxCDD-13C	100	84	25.0	163.0	84
1,2,3,4,6,7,8-HpCDF-13C	100	83	21.0	158.0	83
1,2,3,4,7,8,9-HpCDF-13C	100	90	20.0	186.0	90
1,2,3,4,6,7,8-HpCDD-13C	100	92	26.0	166.0	92
OCDD-13C	200	160	26.0	397.0	80

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Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
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Method 1613B

Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Wisconsin

Spike 1 ID LCS-80583 Spike 2 ID LCSD-80584
Spike 1 Filename U200702A_03 Spike 2 Filename U200702A_04

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	107	112	4.6
2,3,7,8-TCDD	111	114	2.7
1,2,3,7,8-PeCDF	107	107	0.0
2,3,4,7,8-PeCDF	103	110	6.6
1,2,3,7,8-PeCDD	106	106	0.0
1,2,3,4,7,8-HxCDF	116	121	4.2
1,2,3,6,7,8-HxCDF	107	112	4.6
2,3,4,6,7,8-HxCDF	106	110	3.7
1,2,3,7,8,9-HxCDF	106	110	3.7
1,2,3,4,7,8-HxCDD	114	122	6.8
1,2,3,6,7,8-HxCDD	124	122	1.6
1,2,3,7,8,9-HxCDD	119	125	4.9
1,2,3,4,6,7,8-HpCDF	114	116	1.7
1,2,3,4,7,8,9-HpCDF	107	114	6.3
1,2,3,4,6,7,8-HpCDD	103	108	4.7
OCDF	122	124	1.6
OCDD	116	123	5.9

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS