State of Wisconsin
Department of Natural Resources
Madison WI 53707-7921
dnr.wi.gov

Recommended Template for Request to Manage Materials under Wis. Admin. Code § NR 718.12 or NR 718.15

Form 4400-315 (R 11/20)

Purpose

The purpose of this document is to provide an optional template format for a request to manage material under Wis. Admin. Code § NR 718.12 or NR 718.15. This document may be included as part of an interim or remedial action plan (RAP) or post-closure modification request, or can be submitted by itself depending on the activities conducted at the site. Using this recommended format will likely result in a faster Department of Natural Resources (DNR) review. At a minimum, all requests must satisfy the requirements outlined in Wis. Admin. Code § NR 718.12 (1) and (2) (b).

Introduction

Contaminated soil and other solid waste generated from a response action site as part of an interim or remedial action may be managed at a site or facility that is not an operating licensed landfill if an exemption from the Waste and Materials Management Program requirements established in Wis. Stat. ch. 289 and Wis. Admin. Code ch. NR 500 to NR 538 is obtained under Wis. Admin. Code §§ NR 718.12 or NR 718.15. An approval under Wis. Admin. Code § NR 718.12 can be granted when contaminated soil is being managed as part of an interim action under Wis. Admin. Code ch. NR 708 or a remedial action under Wis. Admin. Code ch. NR 722. An approval through Wis. Admin. Code § NR 718.15 can be granted when other solid waste material is managed as part of an interim or remedial action on the site from which it was generated. Managing material under either section requires prior written approval from the DNR. For more information see "Management of Contaminated Soil and Other Solid Wastes, Wis. Admin. Code §§ NR 718.12 and NR 718.15" (RR-060), by visiting dnr.wi.gov, search "RR-060."

If this approval request involves contaminated material impacted by a discharge of a hazardous substance that has not been reported to the DNR, a "Notification for Hazardous Substance Discharge (non-emergency)", DNR Form 4400-225, must be completed and submitted immediately as required by Wis. Admin. Code § NR 706, unless an alternate method of reporting is approved by the DNR. This form can be found by visiting dnr.wi.gov, search "4400-225."

This template is not intended to be used for immediate actions under Wis. Admin. Code § NR 708.05, as prior DNR approval is not required if: 1) the requirements of Wis. Admin. Code § NR 718.12 (1) are met, 2) contaminant concentrations do not exceed Wis. Admin. Code ch. NR 720 soil residual contaminant levels, 3) and the quantity of material managed is less than 100 cubic yards total.

Requests to manage material under Wis. Admin. Code ch. NR 718 for projects involving large-scale disposal or requiring items such as a liner system, leachate treatment and an engineered cap, or projects proposing to place the material below the groundwater table, should not be requested using this template. Consult with DNR staff before submitting such a proposal

Document Instructions

In order to expedite processing, complete all applicable sections of this document as instructed. **Fields/sections required by administrative code are marked with a red asterisk (*)**. All other fields are optional and are included to assist DNR staff in gathering additional information to expedite review of the request.

Some portions of the document may be filled in directly as indicated, other responses may need to be completed separately and attached. If a field is not relevant, explaining why will further assist staff in reviewing the request.

In this document, "generating site or facility" means the site or facility where the response action is generating the contaminated material subject to this approval request. "Receiving site or facility" means the site or facility where the contaminated material is proposed to be managed. The "receiving site or facility" may be the same site or facility as the generating site or facility, or it may be a different site or facility.

Submittal Instructions

Please submit this form and related documents using the RR Program Submittal Portal at dnr.wi.gov, search "RR Submittal Portal". All accompanying attachments should be combined into a separate PDF. Please see RR-690 for up-to-date information on submitting documents.

For questions on this form, please contact Judy Fassbender at judy.fassbender@wisconsin.gov.

Section 1 – Purpose of Request

Identify the purpose of the request by checking each box that applies:

☒ Manage contaminated soil as part of an interim or remedial action or post-closure modification on the same response action site from which it was generated (Wis. Admin. Code §§ NR 718.12 (1) and (2)).

☐ Manage contaminated soil as part of an interim or remedial action or post-closure modification at a site or facility that is different from the response action site from which it was generated (Wis. Admin. Code §§ NR 718.12 (1) and (2)).

☐ Manage other solid waste other than contaminated soil, as part of a response action, at the same site from which it was generated (Wis. Admin. Code § NR 718.15).

If none of the above boxes are checked, the proposed materials management activity cannot be exempted from solid waste rules under Wis. Admin. Code ch. NR 718. Management of solid waste material generated as a result of a non-NR 700 action may be allowed after obtaining a "low hazard exemption" from the DNR Waste and Material Management Program. Please see the DNR publication "Exempting Low-Hazard Wastes from Solid Waste Regulations" (PUB-WA 1645), which can be found by visiting dnr.wi.gov, search "WA1645."

Section 2 – Applicable Fees

Fees are assessed for each type of Wis. Admin. Code § NR 718.12 or NR 718.15 request (plus database fee) **per site or facility** where contaminated material is excavated or managed. The below tables are provided to assist you in calculating the appropriate Wis. Admin. Code § NR 749 fee required for the review of your submittal.

Identify the Wis. Admin. Code § NR 749 review fees for this submittal by checking the applicable "On-Site Management Fee" in section A, column D. If material will be managed at a site(s) or facility(ies) other than the response action site, also select the appropriate "Off-Site Management Fee" in section B, and indicate the number of applicable receiving sites in column E. Please send a single check to the regional office managing your request. Specific directions will be detailed in your submittal confirmation.

A. Fee Assessed to Excavate or Manage Soil or Other Solid Waste on the Generating Site or Facility

A	B	C	D
Action	**Action Fee**	**Database Fee**	**On-Site Mgmt Fee**
MMP as part of Interim Action per NR 708.11, with residual soil CO	$700	$300	☐ $1000
MMP as part of Interim Action per NR 708.11, without residual soil CO	$700	No fee	☒ $700
MMP as part of Remedial Action Plan approval, with residual soil CO	$1050	$300	☐ $1350
MMP as part of a Remedial Action Plan approval without residual soil CO	$1050	No fee	☐ $1050
Closed Sites: MMP as part of a CO modification action, with residual soil CO	$1050	$300	☐ $1350
Closed Sites: MMP as part of a CO modification action, without residual soil CO	$1050	No fee	☐ $1050
MMP separate from RAP or CO mod, with residual soil CO	$700	$300	☐ $1000
MMP separate from RAP or CO mod, without residual soil CO	$700	No fee	☐ $700

B. Fee Assessed to Manage Soil on a Site or Facility other than the Generating Site or Facility

A	B	C	D	E	F
Action	**Action Fee**	**Database Fee**	**Off-Site Mgmt Fee**	**# of receiving sites subject to action**	**Total for row**
MMP as part of interim action, remedial action, modification to COs, etc., with residual soil CO	$700	$300	☐ $1000		
MMP as part of interim action, remedial action, modification to COs, etc., without residual soil CO	$700	No fee	☐ $700		
Total of Off-Site Management Fee					$0
Total of On-Site and Off-Site Management Fee					**$0**

1) **MMP** – A Material Management Plan submitted in accordance with Wis. Admin. Code §§ NR 718.12 (1) and (2) or NR 718.15.
2) "**With residual soil CO**" - site will have a residual soil continuing obligation (e.g. engineering control, cap, or cover) applied at the generating site or facility at the end of the applicable action; remedial action approval, or approval by an addendum to the closure letter.
3) "**Without residual soil CO**" - site that will not have a residual soil continuing obligation applied at the generating site or facility at the end of the applicable action.

Section 3 –Property and Contact Information

A. Information about the generating site or facility (from which material is proposed to be excavated)

BRRTS #(s) (include Materials Management #s and VPLE #s if assigned)	BRRTS Activity (Site) Name(s)	FID #(s)
02-41-582725	128th National Guard Air refueling Wing	
- -		

Response Action Site Address* (physical, not mailing address)
1919 E Grange Ave

City*	State*	Parcel ID #(s)
Milwaukee	WI	

County*	ZIP Code*
Milwaukee	53207

WTM Coordinates*	Lat/Long Coordinates decimal degrees (min. of 6 digits right of decimal, e.g., -89.123456)*	Coordinates Represent:
X:	Lat:	◯ Center of Project
Y:	Long:	◯ Parcel Center

¼ * ¼* Section* Township* N Range* ◯E ◯W

Current Zoning:	Current Land Use:

B. Responsible Party (RP) of the generating site or facility

The Wis. Admin. Code §§ NR 718.12 or NR 718.15 approval will be issued to the Wis. Admin. Code NR 700 series responsible party identified below and to the owner of the receiving site or facility, if different than the generating site or facility. If there is more than one responsible party or property owner, include the information requested below for each.

Responsible Party (RP) Name*	Organization / Business Name		
Harry Wilkinson	128th National Guard Air Refueling Wing		
Mailing Address*	**City***	**State***	**ZIP Code***
1919 E Grange Ave	Milwaukee	WI	53207
Phone # (include area code)*	**Email***		
414-218-4305	HWilkinson@WI.rr.com		

C. Property owner(s) information for generating site or facility if different than RP

☐ *Check here if the property owner of the generating site or facility is different than the responsible party, and enter the property owner's information below.*

Property Owner Name(s)	Organization / Business Name		
Mailing Address	**City**	**State**	**ZIP Code**
Phone # (include area code)	**Email**		

D. Consultant / contractor information

Consultant / Contractor Name*	Organization / Business Name*		
Howie Nissen	CornerStone One		
Mailing Address*	**City***	**State***	**ZIP Code***
20865 Enterprise Dr	Brookfield	WI	53045
Phone # (include area code)*	**Email**		
262-896-9006	Howie.Nissen@Cstoneone.com		

E. Contact information for questions about this request

Contact Name	Organization / Business Name		
Howie Nissen	Cornerstone One		
Mailing Address	**City**	**State**	**ZIP Code**
20865 Enterprise Dr	Brookfield	WI	53045
Phone # (include area code)	**Email**		
920-988-4140	Howie.Nissen@Cstoneone.com		

Relationship to the Requestor (Same, Consultant, Developer, Etc.):
Contractor

Section 4 – Results of Analyses Performed and Characteristics of Waste

The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (1) (d) 1, NR 718.12 (2) (b) 2. and NR 718.12 (2) (b) 6. In this section, describe the characteristics of the contaminated soil and/or other solid waste material that will be managed under this request, describe the sampling activities conducted and demonstrate how it has been adequately characterized. Narrative boxes have a limit of 2500 characters. Please attach additional pages if necessary, clearly labeling the section of the form to which you are responding.

A. Enter the total volume of contaminated soil and/or other solid waste to be managed (cubic yards) *:
600

B. Describe the characteristics of the material proposed to be managed,* which may include general makeup, physical characteristics, the homogeneity of the material, the proportion of soil to other solid waste, and any other pertinent descriptors.

Soil

C. Describe the historic and current land use of the generating site or facility where the contaminated soil or other solid waste originates, including how this site or facility is zoned.

Air National Guard Base

D. Describe identified contaminants and the source(s). Indicate whether contaminant concentrations exceed Wis. Admin. Code § NR 720 Residual Contaminant Levels.

Soil Samples have been taken. PFAS are present

E. Describe the sampling activities conducted to characterize the material including where the samples were collected, how sample locations were chosen, the sampling methods used, and when sampling activities were conducted.

Excavated areas where work will take place. Soil engineering company took Samples

F. Explain how the sampling activities adequately characterized the contaminated soil or other solid waste proposed to be managed. Indicate whether the samples were analyzed for all contaminants previously identified at the generating site or facility and analyzed for all contaminants potentially present at the site or facility considering current and historic land use. Discuss how samples were collected from areas most likely to be contaminated and from material that will actually be managed under this request.

Samples were analyzed for all contaminates including previously identified

G. Enter the total number of samples collected from this material and analyzed for contaminants of concern.
8

H. Enter the rate of sample collection per volume. One sample per _____ yards of contaminated material.

i. Wis. Admin. Code § NR 718.12 (1) (e) requires that samples collected to characterize soil be collected at a rate of one sample per 100 cubic yards (for the first 600 cubic yards) and one sample for each additional 300 cubic yards of material, with a minimum of two samples. If the DNR pre-approved an alternative sampling plan, describe how the sampling that was conducted complied with a pre-approved plan. Please also provide the date the sampling plan was pre-approved and the name of the DNR staff person who approved the plan.

Samples collected before excavation for work began. No work has begun yet.

Section 5 – Project description/material management plan

The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (2) (b) (5), (7) and (8). In this section, describe how the contaminated materials will be managed, the proposed schedule for managing the material, and provide sufficient information to justify that the placement of the contaminated materials will meet the requirements of Wis. Admin. Code §§ NR 726.12 (1) (b) 1. to 5. Narrative boxes have a limit of 2500 characters. Please attach additional pages if necessary, clearly labeling the section of the form to which you are responding.

A. Describe the material management activities to take place.* Provide details on how and where the material will be generated, transported and placed. Describe the depth of the proposed excavation of contaminated soil or other solid waste, and the depth that it will be placed at the receiving site or facility. Describe any response actions proposed for the receiving site or facility to address the relocated contaminated material (such as the construction of a cap). Discuss how material management activities will fit in with the overall property remediation and/or redevelopment plans.

Excavate ows, Soils to be moved by dump trucks onsite, stock piled on asphalt surface surrounded by straw logs to contain any run off. Excavations will be approx 10' deep, stacked up by a front end loader. Soils will then be re-used for backfill with any leftovers to be hauled to a waste Management facility

B. Summarize the proposed schedule for implementation of the activities including anticipated start and end dates. *

Work will begin as soon as all permits are issued

C. Confirm the proposed management activities will comply with Wis. Admin. Code § NR 726.13 (1) (b) 1. through 5.*

Can Confirm

D. Describe any procedures that have been established, or methods that will be used, to identify previously undocumented contamination during the completion of this project (such as instrument field screening, visual inspections, etc.). Also describe any contingency procedures that have been established to address unexpected contamination.

Visual inspections made during work. if additional guidance is necessary, a Soils engineer will be consulted.

E. Summarize how the proposed management activities will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety, by assessing how all potential exposure and migration pathways of concern, including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management.

Soils to be placed in an unused area of a parking lot. Covered. there is no waterway nearby, No Sewer Systems nearby. any groundwater will be pumped to an already approved location where NO people go.

Section 6 - Receiving site or facility information

The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (2) (c) 3. In this section, describe the site or facility receiving the material by addressing the following items. Narrative boxes have a limit of 2500 characters. Please attach additional pages if necessary, clearly labeling the section of the form to which you are responding.

A. Briefly discuss the geology and hydrogeology of the receiving site(s) or facility(ies), including information from any previous remedial investigations, and well logs or well construction records from nearby wells. Please also provide the information requested below, indicating whether the response is based on regional or site-specific information. *

N/A

Depth to Bedrock (ft. below ground surface): _____ ◯ Regional ◯ Site Specific

Bedrock Type: ◯ Sandstone ◯ Limestone / Dolomite ◯ Metamorphic / Igneous

High Groundwater Level (ft. below ground surface): _____ ◯ Regional ◯ Site Specific

Groundwater Flow Direction: _____ ◯ Regional ◯ Site Specific

B. Briefly describe any previous environmental site investigations or remedial actions conducted at the receiving site(s) or facility(ies). Describe the environmental condition of the portion of the receiving site(s) or facility(ies) where material will be placed including what contaminants are present, the environmental sampling conducted in that area, and whether identified contaminant concentrations exceed applicable standards. *

N/A

C. Describe any environmentally sensitive areas at or near the receiving site(s) or facility(s) where the contaminated material will be managed.

N/A

D. Describe the historic, current and proposed land use of the receiving site(s) or facility(ies) where the contaminated soil or other solid waste will be managed. How are these site(s) or facility(ies) zoned?

N/A

E. Identify current uses of all properties adjacent to the receiving site or facility. Check all that apply.

Agricultural	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
Industrial	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
Recreational	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
Residential	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
Undeveloped	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
Commercial	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW
Other	☐ N	☐ S	☐ E	☐ W	☐ NE	☐ NW	☐ SE	☐ SW

Describe "other" property use below:

N/A

F. Describe any other features of this property not addressed above that influence the suitability of the receiving site(s) or facility(ies) for the management of the contaminated soil or other solid waste.

N/A

Section 7 – Locational criteria

The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (1) (c). Indicate if excavated material will be placed in any of the following locations*:

- ☐ Within a floodplain.
- ☐ Within 100 feet of any wetland or critical habitat area.
- ☐ Within 300 feet of any navigable river, stream, lake, pond, or flowage.
- ☐ Within 100 feet of any on-site water supply well or 300 feet of any off-site water supply well.
- ☐ Within three (3) feet of the high groundwater level.
- ☐ At a depth greater than the depth of the original excavation from which the contaminated soil was removed.

If any of the above boxes are checked, an exemption from the indicated criteria must be requested as described below. If none of the above boxes are checked, and the proposed placement of material will not otherwise pose a threat to the public health, safety, or welfare or the environment, the proposed management activities will comply with the locational criteria of Wis. Admin. Code § NR 718.12 (1) (c) and you may skip the following question.

Include an explanation of why granting an exemption to the Wis. Admin. Code § NR 718.12 (1) (c) locational criteria will not cause a threat to public health, safety, or welfare or the environment by assessing how all potential exposure and migration pathways of concern, including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management. Consider the quantity and characteristics of the material being managed, the geologic and hydrogeological characteristics of the receiving site or facility, the unavailability of other environmentally suitable alternatives, and whether the activities will comply with other state and federal regulations including other portions of Wis. Admin. Code chs. NR 700 to NR 754.

Section 8 – Additional information for non-metallic mine receiving sites or facilities

If the material to be managed is proposed for use in reclaiming a non-metallic mine, the disposal of such a material must be specifically allowed in the mine's reclamation plan. If not, the reclamation plan needs to be modified prior to DNR approving the management of the contaminated soil at the mine. Complete this section if the proposed receiving site or facility is a non-metallic mine.

A. Current depth to groundwater at facility (feet below ground surface): _____

B. Has the facility been dewatered to allow mining? ◯ Yes ◯ No

If yes, indicate the expected natural groundwater level when dewatering is terminated (feet below ground surface):

C. Is material proposed to be placed within 10 feet of the natural water table? ◯ Yes* ◯ No

If yes, provide information to justify a variance approval under Wis. Admin. Code ch. NR 503.

D. Include a copy of the reclamation plan indicating the placement of low level contaminated material is acceptable.

E. Describe any design criteria established for the disposal site, include restrictions on material placement, engineered barrier requirements, etc.

N/A

Section 9 – Continuing obligations at receiving site or facility

The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (2) (d) and (e).Check the applicable boxes to indicate which continuing obligations will be specifically required to address the material being managed on the receiving site or facility. The associated language will appear in the Wis. Admin. Code ch. NR 718 Approval Letter.

☐ No Continuing Obligations

☐ Residual Soil Contamination:

If contaminated soil that was managed as proposed in the material management plan is excavated in the future, the property owner at the time of excavation will have the following responsibilities per Wis. Admin. Code § NR 725.05 (l) (d):

- determine if contamination is present,
- determine whether the soil is considered solid or hazardous waste; and
- ensure that any storage, is in compliance with applicable statutes and rules.

Excavated contaminated soil may be managed in accordance with Wis. Admin. Code ch. NR 718, with prior DNR approval. In addition, all current and future property owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose a hazard and special precautions may be necessary to prevent a health threat to humans. A historic fill exemption is required prior to construction of any structures over fill materials.

Depending on site-specific conditions, construction over contaminated soil or groundwater may also result in vapor migration of contaminants into enclosed structures or migration along underground utility lines. The potential for vapor intrusion and means of mitigation should be evaluated when planning any future redevelopment, and measures may need to be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

☐ Maintenance of a cover:

A soil cover/engineered cover/other is proposed to be installed and maintained over contaminated soil. Inspections will be required per Wis. Admin. Code § NR 724.13, and submittal of inspection reports may be required per Wis. Admin. Code § NR 727.05 (1) (b) 3. Certain activities which would disturb the cover or barrier will be prohibited. If the cover is approved for industrial land use, notification of the DNR is required before changing to a non-industrial use, to determine if the cover will be protective for that use per Wis. Admin. Code § NR 727.07 (3). A maintenance plan is attached, which describes the maintenance activities to be required. An updated maintenance plan must be provided to the DNR once the barrier has been constructed if changes are required and must address actual site conditions (Wis. Admin. Code § NR 724.15 (3) (h)). A map is attached which shows the location of the extent of contaminated materials and the extent of the cover.

☐ Use of Industrial Land Use Soil Standards:

Direct contact risk posed by contaminated material managed under this approval was assessed using residual contaminant levels for industrial land use. The DNR must be notified if the property land use will change from industrial use to a non-industrial land use per Wis. Admin. Code § NR 727.07 (3). Additional investigation and remediation may be required prior to the change in land use to ensure the site conditions are protective for the planned land use.

☐ Vapor: Future Actions to Address Vapor Intrusion:

While vapor intrusion does not currently exist, if a building is constructed or reconstructed on this property, or if use of an existing building is changed to a non-industrial use, vapor intrusion may become a concern. The DNR must be notified before construction of a building or changing the use of an existing building to non-industrial use per Wis. Admin. Code § NR 727.07. The use of vapor control technologies or an assessment of the potential for vapor intrusion will be required at that time per Wis. Admin. Code §§ NR 722.15 (2) (e) 4 and 5.

☐ Site specific condition:

Describe the site specific condition:

N/A

Section 10 – Figures

Providing figures as part of the material management plan will allow DNR staff to more quickly evaluate the compliance of the request with the requirements of Wis. Admin. Code §§ NR 718.12 (1) and (2) and NR 718.15. The following are recommended figures to be submitted with this request.

The DNR recommends that all maps are drawn to scale not larger than 1 inch equal to 100 feet and labeled with the site or facility name and address. The location of the property and the specific management area should be provided in sufficient detail to allow DNR personnel to inspect these areas in the future. Providing a "cut/fill" map that clearly depicts how much material will be removed or added to different areas of the involved property(ies) and depicting how material will be moved across the site is also highly recommended. Providing cross sections that depict site conditions before and after material management activities is also recommended.

Attach appropriate figures to this form. Use the following checklist to ensure recommended items are included in the attached figures.

- ☐ The boundaries of each property involved in the project as well as named and unnamed roads or access points, buildings and other surface features, underground utilities, land uses on adjacent properties, and known and potential sources of hazardous substances.
- ☐ The location of wetlands, critical habitat areas, floodplains, surface water bodies, water supply wells, or other possible receptors located near or within the area where material will be managed.
- ☐ The lateral extent and depth of planned excavation, grading, or otherwise disturbed areas.
- ☐ The lateral extent and thickness of excavated material placement locations.
- ☐ Soil sample locations at the response action site and receiving site(s) or facility(ies). Depict applicable soil contaminant concentration data and sample depths. Indicate the extent of contamination exceeding a RCL.
- ☐ Depth to groundwater.
- ☐ The extent of any performance standards (such as a barrier or cap) that will be required at the completion of management activities.

Section 11 - Additional Attachments

The following documents are recommended for inclusion with a Wis. Admin. Code § NR 718.12 or a Wis. Admin. Code § 718.15 request. Indicate which of these documents are included in this request by checking the boxes below.

- ☐ A table summarizing the analytical results of all soil/waste samples collected at the generating site or facility that meets the requirements of Wis. Admin. Code § 716.15 (4) (e). Clearly indicate which of these samples were collected from material that is proposed to be managed.
- ☐ The analytical package for all samples listed on the above table. The package should include the sample results, chain of custody, sampling methods, and QA/QC data.
- ☐ A maintenance plan for any performance standard needed to address the material proposed to be managed. The plan should follow the format found in DNR Form 4400-202, Attachment D.
- ☐ A copy of the reclamation plan for the receiving site or facility if it is a nonmetallic mine. Confirm the plan allows for acceptance of contaminated soil by marking relevant plan sections.
- ☐ Power of Attorney (if applicable, see Section 12).
- ☐ Deed for the property receiving the contaminated material. If a certified survey map or plat map is referenced by this deed then also include those documents.
- ☐ Provide a copy of a parcel map depicting the property(ies) boundaries.

Section 12 - Certification Statements

Wis. Admin. Code ch. NR 712, entitled "Personnel Qualifications for Conducting Environmental Response Actions," establishes minimum standards for experience and professional qualifications for persons who perform certain environmental services. All requests submitted to manage contaminated soil or other solid waste as an interim action or remedial action under Wis. Admin. Code chs. NR 708 or NR 722 must be prepared by, or prepared under, the supervision of a professional engineer per Wis. Admin. Code ch. NR 712. The professional engineer who prepared or supervised this request should complete the following section. This law applies to work conducted under Wis. Admin. Code ch. NR 718, unless specifically exempted.

Per Wis. Admin. Code § NR 712.09 (3) (a), the following certification shall be attached to any submittal that is required to be prepared by, or under the supervision of, a professional engineer under s. NR 712.07 (2), (3) or (5):

"I, _____ , hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

_____ _____
Signature, title and P.E. number P.E. stamp

In addition, if the work certified included investigation or evaluation of groundwater conditions, or groundwater related conclusions or recommendations, Wis. Admin. Code § NR 712.09 (3) (b) requires the following certification shall be attached to any submittal that is required to be prepared or to have its preparation supervised by a certified hydrogeologist under s. NR 712.07 (2), (4) or (5):

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

_____ _____
Signature and title Date

Section 13 - Signatures

Owner(s) of receiving site(s) or facility(ies) if different than generating site

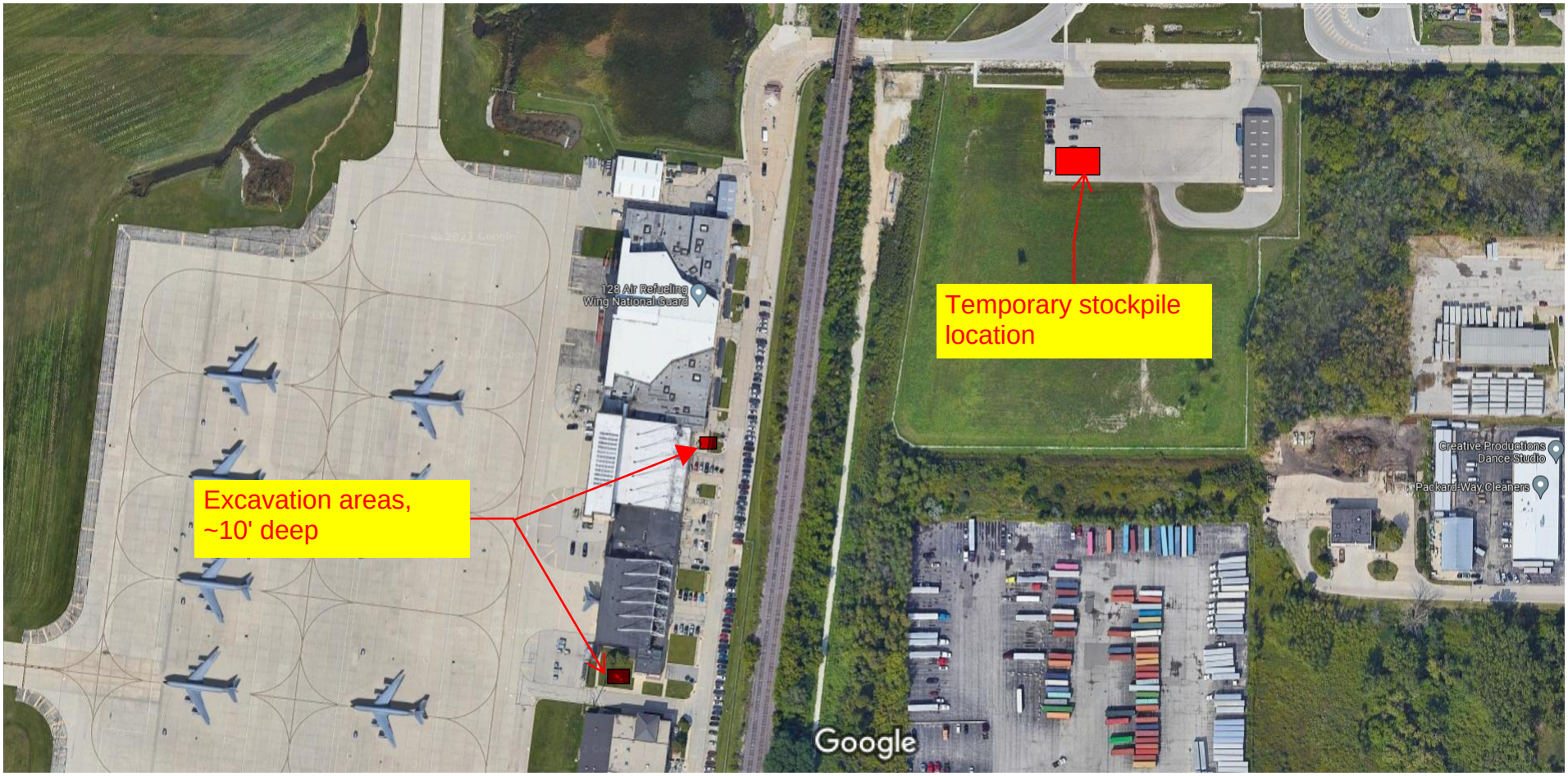
Each property owner of receiving site(s) or facility(ies) involved in the management project must provide their signature as part of this request. If one of the owners of the receiving site(s) or facility(ies) is acting on behalf of other owners, a power of attorney form or statement must be signed and attached to this agreement clearly granting the agent the authority to accept the contaminated materials on behalf of all other owners of the receiving site(s) or facility(ies) whose signatures are not included on this agreement.

I understand that by signing this application I certify that I will follow the conditions and limitations required by law and specified in the approval issued to me as owner of the site or facility that will receive the contaminated soil. Further, I certify that the contaminated soil proposed to be managed under this approval will be at a property that meets the definition of "site" or "facility" under Wis. Stats. ch.292 and Wis. Admin. Code chs. NR 700 – 799, and I understand that the material must be managed any time in the future as a solid waste with the department's approval. I understand that this approval will be tracked in the Wisconsin Remediation and Redevelopment Database, and if required, will include maintenance and inspection by me of any continuing obligations, such as maintaining an engineering control or barrier over the contaminated soil, and will also be subject to inspection by the department. I understand that the conditions on my site or facility may be subject to Wis. Stats. ch. 709, Disclosures by Owners of Real Estate. I believe that the legal description for all properties where material will be managed is included with this submittal.

Receiving site or facility address as listed in Section 3F: N/A

Print Name	Signature	Date
Print Name	Signature	Date

Google Maps



Imagery ©2023 CNES / Airbus, Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2023 100 ft

OWS Excavation Plan Modification

Option:1 Postpone the start of excavating the PFAS soils until the Material Management Plan is reviewed by the DNR

1. The 128th shall provide a Material Management Plan to the WI DNR for review, and the contractor shall cover the review fee of approximately $700.00 for the material management plan (The process may take 1 to 2 months).
2. The contractor shall calculate and provide an estimate of the approximate area (Base Width x Base Length x Avg Height) required to stockpile the excavated PFAS soils. The estimated volume area shall be a minimum of 500 Loose Cubic Yards.
3. After the DNR review of the Material Management Plan, the contractor shall start excavating the two OWS near B208/B304 and stockpile soil in a designated area (TBD) near the work site.
4. The contractor shall install the new 8000-gal OWS tank and reuse the available stockpiled soil to backfill as needed.
5. After the OWS installation at B208/B304, the contractor shall start excavating the OWS near B308.
6. The contractor shall use excavated soil from B308 OWS to add backfill to areas around B208/B304 as needed and stockpile the excess in the designated area (TBD).
7. Upon completion, the contractor shall calculate the quantity of the excess stockpiled soil and revisit a change-order request to load, transport, and dump PFAS soils at an approved off-site location.

** Stockpiled soils must conform to NR718.05 (https://docs.legis.wisconsin.gov/document/administrativecode/NR%20718.05). This has location requirements along with need to be placed on impervious surface and to be covered.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 128TH AIR REFUELING WING (ANG)

17 May 2023

MEMORANDUM FOR WISCONSIN DEPARTMENT OF NATURAL RESOURCES

FROM: 128 CES/CEIE
1919 E Grange Ave
Milwaukee WI 53207-6142

SUBJECT: Materials Management Plan – BRRTS # 02-41-582725

1. Pursuant to Wisconsin Administrative Code NR 718, a materials management plan (MMP) is required for materials that could be removed that contain contaminants of concern. This memorandum serves as the material management plan that the 128th Air Refueling Wing will follow during construction related to the replacement of two oil water separators which will be installed to the the east of Buildings 208 and 304 and to south of Building 308. This material management plan provides the process for handling soil and water that have the potential to contain contaminants of concern. This site is located in the NW ¼ Section 34 Township 6N, Range 22 East in Milwaukee County, Wisconsin.

2. **Project Area Site Soil Results –** With the replacement of three oil/water separators serving buildings 208, 304 and 308 with two new units (one serving 208 and 304; the other serving 308) it was determined in concert with the Wisconsin Department of Natural Resources that a soils management plan for the management of perfluorinated contaminated soils should be established. After sampling multiple areas around the oil/water separator units to be removed, it was determined that perfluorinated compounds were present in the soils (no groundwater was encountered). Data for this determination was collected from the sampling report for Buildings 208, 304 and 308 (Attachment 1) and the FY16 Phase 1 Regional Site Inspection for Perflourinated Compounds report. Perflourinated compounds were detected in all soil samples in the vicinity of both planned oil/water separator replacements. Concentrations of PFOS ranged from non-detect to 28 ug/kg. Concentrations of PFOA ranged from 0.24 to 120 ug/kg. Sample report and map are attached to this letter. A copy of the FY16 Phase 1 Regional Site Inspection for Perflourinated Compounds can be located on the BRRTS website.

3. **Site Soil Handling and Disposition** – Soil from construction activities will fall into two major categories with different disposition procedures. Implementation for this soil management plan is expected to occur from June 2023 – September 2023.

- To facilitate the proposed installation of two oil/water separator units (OWS) in the project area, soil will be excavated to a maximum depth of approximately 15 feet.
- Soils with perfluorinated compounds will be used as fill within the two planned project excavations pursuant to that the fill location will ultimately be an impervious surface. Current estimated soils to be managed in this option is 300 to 350 cubic yards.
- However, it is anticipated that a small percentage of excess contaminated soil will remain following the backfilling of the excavations. These remaining soils (discussed in the bullet point above) will be stockpiled on paved surfaces adjacent to the OWS units and will eventually be disposed of at a licensed solid waste facility. Prior to disposal soils will be stored on site in accordance with NR 718.05(2). Current estimated soil to be managed in this option is approximately 100-150 cubic yards.
- Soils with perfluorinated compounds may be used in pervious areas within the project site so long as the site conforms to NR 718.12 and is covered with minimum of one foot of clean soil, top soil, and seeded. The location for soils to be reused would within the backfill of each oil/water separator unit (respectively located on the east side of Buildings 208 and 304 and south side of Building 308). These locations are greater than 100 feet west of the drainage ditch which has wetland characteristics, but which is not delinated as wetland per the Wisconsin Department of Natural Resources Surface Water Data Viewer

database. Additionally, this ditch was determined as a non-navigable waterway in the past. This location poses no threat to public health, safety, or welfare for the environment as it is located on an industrial facility with a closed fenceline. Additionally, contaiminated soils would be covered with clean soil or below a pervious surface, therefore no direct contact can be made with contaminated soils. All contaminated soils in this area would be under both the industrial direct contact residual contact limit (RCL) and the non-industrial direct contact RCL. Only soils that were previously located in a pervious area (i.e. grass/gravel cover) will be reutilized under future planned pervious areas. Soils will be removed and placed next to the excavation and then replaced in same footprint, in order to not introduce any additional contamination than what was previously there. This operation will prevent any increased risk for a pathway to groundwater as compared to if the soil was undisturbed by construction activities. Current estimated soils to be be managed in this option is 150-175 cubic yards.

4**. Site Water Results** – Based upon the Site Inspection report conducted as part of the nearby Building 522 soil management project, groundwater in the area flows from south to north in the area. Groundwater was sampled during the Site Inspection from CB018A-MW0291 and had detections of 0.74 ug/L PFOS and 0.0799 ug/L PFOA. As the proposed area for this project is located upgradient from Building 522, and is more distant from known PFAS source areas, it is likely that the above-described detection levels for PFOS and PFOA represent a worst-case scenario.

5. **Site Water Handling and Disposition** – Dewatering of each excavation will occur, following a dewatering plan that was approved by WDNR (see Attachment 5) and which will be conducted as per the conditions of WPDES Permit Number WI-0046566-07-0 (please refer to Attachment 6). Water from each excavation will be pumped (via a protected hose) into storm drains that are located between 75 and 100 feet to the east of each respective excavation. The drains will be fitted with filtration bags to capture any bulk solids and will be monitored for clarity..

The above and attached is the 128th Air Refueling Wing's approach to material management for oil/water separator replacement work adjacent to Buildings 206/304 and 308 and which is relatd to BRRTS # 02-41-582725 at General Mitchell Field, Milwaukee, Wisconsin.

If you have any additional questions, please feel free to contact me at 414-944-8414 or robert.chmieleski@us.af.mil at any time. Thank you in advance for your review of this material management plan.

Robert M. Chmieleski, Jr., CHMM
Sr. Environmental Enforcement Specialist

Attachments:

1. Sample Location Map
2. Project Area Analytical Results
3. Navigability Determination Letter
4. Surface Water Data Viewer Map
5. Dewatering Plan
6. WPDES General Permit No. WI-0046566-07-0

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118
www.gilesengr.com

FIGURE 1
SOIL SAMPLE LOCATION PLAN
128th AIR REFUELING WING
1919 E. GRANGE AVENUE
MILWAUKEE, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
BAH	ERA	approx. 1"=50'	03-08-23	--
PROJECT NO.: 1E-2301016			CAD No. 1E2301016A	

LEGEND:
1A TEST PIT LOCATION

N
W E
S

0 25' 50'
APPROXIMATE SCALE

NOTES:
1.) BASE MAP DEVELOPED FROM A MILWAUKEE COUNTY GIS.

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

March 29, 2023

Michelle Peed
Giles Engineering Associates, Inc.
N8 W22350 Johnson Road
Waukesha, WI 53186

RE: Project: 128TH ARW
Pace Project No.: 40258659

Dear Michelle Peed:

Enclosed are the analytical results for sample(s) received by the laboratory on February 25, 2023. 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,

Tod Noltemeyer

Tod Noltemeyer for
Dan Milewsky
dan.milewsky@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: 128TH ARW
Pace Project No.: 40258659

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
South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

Pace Analytical Services, LLC
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(920)469-2436

SAMPLE SUMMARY

Project: 128TH ARW
Pace Project No.: 40258659

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40258659001	**OWS 1A**	Solid	02/24/23 08:30	02/25/23 09:00
40258659002	**OWS 1B**	Solid	02/24/23 08:35	02/25/23 09:00
40258659003	**OWS 1C**	Solid	02/24/23 08:40	02/25/23 09:00
40258659004	**OWS 1D**	Solid	02/24/23 08:45	02/25/23 09:00
40258659005	**OWS 2A**	Solid	02/24/23 11:05	02/25/23 09:00
40258659006	**OWS 2B**	Solid	02/24/23 11:10	02/25/23 09:00
40258659007	**OWS 2C**	Solid	02/24/23 11:15	02/25/23 09:00
40258659008	**OWS 2B**	Solid	02/24/23 11:20	02/25/23 09:00

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: 128TH ARW
Pace Project No.: 40258659

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40258659001	**OWS 1A**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659002	**OWS 1B**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659003	**OWS 1C**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659004	**OWS 1D**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659005	**OWS 2A**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659006	**OWS 2B**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659007	**OWS 2C**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40258659008	**OWS 2B**	EPA 6010D	SIS	7	PASI-G
		EPA 7471	LMS	1	PASI-G

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: 128TH ARW
Pace Project No.: 40258659

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270E	TPO	70	PASI-G
		EPA 8260	ALD	63	PASI-G
		ASTM D2974-87	NMK	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
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(920)469-2436

SUMMARY OF DETECTION

Project: 128TH ARW
Pace Project No.: 40258659

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40258659001	**OWS 1A**					
EPA 6010D	Arsenic	4.8	mg/kg	2.9	03/01/23 14:52	
EPA 6010D	Barium	58.3	mg/kg	0.58	03/01/23 14:52	M0
EPA 6010D	Cadmium	0.37J	mg/kg	0.58	03/01/23 14:52	
EPA 6010D	Chromium	15.6	mg/kg	1.2	03/01/23 14:52	
EPA 6010D	Lead	35.4	mg/kg	2.3	03/01/23 14:52	M0
EPA 7471	Mercury	0.37	mg/kg	0.040	03/09/23 10:08	
EPA 8270E	Benzo(a)anthracene	445J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Benzo(a)pyrene	446J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Benzo(b)fluoranthene	594J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Benzo(g,h,i)perylene	353J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Benzo(k)fluoranthene	272J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Chrysene	549J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Fluoranthene	1150	ug/kg	778	03/01/23 14:50	
EPA 8270E	Indeno(1,2,3-cd)pyrene	332J	ug/kg	778	03/01/23 14:50	B
EPA 8270E	Phenanthrene	500J	ug/kg	778	03/01/23 14:50	
EPA 8270E	Pyrene	1000	ug/kg	778	03/01/23 14:50	
ASTM D2974-87	Percent Moisture	14.2	%	0.10	02/27/23 11:36	
40258659002	**OWS 1B**					
EPA 6010D	Arsenic	5.1	mg/kg	2.7	03/01/23 15:00	
EPA 6010D	Barium	77.1	mg/kg	0.54	03/01/23 15:00	
EPA 6010D	Cadmium	0.59	mg/kg	0.54	03/01/23 15:00	
EPA 6010D	Chromium	26.8	mg/kg	1.1	03/01/23 15:00	
EPA 6010D	Lead	38.3	mg/kg	2.1	03/01/23 15:00	
EPA 7471	Mercury	0.12	mg/kg	0.038	03/09/23 10:10	
EPA 8270E	Benzo(a)anthracene	432J	ug/kg	783	03/01/23 14:28	
EPA 8270E	Benzo(a)pyrene	346J	ug/kg	783	03/01/23 14:28	
EPA 8270E	Benzo(b)fluoranthene	554J	ug/kg	783	03/01/23 14:28	M1
EPA 8270E	Benzo(g,h,i)perylene	300J	ug/kg	783	03/01/23 14:28	
EPA 8270E	Benzo(k)fluoranthene	240J	ug/kg	783	03/01/23 14:28	
EPA 8270E	Chrysene	575J	ug/kg	783	03/01/23 14:28	
EPA 8270E	Fluoranthene	1060	ug/kg	783	03/01/23 14:28	M1
EPA 8270E	Indeno(1,2,3-cd)pyrene	269J	ug/kg	783	03/01/23 14:28	B
EPA 8270E	Phenanthrene	543J	ug/kg	783	03/01/23 14:28	
EPA 8270E	Pyrene	924	ug/kg	783	03/01/23 14:28	
ASTM D2974-87	Percent Moisture	14.7	%	0.10	02/27/23 11:36	
40258659003	**OWS 1C**					
EPA 6010D	Arsenic	6.4	mg/kg	2.8	03/01/23 15:04	
EPA 6010D	Barium	104	mg/kg	0.55	03/01/23 15:04	
EPA 6010D	Cadmium	0.50J	mg/kg	0.55	03/01/23 15:04	
EPA 6010D	Chromium	22.5	mg/kg	1.1	03/01/23 15:04	
EPA 6010D	Lead	98.2	mg/kg	2.2	03/01/23 15:04	
EPA 7471	Mercury	0.057	mg/kg	0.037	03/09/23 10:13	
EPA 8270E	Benzo(a)anthracene	362J	ug/kg	782	03/01/23 16:15	
EPA 8270E	Benzo(a)pyrene	332J	ug/kg	782	03/01/23 16:15	
EPA 8270E	Benzo(b)fluoranthene	483J	ug/kg	782	03/01/23 16:15	
EPA 8270E	Benzo(g,h,i)perylene	261J	ug/kg	782	03/01/23 16:15	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: 128TH ARW
Pace Project No.: 40258659

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40258659003	**OWS 1C**					
EPA 8270E	Benzo(k)fluoranthene	288J	ug/kg	782	03/01/23 16:15	
EPA 8270E	Chrysene	540J	ug/kg	782	03/01/23 16:15	
EPA 8270E	Fluoranthene	839	ug/kg	782	03/01/23 16:15	
EPA 8270E	Indeno(1,2,3-cd)pyrene	232J	ug/kg	782	03/01/23 16:15	B
EPA 8270E	Phenanthrene	348J	ug/kg	782	03/01/23 16:15	
EPA 8270E	Pyrene	788	ug/kg	782	03/01/23 16:15	
ASTM D2974-87	Percent Moisture	14.5	%	0.10	02/27/23 11:36	
40258659004	**OWS 1D**					
EPA 6010D	Arsenic	3.3	mg/kg	3.1	03/01/23 15:06	
EPA 6010D	Barium	104	mg/kg	0.61	03/01/23 15:06	
EPA 6010D	Cadmium	0.67	mg/kg	0.61	03/01/23 15:06	
EPA 6010D	Chromium	26.0	mg/kg	1.2	03/01/23 15:06	
EPA 6010D	Lead	14.3	mg/kg	2.5	03/01/23 15:06	
EPA 7471	Mercury	0.053	mg/kg	0.039	03/09/23 10:15	
ASTM D2974-87	Percent Moisture	19.5	%	0.10	02/27/23 11:36	
40258659005	**OWS 2A**					
EPA 6010D	Arsenic	11.8	mg/kg	3.1	03/01/23 15:12	
EPA 6010D	Barium	70.8	mg/kg	0.63	03/01/23 15:12	
EPA 6010D	Cadmium	0.19J	mg/kg	0.63	03/01/23 15:12	
EPA 6010D	Chromium	19.1	mg/kg	1.3	03/01/23 15:12	
EPA 6010D	Lead	10.4	mg/kg	2.5	03/01/23 15:12	
EPA 7471	Mercury	0.025J	mg/kg	0.044	03/09/23 10:22	
ASTM D2974-87	Percent Moisture	21.1	%	0.10	02/27/23 11:36	
40258659006	**OWS 2B**					
EPA 6010D	Arsenic	6.3	mg/kg	2.9	03/01/23 15:14	
EPA 6010D	Barium	109	mg/kg	0.59	03/01/23 15:14	
EPA 6010D	Chromium	27.7	mg/kg	1.2	03/01/23 15:14	
EPA 6010D	Lead	13.6	mg/kg	2.3	03/01/23 15:14	
EPA 7471	Mercury	0.048	mg/kg	0.041	03/09/23 10:24	
ASTM D2974-87	Percent Moisture	17.1	%	0.10	02/27/23 11:36	
40258659007	**OWS 2C**					
EPA 6010D	Arsenic	2.8J	mg/kg	2.9	03/01/23 15:15	
EPA 6010D	Barium	57.9	mg/kg	0.58	03/01/23 15:15	
EPA 6010D	Cadmium	0.36J	mg/kg	0.58	03/01/23 15:15	
EPA 6010D	Chromium	16.5	mg/kg	1.2	03/01/23 15:15	
EPA 6010D	Lead	18.4	mg/kg	2.3	03/01/23 15:15	
EPA 7471	Mercury	0.024J	mg/kg	0.042	03/09/23 10:27	
EPA 8270E	Benzo(a)anthracene	51.9J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Benzo(a)pyrene	66.5J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Benzo(b)fluoranthene	106J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Benzo(g,h,i)perylene	115J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Benzo(k)fluoranthene	63.7J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Chrysene	111J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Dibenz(a,h)anthracene	69.9J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Fluoranthene	164J	ug/kg	198	03/01/23 13:03	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: 128TH ARW
Pace Project No.: 40258659

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40258659007	**OWS 2C**					
EPA 8270E	Indeno(1,2,3-cd)pyrene	120J	ug/kg	198	03/01/23 13:03	B
EPA 8270E	Phenanthrene	70.1J	ug/kg	198	03/01/23 13:03	
EPA 8270E	Pyrene	145J	ug/kg	198	03/01/23 13:03	
EPA 8260	n-Butylbenzene	146	ug/kg	68.7	02/27/23 12:53	
EPA 8260	sec-Butylbenzene	152	ug/kg	68.7	02/27/23 12:53	
EPA 8260	p-Isopropyltoluene	25.6J	ug/kg	68.7	02/27/23 12:53	
ASTM D2974-87	Percent Moisture	15.7	%	0.10	02/27/23 11:37	
40258659008	**OWS 2B**					
EPA 6010D	Arsenic	5.4	mg/kg	2.7	03/01/23 15:17	
EPA 6010D	Barium	86.2	mg/kg	0.55	03/01/23 15:17	
EPA 6010D	Cadmium	0.83	mg/kg	0.55	03/01/23 15:17	
EPA 6010D	Chromium	21.4	mg/kg	1.1	03/01/23 15:17	
EPA 6010D	Lead	17.5	mg/kg	2.2	03/01/23 15:17	
ASTM D2974-87	Percent Moisture	15.9	%	0.10	02/27/23 11:37	

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1A **Lab ID: 40258659001** Collected: 02/24/23 08:30 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**4.8**	mg/kg	2.9	1.7	1	03/01/23 06:06	03/01/23 14:52	7440-38-2	
Barium	**58.3**	mg/kg	0.58	0.17	1	03/01/23 06:06	03/01/23 14:52	7440-39-3	M0
Cadmium	**0.37J**	mg/kg	0.58	0.15	1	03/01/23 06:06	03/01/23 14:52	7440-43-9	
Chromium	**15.6**	mg/kg	1.2	0.32	1	03/01/23 06:06	03/01/23 14:52	7440-47-3	
Lead	**35.4**	mg/kg	2.3	0.70	1	03/01/23 06:06	03/01/23 14:52	7439-92-1	M0
Selenium	**<1.5**	mg/kg	4.6	1.5	1	03/01/23 06:06	03/01/23 14:52	7782-49-2	
Silver	**<0.36**	mg/kg	1.2	0.36	1	03/01/23 06:06	03/01/23 14:52	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.37**	mg/kg	0.040	0.011	1	03/08/23 08:45	03/09/23 10:08	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<276**	ug/kg	778	276	4	02/28/23 12:55	03/01/23 14:50	83-32-9	
Acenaphthylene	**<277**	ug/kg	778	277	4	02/28/23 12:55	03/01/23 14:50	208-96-8	
Anthracene	**<124**	ug/kg	778	124	4	02/28/23 12:55	03/01/23 14:50	120-12-7	
Benzo(a)anthracene	**445J**	ug/kg	778	120	4	02/28/23 12:55	03/01/23 14:50	56-55-3	
Benzo(a)pyrene	**446J**	ug/kg	778	117	4	02/28/23 12:55	03/01/23 14:50	50-32-8	
Benzo(b)fluoranthene	**594J**	ug/kg	778	134	4	02/28/23 12:55	03/01/23 14:50	205-99-2	
Benzo(g,h,i)perylene	**353J**	ug/kg	778	203	4	02/28/23 12:55	03/01/23 14:50	191-24-2	
Benzo(k)fluoranthene	**272J**	ug/kg	778	186	4	02/28/23 12:55	03/01/23 14:50	207-08-9	
4-Bromophenylphenyl ether	**<163**	ug/kg	778	163	4	02/28/23 12:55	03/01/23 14:50	101-55-3	
Butylbenzylphthalate	**<324**	ug/kg	778	324	4	02/28/23 12:55	03/01/23 14:50	85-68-7	CH
Carbazole	**<122**	ug/kg	778	122	4	02/28/23 12:55	03/01/23 14:50	86-74-8	
4-Chloro-3-methylphenol	**<242**	ug/kg	778	242	4	02/28/23 12:55	03/01/23 14:50	59-50-7	
4-Chloroaniline	**<128**	ug/kg	778	128	4	02/28/23 12:55	03/01/23 14:50	106-47-8	
bis(2-Chloroethoxy)methane	**<209**	ug/kg	778	209	4	02/28/23 12:55	03/01/23 14:50	111-91-1	
bis(2-Chloroethyl) ether	**<243**	ug/kg	778	243	4	02/28/23 12:55	03/01/23 14:50	111-44-4	
2-Chloronaphthalene	**<99.8**	ug/kg	778	99.8	4	02/28/23 12:55	03/01/23 14:50	91-58-7	
2-Chlorophenol	**<194**	ug/kg	778	194	4	02/28/23 12:55	03/01/23 14:50	95-57-8	
4-Chlorophenylphenyl ether	**<145**	ug/kg	778	145	4	02/28/23 12:55	03/01/23 14:50	7005-72-3	
Chrysene	**549J**	ug/kg	778	116	4	02/28/23 12:55	03/01/23 14:50	218-01-9	
Dibenz(a,h)anthracene	**<211**	ug/kg	778	211	4	02/28/23 12:55	03/01/23 14:50	53-70-3	
Dibenzofuran	**<94.1**	ug/kg	778	94.1	4	02/28/23 12:55	03/01/23 14:50	132-64-9	
1,2-Dichlorobenzene	**<244**	ug/kg	778	244	4	02/28/23 12:55	03/01/23 14:50	95-50-1	
1,3-Dichlorobenzene	**<108**	ug/kg	778	108	4	02/28/23 12:55	03/01/23 14:50	541-73-1	
1,4-Dichlorobenzene	**<108**	ug/kg	778	108	4	02/28/23 12:55	03/01/23 14:50	106-46-7	
3,3'-Dichlorobenzidine	**<211**	ug/kg	778	211	4	02/28/23 12:55	03/01/23 14:50	91-94-1	
2,4-Dichlorophenol	**<208**	ug/kg	778	208	4	02/28/23 12:55	03/01/23 14:50	120-83-2	
Diethylphthalate	**<129**	ug/kg	778	129	4	02/28/23 12:55	03/01/23 14:50	84-66-2	
2,4-Dimethylphenol	**<154**	ug/kg	778	154	4	02/28/23 12:55	03/01/23 14:50	105-67-9	
Dimethylphthalate	**<101**	ug/kg	778	101	4	02/28/23 12:55	03/01/23 14:50	131-11-3	
Di-n-butylphthalate	**<116**	ug/kg	778	116	4	02/28/23 12:55	03/01/23 14:50	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1A **Lab ID: 40258659001** Collected: 02/24/23 08:30 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<240**	ug/kg	778	240	4	02/28/23 12:55	03/01/23 14:50	534-52-1	
2,4-Dinitrophenol	**<611**	ug/kg	1540	611	4	02/28/23 12:55	03/01/23 14:50	51-28-5	
2,4-Dinitrotoluene	**<111**	ug/kg	778	111	4	02/28/23 12:55	03/01/23 14:50	121-14-2	
2,6-Dinitrotoluene	**<148**	ug/kg	778	148	4	02/28/23 12:55	03/01/23 14:50	606-20-2	
Di-n-octylphthalate	**<175**	ug/kg	778	175	4	02/28/23 12:55	03/01/23 14:50	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<265**	ug/kg	778	265	4	02/28/23 12:55	03/01/23 14:50	117-81-7	CH
Fluoranthene	**1150**	ug/kg	778	110	4	02/28/23 12:55	03/01/23 14:50	206-44-0	
Fluorene	**<90.9**	ug/kg	778	90.9	4	02/28/23 12:55	03/01/23 14:50	86-73-7	
Hexachloro-1,3-butadiene	**<198**	ug/kg	778	198	4	02/28/23 12:55	03/01/23 14:50	87-68-3	
Hexachlorobenzene	**<131**	ug/kg	778	131	4	02/28/23 12:55	03/01/23 14:50	118-74-1	
Hexachlorocyclopentadiene	**<184**	ug/kg	778	184	4	02/28/23 12:55	03/01/23 14:50	77-47-4	
Hexachloroethane	**<124**	ug/kg	778	124	4	02/28/23 12:55	03/01/23 14:50	67-72-1	
Indeno(1,2,3-cd)pyrene	**332J**	ug/kg	778	168	4	02/28/23 12:55	03/01/23 14:50	193-39-5	B
Isophorone	**<119**	ug/kg	778	119	4	02/28/23 12:55	03/01/23 14:50	78-59-1	
2-Methylnaphthalene	**<202**	ug/kg	778	202	4	02/28/23 12:55	03/01/23 14:50	91-57-6	
2-Methylphenol(o-Cresol)	**<141**	ug/kg	778	141	4	02/28/23 12:55	03/01/23 14:50	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<142**	ug/kg	778	142	4	02/28/23 12:55	03/01/23 14:50		
Naphthalene	**<272**	ug/kg	778	272	4	02/28/23 12:55	03/01/23 14:50	91-20-3	
2-Nitroaniline	**<222**	ug/kg	778	222	4	02/28/23 12:55	03/01/23 14:50	88-74-4	
3-Nitroaniline	**<132**	ug/kg	778	132	4	02/28/23 12:55	03/01/23 14:50	99-09-2	
4-Nitroaniline	**<323**	ug/kg	778	323	4	02/28/23 12:55	03/01/23 14:50	100-01-6	
Nitrobenzene	**<158**	ug/kg	778	158	4	02/28/23 12:55	03/01/23 14:50	98-95-3	
2-Nitrophenol	**<245**	ug/kg	778	245	4	02/28/23 12:55	03/01/23 14:50	88-75-5	
4-Nitrophenol	**<196**	ug/kg	778	196	4	02/28/23 12:55	03/01/23 14:50	100-02-7	
N-Nitroso-di-n-propylamine	**<123**	ug/kg	778	123	4	02/28/23 12:55	03/01/23 14:50	621-64-7	
N-Nitrosodiphenylamine	**<205**	ug/kg	778	205	4	02/28/23 12:55	03/01/23 14:50	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<200**	ug/kg	778	200	4	02/28/23 12:55	03/01/23 14:50	108-60-1	
Pentachlorophenol	**<171**	ug/kg	778	171	4	02/28/23 12:55	03/01/23 14:50	87-86-5	
Phenanthrene	**500J**	ug/kg	778	99.7	4	02/28/23 12:55	03/01/23 14:50	85-01-8	
Phenol	**<184**	ug/kg	778	184	4	02/28/23 12:55	03/01/23 14:50	108-95-2	D3
Pyrene	**1000**	ug/kg	778	172	4	02/28/23 12:55	03/01/23 14:50	129-00-0	
1,2,4-Trichlorobenzene	**<87.9**	ug/kg	778	87.9	4	02/28/23 12:55	03/01/23 14:50	120-82-1	
2,4,5-Trichlorophenol	**<137**	ug/kg	778	137	4	02/28/23 12:55	03/01/23 14:50	95-95-4	
2,4,6-Trichlorophenol	**<119**	ug/kg	778	119	4	02/28/23 12:55	03/01/23 14:50	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	69	%	10-125		4	02/28/23 12:55	03/01/23 14:50	4165-60-0	
2-Fluorobiphenyl (S)	67	%	12-118		4	02/28/23 12:55	03/01/23 14:50	321-60-8	
Terphenyl-d14 (S)	83	%	10-124		4	02/28/23 12:55	03/01/23 14:50	1718-51-0	
Phenol-d6 (S)	59	%	10-125		4	02/28/23 12:55	03/01/23 14:50	13127-88-3	
2-Fluorophenol (S)	58	%	10-130		4	02/28/23 12:55	03/01/23 14:50	367-12-4	
2,4,6-Tribromophenol (S)	61	%	10-144		4	02/28/23 12:55	03/01/23 14:50	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1A **Lab ID: 40258659001** Collected: 02/24/23 08:30 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<15.8**	ug/kg	26.6	15.8	1	02/27/23 07:30	02/27/23 13:13	71-43-2	
Bromobenzene	**<26.0**	ug/kg	66.5	26.0	1	02/27/23 07:30	02/27/23 13:13	108-86-1	
Bromochloromethane	**<18.2**	ug/kg	66.5	18.2	1	02/27/23 07:30	02/27/23 13:13	74-97-5	
Bromodichloromethane	**<15.8**	ug/kg	66.5	15.8	1	02/27/23 07:30	02/27/23 13:13	75-27-4	
Bromoform	**<293**	ug/kg	333	293	1	02/27/23 07:30	02/27/23 13:13	75-25-2	
Bromomethane	**<93.3**	ug/kg	333	93.3	1	02/27/23 07:30	02/27/23 13:13	74-83-9	
n-Butylbenzene	**<30.5**	ug/kg	66.5	30.5	1	02/27/23 07:30	02/27/23 13:13	104-51-8	
sec-Butylbenzene	**<16.2**	ug/kg	66.5	16.2	1	02/27/23 07:30	02/27/23 13:13	135-98-8	
tert-Butylbenzene	**<20.9**	ug/kg	66.5	20.9	1	02/27/23 07:30	02/27/23 13:13	98-06-6	
Carbon tetrachloride	**<14.6**	ug/kg	66.5	14.6	1	02/27/23 07:30	02/27/23 13:13	56-23-5	
Chlorobenzene	**<8.0**	ug/kg	66.5	8.0	1	02/27/23 07:30	02/27/23 13:13	108-90-7	
Chloroethane	**<28.1**	ug/kg	333	28.1	1	02/27/23 07:30	02/27/23 13:13	75-00-3	
Chloroform	**<47.6**	ug/kg	333	47.6	1	02/27/23 07:30	02/27/23 13:13	67-66-3	
Chloromethane	**<25.3**	ug/kg	66.5	25.3	1	02/27/23 07:30	02/27/23 13:13	74-87-3	
2-Chlorotoluene	**<21.6**	ug/kg	66.5	21.6	1	02/27/23 07:30	02/27/23 13:13	95-49-8	
4-Chlorotoluene	**<25.3**	ug/kg	66.5	25.3	1	02/27/23 07:30	02/27/23 13:13	106-43-4	
1,2-Dibromo-3-chloropropane	**<51.6**	ug/kg	333	51.6	1	02/27/23 07:30	02/27/23 13:13	96-12-8	
Dibromochloromethane	**<227**	ug/kg	333	227	1	02/27/23 07:30	02/27/23 13:13	124-48-1	
1,2-Dibromoethane (EDB)	**<18.2**	ug/kg	66.5	18.2	1	02/27/23 07:30	02/27/23 13:13	106-93-4	
Dibromomethane	**<19.7**	ug/kg	66.5	19.7	1	02/27/23 07:30	02/27/23 13:13	74-95-3	
1,2-Dichlorobenzene	**<20.6**	ug/kg	66.5	20.6	1	02/27/23 07:30	02/27/23 13:13	95-50-1	
1,3-Dichlorobenzene	**<18.2**	ug/kg	66.5	18.2	1	02/27/23 07:30	02/27/23 13:13	541-73-1	
1,4-Dichlorobenzene	**<18.2**	ug/kg	66.5	18.2	1	02/27/23 07:30	02/27/23 13:13	106-46-7	
Dichlorodifluoromethane	**<28.6**	ug/kg	66.5	28.6	1	02/27/23 07:30	02/27/23 13:13	75-71-8	
1,1-Dichloroethane	**<17.0**	ug/kg	66.5	17.0	1	02/27/23 07:30	02/27/23 13:13	75-34-3	
1,2-Dichloroethane	**<15.3**	ug/kg	66.5	15.3	1	02/27/23 07:30	02/27/23 13:13	107-06-2	
1,1-Dichloroethene	**<22.1**	ug/kg	66.5	22.1	1	02/27/23 07:30	02/27/23 13:13	75-35-4	
cis-1,2-Dichloroethene	**<14.2**	ug/kg	66.5	14.2	1	02/27/23 07:30	02/27/23 13:13	156-59-2	
trans-1,2-Dichloroethene	**<14.4**	ug/kg	66.5	14.4	1	02/27/23 07:30	02/27/23 13:13	156-60-5	
1,2-Dichloropropane	**<15.8**	ug/kg	66.5	15.8	1	02/27/23 07:30	02/27/23 13:13	78-87-5	
1,3-Dichloropropane	**<14.5**	ug/kg	66.5	14.5	1	02/27/23 07:30	02/27/23 13:13	142-28-9	
2,2-Dichloropropane	**<18.0**	ug/kg	66.5	18.0	1	02/27/23 07:30	02/27/23 13:13	594-20-7	
1,1-Dichloropropene	**<21.6**	ug/kg	66.5	21.6	1	02/27/23 07:30	02/27/23 13:13	563-58-6	
cis-1,3-Dichloropropene	**<43.9**	ug/kg	333	43.9	1	02/27/23 07:30	02/27/23 13:13	10061-01-5	
trans-1,3-Dichloropropene	**<190**	ug/kg	333	190	1	02/27/23 07:30	02/27/23 13:13	10061-02-6	
Diisopropyl ether	**<16.5**	ug/kg	66.5	16.5	1	02/27/23 07:30	02/27/23 13:13	108-20-3	
Ethylbenzene	**<15.8**	ug/kg	66.5	15.8	1	02/27/23 07:30	02/27/23 13:13	100-41-4	
Hexachloro-1,3-butadiene	**<132**	ug/kg	333	132	1	02/27/23 07:30	02/27/23 13:13	87-68-3	
Isopropylbenzene (Cumene)	**<18.0**	ug/kg	66.5	18.0	1	02/27/23 07:30	02/27/23 13:13	98-82-8	
p-Isopropyltoluene	**<20.2**	ug/kg	66.5	20.2	1	02/27/23 07:30	02/27/23 13:13	99-87-6	
Methylene Chloride	**<18.5**	ug/kg	66.5	18.5	1	02/27/23 07:30	02/27/23 13:13	75-09-2	
Methyl-tert-butyl ether	**<19.6**	ug/kg	66.5	19.6	1	02/27/23 07:30	02/27/23 13:13	1634-04-4	
Naphthalene	**<20.8**	ug/kg	333	20.8	1	02/27/23 07:30	02/27/23 13:13	91-20-3	
n-Propylbenzene	**<16.0**	ug/kg	66.5	16.0	1	02/27/23 07:30	02/27/23 13:13	103-65-1	

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ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1A **Lab ID: 40258659001** Collected: 02/24/23 08:30 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<17.0**	ug/kg	66.5	17.0	1	02/27/23 07:30	02/27/23 13:13	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.0**	ug/kg	66.5	16.0	1	02/27/23 07:30	02/27/23 13:13	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.1**	ug/kg	66.5	24.1	1	02/27/23 07:30	02/27/23 13:13	79-34-5	
Tetrachloroethene	**<25.8**	ug/kg	66.5	25.8	1	02/27/23 07:30	02/27/23 13:13	127-18-4	
Toluene	**<16.8**	ug/kg	66.5	16.8	1	02/27/23 07:30	02/27/23 13:13	108-88-3	
1,2,3-Trichlorobenzene	**<74.1**	ug/kg	333	74.1	1	02/27/23 07:30	02/27/23 13:13	87-61-6	
1,2,4-Trichlorobenzene	**<54.8**	ug/kg	333	54.8	1	02/27/23 07:30	02/27/23 13:13	120-82-1	
1,1,1-Trichloroethane	**<17.0**	ug/kg	66.5	17.0	1	02/27/23 07:30	02/27/23 13:13	71-55-6	
1,1,2-Trichloroethane	**<24.2**	ug/kg	66.5	24.2	1	02/27/23 07:30	02/27/23 13:13	79-00-5	
Trichloroethene	**<24.9**	ug/kg	66.5	24.9	1	02/27/23 07:30	02/27/23 13:13	79-01-6	
Trichlorofluoromethane	**<19.3**	ug/kg	66.5	19.3	1	02/27/23 07:30	02/27/23 13:13	75-69-4	
1,2,3-Trichloropropane	**<32.3**	ug/kg	66.5	32.3	1	02/27/23 07:30	02/27/23 13:13	96-18-4	
1,2,4-Trimethylbenzene	**<19.8**	ug/kg	66.5	19.8	1	02/27/23 07:30	02/27/23 13:13	95-63-6	
1,3,5-Trimethylbenzene	**<21.4**	ug/kg	66.5	21.4	1	02/27/23 07:30	02/27/23 13:13	108-67-8	
Vinyl chloride	**<13.4**	ug/kg	66.5	13.4	1	02/27/23 07:30	02/27/23 13:13	75-01-4	
Xylene (Total)	**<48.0**	ug/kg	200	48.0	1	02/27/23 07:30	02/27/23 13:13	1330-20-7	
Surrogates									
Toluene-d8 (S)	127	%	69-153		1	02/27/23 07:30	02/27/23 13:13	2037-26-5	
4-Bromofluorobenzene (S)	134	%	68-156		1	02/27/23 07:30	02/27/23 13:13	460-00-4	
1,2-Dichlorobenzene-d4 (S)	132	%	71-161		1	02/27/23 07:30	02/27/23 13:13	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**14.2**	%	0.10	0.10	1		02/27/23 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1B **Lab ID: 40258659002** Collected: 02/24/23 08:35 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**5.1**	mg/kg	2.7	1.6	1	03/01/23 06:06	03/01/23 15:00	7440-38-2	
Barium	**77.1**	mg/kg	0.54	0.16	1	03/01/23 06:06	03/01/23 15:00	7440-39-3	
Cadmium	**0.59**	mg/kg	0.54	0.14	1	03/01/23 06:06	03/01/23 15:00	7440-43-9	
Chromium	**26.8**	mg/kg	1.1	0.30	1	03/01/23 06:06	03/01/23 15:00	7440-47-3	
Lead	**38.3**	mg/kg	2.1	0.64	1	03/01/23 06:06	03/01/23 15:00	7439-92-1	
Selenium	**<1.4**	mg/kg	4.3	1.4	1	03/01/23 06:06	03/01/23 15:00	7782-49-2	
Silver	**<0.33**	mg/kg	1.1	0.33	1	03/01/23 06:06	03/01/23 15:00	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.12**	mg/kg	0.038	0.011	1	03/08/23 08:45	03/09/23 10:10	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<277**	ug/kg	783	277	4	02/28/23 12:55	03/01/23 14:28	83-32-9	
Acenaphthylene	**<279**	ug/kg	783	279	4	02/28/23 12:55	03/01/23 14:28	208-96-8	
Anthracene	**<125**	ug/kg	783	125	4	02/28/23 12:55	03/01/23 14:28	120-12-7	
Benzo(a)anthracene	**432J**	ug/kg	783	121	4	02/28/23 12:55	03/01/23 14:28	56-55-3	
Benzo(a)pyrene	**346J**	ug/kg	783	118	4	02/28/23 12:55	03/01/23 14:28	50-32-8	
Benzo(b)fluoranthene	**554J**	ug/kg	783	134	4	02/28/23 12:55	03/01/23 14:28	205-99-2	M1
Benzo(g,h,i)perylene	**300J**	ug/kg	783	205	4	02/28/23 12:55	03/01/23 14:28	191-24-2	
Benzo(k)fluoranthene	**240J**	ug/kg	783	187	4	02/28/23 12:55	03/01/23 14:28	207-08-9	
4-Bromophenylphenyl ether	**<164**	ug/kg	783	164	4	02/28/23 12:55	03/01/23 14:28	101-55-3	
Butylbenzylphthalate	**<326**	ug/kg	783	326	4	02/28/23 12:55	03/01/23 14:28	85-68-7	CH
Carbazole	**<123**	ug/kg	783	123	4	02/28/23 12:55	03/01/23 14:28	86-74-8	
4-Chloro-3-methylphenol	**<243**	ug/kg	783	243	4	02/28/23 12:55	03/01/23 14:28	59-50-7	
4-Chloroaniline	**<129**	ug/kg	783	129	4	02/28/23 12:55	03/01/23 14:28	106-47-8	
bis(2-Chloroethoxy)methane	**<211**	ug/kg	783	211	4	02/28/23 12:55	03/01/23 14:28	111-91-1	
bis(2-Chloroethyl) ether	**<244**	ug/kg	783	244	4	02/28/23 12:55	03/01/23 14:28	111-44-4	M1
2-Chloronaphthalene	**<100**	ug/kg	783	100	4	02/28/23 12:55	03/01/23 14:28	91-58-7	
2-Chlorophenol	**<195**	ug/kg	783	195	4	02/28/23 12:55	03/01/23 14:28	95-57-8	
4-Chlorophenylphenyl ether	**<146**	ug/kg	783	146	4	02/28/23 12:55	03/01/23 14:28	7005-72-3	
Chrysene	**575J**	ug/kg	783	117	4	02/28/23 12:55	03/01/23 14:28	218-01-9	
Dibenz(a,h)anthracene	**<213**	ug/kg	783	213	4	02/28/23 12:55	03/01/23 14:28	53-70-3	
Dibenzofuran	**<94.7**	ug/kg	783	94.7	4	02/28/23 12:55	03/01/23 14:28	132-64-9	
1,2-Dichlorobenzene	**<246**	ug/kg	783	246	4	02/28/23 12:55	03/01/23 14:28	95-50-1	
1,3-Dichlorobenzene	**<108**	ug/kg	783	108	4	02/28/23 12:55	03/01/23 14:28	541-73-1	
1,4-Dichlorobenzene	**<109**	ug/kg	783	109	4	02/28/23 12:55	03/01/23 14:28	106-46-7	
3,3'-Dichlorobenzidine	**<212**	ug/kg	783	212	4	02/28/23 12:55	03/01/23 14:28	91-94-1	
2,4-Dichlorophenol	**<209**	ug/kg	783	209	4	02/28/23 12:55	03/01/23 14:28	120-83-2	
Diethylphthalate	**<130**	ug/kg	783	130	4	02/28/23 12:55	03/01/23 14:28	84-66-2	
2,4-Dimethylphenol	**<155**	ug/kg	783	155	4	02/28/23 12:55	03/01/23 14:28	105-67-9	
Dimethylphthalate	**<102**	ug/kg	783	102	4	02/28/23 12:55	03/01/23 14:28	131-11-3	
Di-n-butylphthalate	**<117**	ug/kg	783	117	4	02/28/23 12:55	03/01/23 14:28	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1B **Lab ID: 40258659002** Collected: 02/24/23 08:35 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<241**	ug/kg	783	241	4	02/28/23 12:55	03/01/23 14:28	534-52-1	
2,4-Dinitrophenol	**<615**	ug/kg	1550	615	4	02/28/23 12:55	03/01/23 14:28	51-28-5	M1
2,4-Dinitrotoluene	**<112**	ug/kg	783	112	4	02/28/23 12:55	03/01/23 14:28	121-14-2	
2,6-Dinitrotoluene	**<149**	ug/kg	783	149	4	02/28/23 12:55	03/01/23 14:28	606-20-2	
Di-n-octylphthalate	**<176**	ug/kg	783	176	4	02/28/23 12:55	03/01/23 14:28	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<267**	ug/kg	783	267	4	02/28/23 12:55	03/01/23 14:28	117-81-7	CH
Fluoranthene	**1060**	ug/kg	783	111	4	02/28/23 12:55	03/01/23 14:28	206-44-0	M1
Fluorene	**<91.5**	ug/kg	783	91.5	4	02/28/23 12:55	03/01/23 14:28	86-73-7	
Hexachloro-1,3-butadiene	**<199**	ug/kg	783	199	4	02/28/23 12:55	03/01/23 14:28	87-68-3	
Hexachlorobenzene	**<132**	ug/kg	783	132	4	02/28/23 12:55	03/01/23 14:28	118-74-1	
Hexachlorocyclopentadiene	**<185**	ug/kg	783	185	4	02/28/23 12:55	03/01/23 14:28	77-47-4	
Hexachloroethane	**<125**	ug/kg	783	125	4	02/28/23 12:55	03/01/23 14:28	67-72-1	
Indeno(1,2,3-cd)pyrene	**269J**	ug/kg	783	169	4	02/28/23 12:55	03/01/23 14:28	193-39-5	B
Isophorone	**<120**	ug/kg	783	120	4	02/28/23 12:55	03/01/23 14:28	78-59-1	
2-Methylnaphthalene	**<203**	ug/kg	783	203	4	02/28/23 12:55	03/01/23 14:28	91-57-6	
2-Methylphenol(o-Cresol)	**<142**	ug/kg	783	142	4	02/28/23 12:55	03/01/23 14:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<143**	ug/kg	783	143	4	02/28/23 12:55	03/01/23 14:28		
Naphthalene	**<274**	ug/kg	783	274	4	02/28/23 12:55	03/01/23 14:28	91-20-3	
2-Nitroaniline	**<223**	ug/kg	783	223	4	02/28/23 12:55	03/01/23 14:28	88-74-4	
3-Nitroaniline	**<133**	ug/kg	783	133	4	02/28/23 12:55	03/01/23 14:28	99-09-2	
4-Nitroaniline	**<325**	ug/kg	783	325	4	02/28/23 12:55	03/01/23 14:28	100-01-6	
Nitrobenzene	**<159**	ug/kg	783	159	4	02/28/23 12:55	03/01/23 14:28	98-95-3	
2-Nitrophenol	**<247**	ug/kg	783	247	4	02/28/23 12:55	03/01/23 14:28	88-75-5	
4-Nitrophenol	**<197**	ug/kg	783	197	4	02/28/23 12:55	03/01/23 14:28	100-02-7	M1
N-Nitroso-di-n-propylamine	**<124**	ug/kg	783	124	4	02/28/23 12:55	03/01/23 14:28	621-64-7	
N-Nitrosodiphenylamine	**<206**	ug/kg	783	206	4	02/28/23 12:55	03/01/23 14:28	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<202**	ug/kg	783	202	4	02/28/23 12:55	03/01/23 14:28	108-60-1	
Pentachlorophenol	**<172**	ug/kg	783	172	4	02/28/23 12:55	03/01/23 14:28	87-86-5	
Phenanthrene	**543J**	ug/kg	783	100	4	02/28/23 12:55	03/01/23 14:28	85-01-8	
Phenol	**<186**	ug/kg	783	186	4	02/28/23 12:55	03/01/23 14:28	108-95-2	D3
Pyrene	**924**	ug/kg	783	173	4	02/28/23 12:55	03/01/23 14:28	129-00-0	
1,2,4-Trichlorobenzene	**<88.5**	ug/kg	783	88.5	4	02/28/23 12:55	03/01/23 14:28	120-82-1	
2,4,5-Trichlorophenol	**<138**	ug/kg	783	138	4	02/28/23 12:55	03/01/23 14:28	95-95-4	
2,4,6-Trichlorophenol	**<119**	ug/kg	783	119	4	02/28/23 12:55	03/01/23 14:28	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	60	%	10-125		4	02/28/23 12:55	03/01/23 14:28	4165-60-0	
2-Fluorobiphenyl (S)	64	%	12-118		4	02/28/23 12:55	03/01/23 14:28	321-60-8	
Terphenyl-d14 (S)	77	%	10-124		4	02/28/23 12:55	03/01/23 14:28	1718-51-0	
Phenol-d6 (S)	56	%	10-125		4	02/28/23 12:55	03/01/23 14:28	13127-88-3	
2-Fluorophenol (S)	47	%	10-130		4	02/28/23 12:55	03/01/23 14:28	367-12-4	
2,4,6-Tribromophenol (S)	52	%	10-144		4	02/28/23 12:55	03/01/23 14:28	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1B **Lab ID: 40258659002** Collected: 02/24/23 08:35 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<16.0**	ug/kg	26.9	16.0	1	02/27/23 07:30	02/27/23 13:33	71-43-2	
Bromobenzene	**<26.2**	ug/kg	67.3	26.2	1	02/27/23 07:30	02/27/23 13:33	108-86-1	
Bromochloromethane	**<18.4**	ug/kg	67.3	18.4	1	02/27/23 07:30	02/27/23 13:33	74-97-5	
Bromodichloromethane	**<16.0**	ug/kg	67.3	16.0	1	02/27/23 07:30	02/27/23 13:33	75-27-4	
Bromoform	**<296**	ug/kg	336	296	1	02/27/23 07:30	02/27/23 13:33	75-25-2	
Bromomethane	**<94.3**	ug/kg	336	94.3	1	02/27/23 07:30	02/27/23 13:33	74-83-9	
n-Butylbenzene	**<30.8**	ug/kg	67.3	30.8	1	02/27/23 07:30	02/27/23 13:33	104-51-8	
sec-Butylbenzene	**<16.4**	ug/kg	67.3	16.4	1	02/27/23 07:30	02/27/23 13:33	135-98-8	
tert-Butylbenzene	**<21.1**	ug/kg	67.3	21.1	1	02/27/23 07:30	02/27/23 13:33	98-06-6	
Carbon tetrachloride	**<14.8**	ug/kg	67.3	14.8	1	02/27/23 07:30	02/27/23 13:33	56-23-5	
Chlorobenzene	**<8.1**	ug/kg	67.3	8.1	1	02/27/23 07:30	02/27/23 13:33	108-90-7	
Chloroethane	**<28.4**	ug/kg	336	28.4	1	02/27/23 07:30	02/27/23 13:33	75-00-3	
Chloroform	**<48.2**	ug/kg	336	48.2	1	02/27/23 07:30	02/27/23 13:33	67-66-3	
Chloromethane	**<25.6**	ug/kg	67.3	25.6	1	02/27/23 07:30	02/27/23 13:33	74-87-3	
2-Chlorotoluene	**<21.8**	ug/kg	67.3	21.8	1	02/27/23 07:30	02/27/23 13:33	95-49-8	
4-Chlorotoluene	**<25.6**	ug/kg	67.3	25.6	1	02/27/23 07:30	02/27/23 13:33	106-43-4	
1,2-Dibromo-3-chloropropane	**<52.2**	ug/kg	336	52.2	1	02/27/23 07:30	02/27/23 13:33	96-12-8	
Dibromochloromethane	**<230**	ug/kg	336	230	1	02/27/23 07:30	02/27/23 13:33	124-48-1	
1,2-Dibromoethane (EDB)	**<18.4**	ug/kg	67.3	18.4	1	02/27/23 07:30	02/27/23 13:33	106-93-4	
Dibromomethane	**<19.9**	ug/kg	67.3	19.9	1	02/27/23 07:30	02/27/23 13:33	74-95-3	
1,2-Dichlorobenzene	**<20.9**	ug/kg	67.3	20.9	1	02/27/23 07:30	02/27/23 13:33	95-50-1	
1,3-Dichlorobenzene	**<18.4**	ug/kg	67.3	18.4	1	02/27/23 07:30	02/27/23 13:33	541-73-1	
1,4-Dichlorobenzene	**<18.4**	ug/kg	67.3	18.4	1	02/27/23 07:30	02/27/23 13:33	106-46-7	
Dichlorodifluoromethane	**<28.9**	ug/kg	67.3	28.9	1	02/27/23 07:30	02/27/23 13:33	75-71-8	
1,1-Dichloroethane	**<17.2**	ug/kg	67.3	17.2	1	02/27/23 07:30	02/27/23 13:33	75-34-3	
1,2-Dichloroethane	**<15.5**	ug/kg	67.3	15.5	1	02/27/23 07:30	02/27/23 13:33	107-06-2	
1,1-Dichloroethene	**<22.3**	ug/kg	67.3	22.3	1	02/27/23 07:30	02/27/23 13:33	75-35-4	
cis-1,2-Dichloroethene	**<14.4**	ug/kg	67.3	14.4	1	02/27/23 07:30	02/27/23 13:33	156-59-2	
trans-1,2-Dichloroethene	**<14.5**	ug/kg	67.3	14.5	1	02/27/23 07:30	02/27/23 13:33	156-60-5	
1,2-Dichloropropane	**<16.0**	ug/kg	67.3	16.0	1	02/27/23 07:30	02/27/23 13:33	78-87-5	
1,3-Dichloropropane	**<14.7**	ug/kg	67.3	14.7	1	02/27/23 07:30	02/27/23 13:33	142-28-9	
2,2-Dichloropropane	**<18.2**	ug/kg	67.3	18.2	1	02/27/23 07:30	02/27/23 13:33	594-20-7	
1,1-Dichloropropene	**<21.8**	ug/kg	67.3	21.8	1	02/27/23 07:30	02/27/23 13:33	563-58-6	
cis-1,3-Dichloropropene	**<44.4**	ug/kg	336	44.4	1	02/27/23 07:30	02/27/23 13:33	10061-01-5	
trans-1,3-Dichloropropene	**<192**	ug/kg	336	192	1	02/27/23 07:30	02/27/23 13:33	10061-02-6	
Diisopropyl ether	**<16.7**	ug/kg	67.3	16.7	1	02/27/23 07:30	02/27/23 13:33	108-20-3	
Ethylbenzene	**<16.0**	ug/kg	67.3	16.0	1	02/27/23 07:30	02/27/23 13:33	100-41-4	
Hexachloro-1,3-butadiene	**<134**	ug/kg	336	134	1	02/27/23 07:30	02/27/23 13:33	87-68-3	
Isopropylbenzene (Cumene)	**<18.2**	ug/kg	67.3	18.2	1	02/27/23 07:30	02/27/23 13:33	98-82-8	
p-Isopropyltoluene	**<20.5**	ug/kg	67.3	20.5	1	02/27/23 07:30	02/27/23 13:33	99-87-6	
Methylene Chloride	**<18.7**	ug/kg	67.3	18.7	1	02/27/23 07:30	02/27/23 13:33	75-09-2	
Methyl-tert-butyl ether	**<19.8**	ug/kg	67.3	19.8	1	02/27/23 07:30	02/27/23 13:33	1634-04-4	
Naphthalene	**<21.0**	ug/kg	336	21.0	1	02/27/23 07:30	02/27/23 13:33	91-20-3	
n-Propylbenzene	**<16.1**	ug/kg	67.3	16.1	1	02/27/23 07:30	02/27/23 13:33	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1B **Lab ID: 40258659002** Collected: 02/24/23 08:35 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<17.2**	ug/kg	67.3	17.2	1	02/27/23 07:30	02/27/23 13:33	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.1**	ug/kg	67.3	16.1	1	02/27/23 07:30	02/27/23 13:33	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.4**	ug/kg	67.3	24.4	1	02/27/23 07:30	02/27/23 13:33	79-34-5	
Tetrachloroethene	**<26.1**	ug/kg	67.3	26.1	1	02/27/23 07:30	02/27/23 13:33	127-18-4	
Toluene	**<17.0**	ug/kg	67.3	17.0	1	02/27/23 07:30	02/27/23 13:33	108-88-3	
1,2,3-Trichlorobenzene	**<74.9**	ug/kg	336	74.9	1	02/27/23 07:30	02/27/23 13:33	87-61-6	
1,2,4-Trichlorobenzene	**<55.4**	ug/kg	336	55.4	1	02/27/23 07:30	02/27/23 13:33	120-82-1	
1,1,1-Trichloroethane	**<17.2**	ug/kg	67.3	17.2	1	02/27/23 07:30	02/27/23 13:33	71-55-6	
1,1,2-Trichloroethane	**<24.5**	ug/kg	67.3	24.5	1	02/27/23 07:30	02/27/23 13:33	79-00-5	
Trichloroethene	**<25.2**	ug/kg	67.3	25.2	1	02/27/23 07:30	02/27/23 13:33	79-01-6	
Trichlorofluoromethane	**<19.5**	ug/kg	67.3	19.5	1	02/27/23 07:30	02/27/23 13:33	75-69-4	
1,2,3-Trichloropropane	**<32.7**	ug/kg	67.3	32.7	1	02/27/23 07:30	02/27/23 13:33	96-18-4	
1,2,4-Trimethylbenzene	**<20.0**	ug/kg	67.3	20.0	1	02/27/23 07:30	02/27/23 13:33	95-63-6	
1,3,5-Trimethylbenzene	**<21.7**	ug/kg	67.3	21.7	1	02/27/23 07:30	02/27/23 13:33	108-67-8	
Vinyl chloride	**<13.6**	ug/kg	67.3	13.6	1	02/27/23 07:30	02/27/23 13:33	75-01-4	
Xylene (Total)	**<48.6**	ug/kg	202	48.6	1	02/27/23 07:30	02/27/23 13:33	1330-20-7	
Surrogates									
Toluene-d8 (S)	125	%	69-153		1	02/27/23 07:30	02/27/23 13:33	2037-26-5	
4-Bromofluorobenzene (S)	226	%	68-156		1	02/27/23 07:30	02/27/23 13:33	460-00-4	S3
1,2-Dichlorobenzene-d4 (S)	163	%	71-161		1	02/27/23 07:30	02/27/23 13:33	2199-69-1	S3
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**14.7**	%	0.10	0.10	1		02/27/23 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1C **Lab ID: 40258659003** Collected: 02/24/23 08:40 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**6.4**	mg/kg	2.8	1.6	1	03/01/23 06:06	03/01/23 15:04	7440-38-2	
Barium	**104**	mg/kg	0.55	0.17	1	03/01/23 06:06	03/01/23 15:04	7440-39-3	
Cadmium	**0.50J**	mg/kg	0.55	0.15	1	03/01/23 06:06	03/01/23 15:04	7440-43-9	
Chromium	**22.5**	mg/kg	1.1	0.31	1	03/01/23 06:06	03/01/23 15:04	7440-47-3	
Lead	**98.2**	mg/kg	2.2	0.66	1	03/01/23 06:06	03/01/23 15:04	7439-92-1	
Selenium	**<1.4**	mg/kg	4.4	1.4	1	03/01/23 06:06	03/01/23 15:04	7782-49-2	
Silver	**<0.34**	mg/kg	1.1	0.34	1	03/01/23 06:06	03/01/23 15:04	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.057**	mg/kg	0.037	0.011	1	03/08/23 08:45	03/09/23 10:13	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<277**	ug/kg	782	277	4	02/28/23 12:55	03/01/23 16:15	83-32-9	
Acenaphthylene	**<279**	ug/kg	782	279	4	02/28/23 12:55	03/01/23 16:15	208-96-8	
Anthracene	**<125**	ug/kg	782	125	4	02/28/23 12:55	03/01/23 16:15	120-12-7	
Benzo(a)anthracene	**362J**	ug/kg	782	121	4	02/28/23 12:55	03/01/23 16:15	56-55-3	
Benzo(a)pyrene	**332J**	ug/kg	782	118	4	02/28/23 12:55	03/01/23 16:15	50-32-8	
Benzo(b)fluoranthene	**483J**	ug/kg	782	134	4	02/28/23 12:55	03/01/23 16:15	205-99-2	
Benzo(g,h,i)perylene	**261J**	ug/kg	782	204	4	02/28/23 12:55	03/01/23 16:15	191-24-2	
Benzo(k)fluoranthene	**288J**	ug/kg	782	187	4	02/28/23 12:55	03/01/23 16:15	207-08-9	
4-Bromophenylphenyl ether	**<164**	ug/kg	782	164	4	02/28/23 12:55	03/01/23 16:15	101-55-3	
Butylbenzylphthalate	**<325**	ug/kg	782	325	4	02/28/23 12:55	03/01/23 16:15	85-68-7	CH
Carbazole	**<122**	ug/kg	782	122	4	02/28/23 12:55	03/01/23 16:15	86-74-8	
4-Chloro-3-methylphenol	**<243**	ug/kg	782	243	4	02/28/23 12:55	03/01/23 16:15	59-50-7	
4-Chloroaniline	**<128**	ug/kg	782	128	4	02/28/23 12:55	03/01/23 16:15	106-47-8	
bis(2-Chloroethoxy)methane	**<210**	ug/kg	782	210	4	02/28/23 12:55	03/01/23 16:15	111-91-1	
bis(2-Chloroethyl) ether	**<244**	ug/kg	782	244	4	02/28/23 12:55	03/01/23 16:15	111-44-4	
2-Chloronaphthalene	**<100**	ug/kg	782	100	4	02/28/23 12:55	03/01/23 16:15	91-58-7	
2-Chlorophenol	**<195**	ug/kg	782	195	4	02/28/23 12:55	03/01/23 16:15	95-57-8	
4-Chlorophenylphenyl ether	**<146**	ug/kg	782	146	4	02/28/23 12:55	03/01/23 16:15	7005-72-3	
Chrysene	**540J**	ug/kg	782	117	4	02/28/23 12:55	03/01/23 16:15	218-01-9	
Dibenz(a,h)anthracene	**<212**	ug/kg	782	212	4	02/28/23 12:55	03/01/23 16:15	53-70-3	
Dibenzofuran	**<94.6**	ug/kg	782	94.6	4	02/28/23 12:55	03/01/23 16:15	132-64-9	
1,2-Dichlorobenzene	**<246**	ug/kg	782	246	4	02/28/23 12:55	03/01/23 16:15	95-50-1	
1,3-Dichlorobenzene	**<108**	ug/kg	782	108	4	02/28/23 12:55	03/01/23 16:15	541-73-1	
1,4-Dichlorobenzene	**<109**	ug/kg	782	109	4	02/28/23 12:55	03/01/23 16:15	106-46-7	
3,3'-Dichlorobenzidine	**<212**	ug/kg	782	212	4	02/28/23 12:55	03/01/23 16:15	91-94-1	
2,4-Dichlorophenol	**<209**	ug/kg	782	209	4	02/28/23 12:55	03/01/23 16:15	120-83-2	
Diethylphthalate	**<130**	ug/kg	782	130	4	02/28/23 12:55	03/01/23 16:15	84-66-2	
2,4-Dimethylphenol	**<155**	ug/kg	782	155	4	02/28/23 12:55	03/01/23 16:15	105-67-9	
Dimethylphthalate	**<102**	ug/kg	782	102	4	02/28/23 12:55	03/01/23 16:15	131-11-3	
Di-n-butylphthalate	**<117**	ug/kg	782	117	4	02/28/23 12:55	03/01/23 16:15	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1C **Lab ID: 40258659003** Collected: 02/24/23 08:40 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<241**	ug/kg	782	241	4	02/28/23 12:55	03/01/23 16:15	534-52-1	
2,4-Dinitrophenol	**<614**	ug/kg	1550	614	4	02/28/23 12:55	03/01/23 16:15	51-28-5	
2,4-Dinitrotoluene	**<112**	ug/kg	782	112	4	02/28/23 12:55	03/01/23 16:15	121-14-2	
2,6-Dinitrotoluene	**<148**	ug/kg	782	148	4	02/28/23 12:55	03/01/23 16:15	606-20-2	
Di-n-octylphthalate	**<176**	ug/kg	782	176	4	02/28/23 12:55	03/01/23 16:15	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<267**	ug/kg	782	267	4	02/28/23 12:55	03/01/23 16:15	117-81-7	CH
Fluoranthene	**839**	ug/kg	782	111	4	02/28/23 12:55	03/01/23 16:15	206-44-0	
Fluorene	**<91.4**	ug/kg	782	91.4	4	02/28/23 12:55	03/01/23 16:15	86-73-7	
Hexachloro-1,3-butadiene	**<199**	ug/kg	782	199	4	02/28/23 12:55	03/01/23 16:15	87-68-3	
Hexachlorobenzene	**<131**	ug/kg	782	131	4	02/28/23 12:55	03/01/23 16:15	118-74-1	
Hexachlorocyclopentadiene	**<185**	ug/kg	782	185	4	02/28/23 12:55	03/01/23 16:15	77-47-4	
Hexachloroethane	**<125**	ug/kg	782	125	4	02/28/23 12:55	03/01/23 16:15	67-72-1	
Indeno(1,2,3-cd)pyrene	**232J**	ug/kg	782	169	4	02/28/23 12:55	03/01/23 16:15	193-39-5	B
Isophorone	**<120**	ug/kg	782	120	4	02/28/23 12:55	03/01/23 16:15	78-59-1	
2-Methylnaphthalene	**<203**	ug/kg	782	203	4	02/28/23 12:55	03/01/23 16:15	91-57-6	
2-Methylphenol(o-Cresol)	**<142**	ug/kg	782	142	4	02/28/23 12:55	03/01/23 16:15	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<143**	ug/kg	782	143	4	02/28/23 12:55	03/01/23 16:15		
Naphthalene	**<273**	ug/kg	782	273	4	02/28/23 12:55	03/01/23 16:15	91-20-3	
2-Nitroaniline	**<223**	ug/kg	782	223	4	02/28/23 12:55	03/01/23 16:15	88-74-4	
3-Nitroaniline	**<133**	ug/kg	782	133	4	02/28/23 12:55	03/01/23 16:15	99-09-2	
4-Nitroaniline	**<324**	ug/kg	782	324	4	02/28/23 12:55	03/01/23 16:15	100-01-6	
Nitrobenzene	**<159**	ug/kg	782	159	4	02/28/23 12:55	03/01/23 16:15	98-95-3	
2-Nitrophenol	**<247**	ug/kg	782	247	4	02/28/23 12:55	03/01/23 16:15	88-75-5	
4-Nitrophenol	**<197**	ug/kg	782	197	4	02/28/23 12:55	03/01/23 16:15	100-02-7	
N-Nitroso-di-n-propylamine	**<124**	ug/kg	782	124	4	02/28/23 12:55	03/01/23 16:15	621-64-7	
N-Nitrosodiphenylamine	**<206**	ug/kg	782	206	4	02/28/23 12:55	03/01/23 16:15	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<202**	ug/kg	782	202	4	02/28/23 12:55	03/01/23 16:15	108-60-1	
Pentachlorophenol	**<172**	ug/kg	782	172	4	02/28/23 12:55	03/01/23 16:15	87-86-5	
Phenanthrene	**348J**	ug/kg	782	100	4	02/28/23 12:55	03/01/23 16:15	85-01-8	
Phenol	**<185**	ug/kg	782	185	4	02/28/23 12:55	03/01/23 16:15	108-95-2	D3
Pyrene	**788**	ug/kg	782	173	4	02/28/23 12:55	03/01/23 16:15	129-00-0	
1,2,4-Trichlorobenzene	**<88.4**	ug/kg	782	88.4	4	02/28/23 12:55	03/01/23 16:15	120-82-1	
2,4,5-Trichlorophenol	**<138**	ug/kg	782	138	4	02/28/23 12:55	03/01/23 16:15	95-95-4	
2,4,6-Trichlorophenol	**<119**	ug/kg	782	119	4	02/28/23 12:55	03/01/23 16:15	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	53	%	10-125		4	02/28/23 12:55	03/01/23 16:15	4165-60-0	
2-Fluorobiphenyl (S)	62	%	12-118		4	02/28/23 12:55	03/01/23 16:15	321-60-8	
Terphenyl-d14 (S)	77	%	10-124		4	02/28/23 12:55	03/01/23 16:15	1718-51-0	
Phenol-d6 (S)	50	%	10-125		4	02/28/23 12:55	03/01/23 16:15	13127-88-3	
2-Fluorophenol (S)	48	%	10-130		4	02/28/23 12:55	03/01/23 16:15	367-12-4	
2,4,6-Tribromophenol (S)	57	%	10-144		4	02/28/23 12:55	03/01/23 16:15	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1C **Lab ID: 40258659003** Collected: 02/24/23 08:40 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<16.0**	ug/kg	26.8	16.0	1	02/27/23 07:30	02/27/23 13:52	71-43-2	
Bromobenzene	**<26.1**	ug/kg	67.0	26.1	1	02/27/23 07:30	02/27/23 13:52	108-86-1	
Bromochloromethane	**<18.4**	ug/kg	67.0	18.4	1	02/27/23 07:30	02/27/23 13:52	74-97-5	
Bromodichloromethane	**<16.0**	ug/kg	67.0	16.0	1	02/27/23 07:30	02/27/23 13:52	75-27-4	
Bromoform	**<295**	ug/kg	335	295	1	02/27/23 07:30	02/27/23 13:52	75-25-2	
Bromomethane	**<94.0**	ug/kg	335	94.0	1	02/27/23 07:30	02/27/23 13:52	74-83-9	
n-Butylbenzene	**<30.7**	ug/kg	67.0	30.7	1	02/27/23 07:30	02/27/23 13:52	104-51-8	
sec-Butylbenzene	**<16.4**	ug/kg	67.0	16.4	1	02/27/23 07:30	02/27/23 13:52	135-98-8	
tert-Butylbenzene	**<21.0**	ug/kg	67.0	21.0	1	02/27/23 07:30	02/27/23 13:52	98-06-6	
Carbon tetrachloride	**<14.7**	ug/kg	67.0	14.7	1	02/27/23 07:30	02/27/23 13:52	56-23-5	
Chlorobenzene	**<8.0**	ug/kg	67.0	8.0	1	02/27/23 07:30	02/27/23 13:52	108-90-7	
Chloroethane	**<28.3**	ug/kg	335	28.3	1	02/27/23 07:30	02/27/23 13:52	75-00-3	
Chloroform	**<48.0**	ug/kg	335	48.0	1	02/27/23 07:30	02/27/23 13:52	67-66-3	
Chloromethane	**<25.5**	ug/kg	67.0	25.5	1	02/27/23 07:30	02/27/23 13:52	74-87-3	
2-Chlorotoluene	**<21.7**	ug/kg	67.0	21.7	1	02/27/23 07:30	02/27/23 13:52	95-49-8	
4-Chlorotoluene	**<25.5**	ug/kg	67.0	25.5	1	02/27/23 07:30	02/27/23 13:52	106-43-4	
1,2-Dibromo-3-chloropropane	**<52.0**	ug/kg	335	52.0	1	02/27/23 07:30	02/27/23 13:52	96-12-8	
Dibromochloromethane	**<229**	ug/kg	335	229	1	02/27/23 07:30	02/27/23 13:52	124-48-1	
1,2-Dibromoethane (EDB)	**<18.4**	ug/kg	67.0	18.4	1	02/27/23 07:30	02/27/23 13:52	106-93-4	
Dibromomethane	**<19.8**	ug/kg	67.0	19.8	1	02/27/23 07:30	02/27/23 13:52	74-95-3	
1,2-Dichlorobenzene	**<20.8**	ug/kg	67.0	20.8	1	02/27/23 07:30	02/27/23 13:52	95-50-1	
1,3-Dichlorobenzene	**<18.4**	ug/kg	67.0	18.4	1	02/27/23 07:30	02/27/23 13:52	541-73-1	
1,4-Dichlorobenzene	**<18.4**	ug/kg	67.0	18.4	1	02/27/23 07:30	02/27/23 13:52	106-46-7	
Dichlorodifluoromethane	**<28.8**	ug/kg	67.0	28.8	1	02/27/23 07:30	02/27/23 13:52	75-71-8	
1,1-Dichloroethane	**<17.2**	ug/kg	67.0	17.2	1	02/27/23 07:30	02/27/23 13:52	75-34-3	
1,2-Dichloroethane	**<15.4**	ug/kg	67.0	15.4	1	02/27/23 07:30	02/27/23 13:52	107-06-2	
1,1-Dichloroethene	**<22.3**	ug/kg	67.0	22.3	1	02/27/23 07:30	02/27/23 13:52	75-35-4	
cis-1,2-Dichloroethene	**<14.3**	ug/kg	67.0	14.3	1	02/27/23 07:30	02/27/23 13:52	156-59-2	
trans-1,2-Dichloroethene	**<14.5**	ug/kg	67.0	14.5	1	02/27/23 07:30	02/27/23 13:52	156-60-5	
1,2-Dichloropropane	**<16.0**	ug/kg	67.0	16.0	1	02/27/23 07:30	02/27/23 13:52	78-87-5	
1,3-Dichloropropane	**<14.6**	ug/kg	67.0	14.6	1	02/27/23 07:30	02/27/23 13:52	142-28-9	
2,2-Dichloropropane	**<18.1**	ug/kg	67.0	18.1	1	02/27/23 07:30	02/27/23 13:52	594-20-7	
1,1-Dichloropropene	**<21.7**	ug/kg	67.0	21.7	1	02/27/23 07:30	02/27/23 13:52	563-58-6	
cis-1,3-Dichloropropene	**<44.2**	ug/kg	335	44.2	1	02/27/23 07:30	02/27/23 13:52	10061-01-5	
trans-1,3-Dichloropropene	**<192**	ug/kg	335	192	1	02/27/23 07:30	02/27/23 13:52	10061-02-6	
Diisopropyl ether	**<16.6**	ug/kg	67.0	16.6	1	02/27/23 07:30	02/27/23 13:52	108-20-3	
Ethylbenzene	**<16.0**	ug/kg	67.0	16.0	1	02/27/23 07:30	02/27/23 13:52	100-41-4	
Hexachloro-1,3-butadiene	**<133**	ug/kg	335	133	1	02/27/23 07:30	02/27/23 13:52	87-68-3	
Isopropylbenzene (Cumene)	**<18.1**	ug/kg	67.0	18.1	1	02/27/23 07:30	02/27/23 13:52	98-82-8	
p-Isopropyltoluene	**<20.4**	ug/kg	67.0	20.4	1	02/27/23 07:30	02/27/23 13:52	99-87-6	
Methylene Chloride	**<18.6**	ug/kg	67.0	18.6	1	02/27/23 07:30	02/27/23 13:52	75-09-2	
Methyl-tert-butyl ether	**<19.7**	ug/kg	67.0	19.7	1	02/27/23 07:30	02/27/23 13:52	1634-04-4	
Naphthalene	**<20.9**	ug/kg	335	20.9	1	02/27/23 07:30	02/27/23 13:52	91-20-3	
n-Propylbenzene	**<16.1**	ug/kg	67.0	16.1	1	02/27/23 07:30	02/27/23 13:52	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1C **Lab ID: 40258659003** Collected: 02/24/23 08:40 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<17.2**	ug/kg	67.0	17.2	1	02/27/23 07:30	02/27/23 13:52	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.1**	ug/kg	67.0	16.1	1	02/27/23 07:30	02/27/23 13:52	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.3**	ug/kg	67.0	24.3	1	02/27/23 07:30	02/27/23 13:52	79-34-5	
Tetrachloroethene	**<26.0**	ug/kg	67.0	26.0	1	02/27/23 07:30	02/27/23 13:52	127-18-4	
Toluene	**<16.9**	ug/kg	67.0	16.9	1	02/27/23 07:30	02/27/23 13:52	108-88-3	
1,2,3-Trichlorobenzene	**<74.7**	ug/kg	335	74.7	1	02/27/23 07:30	02/27/23 13:52	87-61-6	
1,2,4-Trichlorobenzene	**<55.2**	ug/kg	335	55.2	1	02/27/23 07:30	02/27/23 13:52	120-82-1	
1,1,1-Trichloroethane	**<17.2**	ug/kg	67.0	17.2	1	02/27/23 07:30	02/27/23 13:52	71-55-6	
1,1,2-Trichloroethane	**<24.4**	ug/kg	67.0	24.4	1	02/27/23 07:30	02/27/23 13:52	79-00-5	
Trichloroethene	**<25.1**	ug/kg	67.0	25.1	1	02/27/23 07:30	02/27/23 13:52	79-01-6	
Trichlorofluoromethane	**<19.4**	ug/kg	67.0	19.4	1	02/27/23 07:30	02/27/23 13:52	75-69-4	
1,2,3-Trichloropropane	**<32.6**	ug/kg	67.0	32.6	1	02/27/23 07:30	02/27/23 13:52	96-18-4	
1,2,4-Trimethylbenzene	**<20.0**	ug/kg	67.0	20.0	1	02/27/23 07:30	02/27/23 13:52	95-63-6	
1,3,5-Trimethylbenzene	**<21.6**	ug/kg	67.0	21.6	1	02/27/23 07:30	02/27/23 13:52	108-67-8	
Vinyl chloride	**<13.5**	ug/kg	67.0	13.5	1	02/27/23 07:30	02/27/23 13:52	75-01-4	
Xylene (Total)	**<48.4**	ug/kg	201	48.4	1	02/27/23 07:30	02/27/23 13:52	1330-20-7	
Surrogates									
Toluene-d8 (S)	103	%	69-153		1	02/27/23 07:30	02/27/23 13:52	2037-26-5	
4-Bromofluorobenzene (S)	203	%	68-156		1	02/27/23 07:30	02/27/23 13:52	460-00-4	S3
1,2-Dichlorobenzene-d4 (S)	155	%	71-161		1	02/27/23 07:30	02/27/23 13:52	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**14.5**	%	0.10	0.10	1		02/27/23 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1D **Lab ID: 40258659004** Collected: 02/24/23 08:45 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**3.3**	mg/kg	3.1	1.8	1	03/01/23 06:06	03/01/23 15:06	7440-38-2	
Barium	**104**	mg/kg	0.61	0.18	1	03/01/23 06:06	03/01/23 15:06	7440-39-3	
Cadmium	**0.67**	mg/kg	0.61	0.16	1	03/01/23 06:06	03/01/23 15:06	7440-43-9	
Chromium	**26.0**	mg/kg	1.2	0.34	1	03/01/23 06:06	03/01/23 15:06	7440-47-3	
Lead	**14.3**	mg/kg	2.5	0.74	1	03/01/23 06:06	03/01/23 15:06	7439-92-1	
Selenium	**<1.6**	mg/kg	4.9	1.6	1	03/01/23 06:06	03/01/23 15:06	7782-49-2	
Silver	**<0.38**	mg/kg	1.2	0.38	1	03/01/23 06:06	03/01/23 15:06	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.053**	mg/kg	0.039	0.011	1	03/08/23 08:45	03/09/23 10:15	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<294**	ug/kg	829	294	4	02/28/23 12:55	03/01/23 13:46	83-32-9	
Acenaphthylene	**<295**	ug/kg	829	295	4	02/28/23 12:55	03/01/23 13:46	208-96-8	
Anthracene	**<132**	ug/kg	829	132	4	02/28/23 12:55	03/01/23 13:46	120-12-7	
Benzo(a)anthracene	**<128**	ug/kg	829	128	4	02/28/23 12:55	03/01/23 13:46	56-55-3	
Benzo(a)pyrene	**<125**	ug/kg	829	125	4	02/28/23 12:55	03/01/23 13:46	50-32-8	
Benzo(b)fluoranthene	**<142**	ug/kg	829	142	4	02/28/23 12:55	03/01/23 13:46	205-99-2	
Benzo(g,h,i)perylene	**<217**	ug/kg	829	217	4	02/28/23 12:55	03/01/23 13:46	191-24-2	
Benzo(k)fluoranthene	**<198**	ug/kg	829	198	4	02/28/23 12:55	03/01/23 13:46	207-08-9	
4-Bromophenylphenyl ether	**<173**	ug/kg	829	173	4	02/28/23 12:55	03/01/23 13:46	101-55-3	
Butylbenzylphthalate	**<345**	ug/kg	829	345	4	02/28/23 12:55	03/01/23 13:46	85-68-7	CH
Carbazole	**<130**	ug/kg	829	130	4	02/28/23 12:55	03/01/23 13:46	86-74-8	
4-Chloro-3-methylphenol	**<258**	ug/kg	829	258	4	02/28/23 12:55	03/01/23 13:46	59-50-7	
4-Chloroaniline	**<136**	ug/kg	829	136	4	02/28/23 12:55	03/01/23 13:46	106-47-8	
bis(2-Chloroethoxy)methane	**<223**	ug/kg	829	223	4	02/28/23 12:55	03/01/23 13:46	111-91-1	
bis(2-Chloroethyl) ether	**<259**	ug/kg	829	259	4	02/28/23 12:55	03/01/23 13:46	111-44-4	
2-Chloronaphthalene	**<106**	ug/kg	829	106	4	02/28/23 12:55	03/01/23 13:46	91-58-7	
2-Chlorophenol	**<207**	ug/kg	829	207	4	02/28/23 12:55	03/01/23 13:46	95-57-8	
4-Chlorophenylphenyl ether	**<154**	ug/kg	829	154	4	02/28/23 12:55	03/01/23 13:46	7005-72-3	
Chrysene	**<124**	ug/kg	829	124	4	02/28/23 12:55	03/01/23 13:46	218-01-9	
Dibenz(a,h)anthracene	**<225**	ug/kg	829	225	4	02/28/23 12:55	03/01/23 13:46	53-70-3	
Dibenzofuran	**<100**	ug/kg	829	100	4	02/28/23 12:55	03/01/23 13:46	132-64-9	
1,2-Dichlorobenzene	**<260**	ug/kg	829	260	4	02/28/23 12:55	03/01/23 13:46	95-50-1	
1,3-Dichlorobenzene	**<115**	ug/kg	829	115	4	02/28/23 12:55	03/01/23 13:46	541-73-1	
1,4-Dichlorobenzene	**<115**	ug/kg	829	115	4	02/28/23 12:55	03/01/23 13:46	106-46-7	
3,3'-Dichlorobenzidine	**<225**	ug/kg	829	225	4	02/28/23 12:55	03/01/23 13:46	91-94-1	
2,4-Dichlorophenol	**<221**	ug/kg	829	221	4	02/28/23 12:55	03/01/23 13:46	120-83-2	
Diethylphthalate	**<137**	ug/kg	829	137	4	02/28/23 12:55	03/01/23 13:46	84-66-2	
2,4-Dimethylphenol	**<164**	ug/kg	829	164	4	02/28/23 12:55	03/01/23 13:46	105-67-9	
Dimethylphthalate	**<108**	ug/kg	829	108	4	02/28/23 12:55	03/01/23 13:46	131-11-3	
Di-n-butylphthalate	**<124**	ug/kg	829	124	4	02/28/23 12:55	03/01/23 13:46	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1D **Lab ID: 40258659004** Collected: 02/24/23 08:45 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<255**	ug/kg	829	255	4	02/28/23 12:55	03/01/23 13:46	534-52-1	
2,4-Dinitrophenol	**<651**	ug/kg	1640	651	4	02/28/23 12:55	03/01/23 13:46	51-28-5	
2,4-Dinitrotoluene	**<118**	ug/kg	829	118	4	02/28/23 12:55	03/01/23 13:46	121-14-2	
2,6-Dinitrotoluene	**<157**	ug/kg	829	157	4	02/28/23 12:55	03/01/23 13:46	606-20-2	
Di-n-octylphthalate	**<186**	ug/kg	829	186	4	02/28/23 12:55	03/01/23 13:46	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<283**	ug/kg	829	283	4	02/28/23 12:55	03/01/23 13:46	117-81-7	CH
Fluoranthene	**<117**	ug/kg	829	117	4	02/28/23 12:55	03/01/23 13:46	206-44-0	
Fluorene	**<96.8**	ug/kg	829	96.8	4	02/28/23 12:55	03/01/23 13:46	86-73-7	
Hexachloro-1,3-butadiene	**<211**	ug/kg	829	211	4	02/28/23 12:55	03/01/23 13:46	87-68-3	
Hexachlorobenzene	**<139**	ug/kg	829	139	4	02/28/23 12:55	03/01/23 13:46	118-74-1	
Hexachlorocyclopentadiene	**<196**	ug/kg	829	196	4	02/28/23 12:55	03/01/23 13:46	77-47-4	
Hexachloroethane	**<133**	ug/kg	829	133	4	02/28/23 12:55	03/01/23 13:46	67-72-1	
Indeno(1,2,3-cd)pyrene	**<179**	ug/kg	829	179	4	02/28/23 12:55	03/01/23 13:46	193-39-5	
Isophorone	**<127**	ug/kg	829	127	4	02/28/23 12:55	03/01/23 13:46	78-59-1	
2-Methylnaphthalene	**<215**	ug/kg	829	215	4	02/28/23 12:55	03/01/23 13:46	91-57-6	
2-Methylphenol(o-Cresol)	**<150**	ug/kg	829	150	4	02/28/23 12:55	03/01/23 13:46	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<152**	ug/kg	829	152	4	02/28/23 12:55	03/01/23 13:46		
Naphthalene	**<290**	ug/kg	829	290	4	02/28/23 12:55	03/01/23 13:46	91-20-3	
2-Nitroaniline	**<236**	ug/kg	829	236	4	02/28/23 12:55	03/01/23 13:46	88-74-4	
3-Nitroaniline	**<141**	ug/kg	829	141	4	02/28/23 12:55	03/01/23 13:46	99-09-2	
4-Nitroaniline	**<344**	ug/kg	829	344	4	02/28/23 12:55	03/01/23 13:46	100-01-6	
Nitrobenzene	**<168**	ug/kg	829	168	4	02/28/23 12:55	03/01/23 13:46	98-95-3	
2-Nitrophenol	**<261**	ug/kg	829	261	4	02/28/23 12:55	03/01/23 13:46	88-75-5	
4-Nitrophenol	**<209**	ug/kg	829	209	4	02/28/23 12:55	03/01/23 13:46	100-02-7	
N-Nitroso-di-n-propylamine	**<131**	ug/kg	829	131	4	02/28/23 12:55	03/01/23 13:46	621-64-7	
N-Nitrosodiphenylamine	**<218**	ug/kg	829	218	4	02/28/23 12:55	03/01/23 13:46	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<214**	ug/kg	829	214	4	02/28/23 12:55	03/01/23 13:46	108-60-1	
Pentachlorophenol	**<182**	ug/kg	829	182	4	02/28/23 12:55	03/01/23 13:46	87-86-5	
Phenanthrene	**<106**	ug/kg	829	106	4	02/28/23 12:55	03/01/23 13:46	85-01-8	
Phenol	**<197**	ug/kg	829	197	4	02/28/23 12:55	03/01/23 13:46	108-95-2	D3
Pyrene	**<184**	ug/kg	829	184	4	02/28/23 12:55	03/01/23 13:46	129-00-0	
1,2,4-Trichlorobenzene	**<93.6**	ug/kg	829	93.6	4	02/28/23 12:55	03/01/23 13:46	120-82-1	
2,4,5-Trichlorophenol	**<146**	ug/kg	829	146	4	02/28/23 12:55	03/01/23 13:46	95-95-4	
2,4,6-Trichlorophenol	**<126**	ug/kg	829	126	4	02/28/23 12:55	03/01/23 13:46	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%	10-125		4	02/28/23 12:55	03/01/23 13:46	4165-60-0	
2-Fluorobiphenyl (S)	59	%	12-118		4	02/28/23 12:55	03/01/23 13:46	321-60-8	
Terphenyl-d14 (S)	73	%	10-124		4	02/28/23 12:55	03/01/23 13:46	1718-51-0	
Phenol-d6 (S)	51	%	10-125		4	02/28/23 12:55	03/01/23 13:46	13127-88-3	
2-Fluorophenol (S)	49	%	10-130		4	02/28/23 12:55	03/01/23 13:46	367-12-4	
2,4,6-Tribromophenol (S)	64	%	10-144		4	02/28/23 12:55	03/01/23 13:46	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1D **Lab ID: 40258659004** Collected: 02/24/23 08:45 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<17.7**	ug/kg	29.7	17.7	1	02/27/23 07:30	02/27/23 14:12	71-43-2	
Bromobenzene	**<28.9**	ug/kg	74.2	28.9	1	02/27/23 07:30	02/27/23 14:12	108-86-1	
Bromochloromethane	**<20.3**	ug/kg	74.2	20.3	1	02/27/23 07:30	02/27/23 14:12	74-97-5	
Bromodichloromethane	**<17.7**	ug/kg	74.2	17.7	1	02/27/23 07:30	02/27/23 14:12	75-27-4	
Bromoform	**<326**	ug/kg	371	326	1	02/27/23 07:30	02/27/23 14:12	75-25-2	
Bromomethane	**<104**	ug/kg	371	104	1	02/27/23 07:30	02/27/23 14:12	74-83-9	
n-Butylbenzene	**<34.0**	ug/kg	74.2	34.0	1	02/27/23 07:30	02/27/23 14:12	104-51-8	
sec-Butylbenzene	**<18.1**	ug/kg	74.2	18.1	1	02/27/23 07:30	02/27/23 14:12	135-98-8	
tert-Butylbenzene	**<23.3**	ug/kg	74.2	23.3	1	02/27/23 07:30	02/27/23 14:12	98-06-6	
Carbon tetrachloride	**<16.3**	ug/kg	74.2	16.3	1	02/27/23 07:30	02/27/23 14:12	56-23-5	
Chlorobenzene	**<8.9**	ug/kg	74.2	8.9	1	02/27/23 07:30	02/27/23 14:12	108-90-7	
Chloroethane	**<31.3**	ug/kg	371	31.3	1	02/27/23 07:30	02/27/23 14:12	75-00-3	
Chloroform	**<53.1**	ug/kg	371	53.1	1	02/27/23 07:30	02/27/23 14:12	67-66-3	
Chloromethane	**<28.2**	ug/kg	74.2	28.2	1	02/27/23 07:30	02/27/23 14:12	74-87-3	
2-Chlorotoluene	**<24.0**	ug/kg	74.2	24.0	1	02/27/23 07:30	02/27/23 14:12	95-49-8	
4-Chlorotoluene	**<28.2**	ug/kg	74.2	28.2	1	02/27/23 07:30	02/27/23 14:12	106-43-4	
1,2-Dibromo-3-chloropropane	**<57.6**	ug/kg	371	57.6	1	02/27/23 07:30	02/27/23 14:12	96-12-8	
Dibromochloromethane	**<253**	ug/kg	371	253	1	02/27/23 07:30	02/27/23 14:12	124-48-1	
1,2-Dibromoethane (EDB)	**<20.3**	ug/kg	74.2	20.3	1	02/27/23 07:30	02/27/23 14:12	106-93-4	
Dibromomethane	**<22.0**	ug/kg	74.2	22.0	1	02/27/23 07:30	02/27/23 14:12	74-95-3	
1,2-Dichlorobenzene	**<23.0**	ug/kg	74.2	23.0	1	02/27/23 07:30	02/27/23 14:12	95-50-1	
1,3-Dichlorobenzene	**<20.3**	ug/kg	74.2	20.3	1	02/27/23 07:30	02/27/23 14:12	541-73-1	
1,4-Dichlorobenzene	**<20.3**	ug/kg	74.2	20.3	1	02/27/23 07:30	02/27/23 14:12	106-46-7	
Dichlorodifluoromethane	**<31.9**	ug/kg	74.2	31.9	1	02/27/23 07:30	02/27/23 14:12	75-71-8	
1,1-Dichloroethane	**<19.0**	ug/kg	74.2	19.0	1	02/27/23 07:30	02/27/23 14:12	75-34-3	
1,2-Dichloroethane	**<17.1**	ug/kg	74.2	17.1	1	02/27/23 07:30	02/27/23 14:12	107-06-2	
1,1-Dichloroethene	**<24.6**	ug/kg	74.2	24.6	1	02/27/23 07:30	02/27/23 14:12	75-35-4	
cis-1,2-Dichloroethene	**<15.9**	ug/kg	74.2	15.9	1	02/27/23 07:30	02/27/23 14:12	156-59-2	
trans-1,2-Dichloroethene	**<16.0**	ug/kg	74.2	16.0	1	02/27/23 07:30	02/27/23 14:12	156-60-5	
1,2-Dichloropropane	**<17.7**	ug/kg	74.2	17.7	1	02/27/23 07:30	02/27/23 14:12	78-87-5	
1,3-Dichloropropane	**<16.2**	ug/kg	74.2	16.2	1	02/27/23 07:30	02/27/23 14:12	142-28-9	
2,2-Dichloropropane	**<20.0**	ug/kg	74.2	20.0	1	02/27/23 07:30	02/27/23 14:12	594-20-7	
1,1-Dichloropropene	**<24.0**	ug/kg	74.2	24.0	1	02/27/23 07:30	02/27/23 14:12	563-58-6	
cis-1,3-Dichloropropene	**<48.9**	ug/kg	371	48.9	1	02/27/23 07:30	02/27/23 14:12	10061-01-5	
trans-1,3-Dichloropropene	**<212**	ug/kg	371	212	1	02/27/23 07:30	02/27/23 14:12	10061-02-6	
Diisopropyl ether	**<18.4**	ug/kg	74.2	18.4	1	02/27/23 07:30	02/27/23 14:12	108-20-3	
Ethylbenzene	**<17.7**	ug/kg	74.2	17.7	1	02/27/23 07:30	02/27/23 14:12	100-41-4	
Hexachloro-1,3-butadiene	**<147**	ug/kg	371	147	1	02/27/23 07:30	02/27/23 14:12	87-68-3	
Isopropylbenzene (Cumene)	**<20.0**	ug/kg	74.2	20.0	1	02/27/23 07:30	02/27/23 14:12	98-82-8	
p-Isopropyltoluene	**<22.5**	ug/kg	74.2	22.5	1	02/27/23 07:30	02/27/23 14:12	99-87-6	
Methylene Chloride	**<20.6**	ug/kg	74.2	20.6	1	02/27/23 07:30	02/27/23 14:12	75-09-2	
Methyl-tert-butyl ether	**<21.8**	ug/kg	74.2	21.8	1	02/27/23 07:30	02/27/23 14:12	1634-04-4	
Naphthalene	**<23.1**	ug/kg	371	23.1	1	02/27/23 07:30	02/27/23 14:12	91-20-3	
n-Propylbenzene	**<17.8**	ug/kg	74.2	17.8	1	02/27/23 07:30	02/27/23 14:12	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 1D **Lab ID: 40258659004** Collected: 02/24/23 08:45 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<19.0**	ug/kg	74.2	19.0	1	02/27/23 07:30	02/27/23 14:12	100-42-5	
1,1,1,2-Tetrachloroethane	**<17.8**	ug/kg	74.2	17.8	1	02/27/23 07:30	02/27/23 14:12	630-20-6	
1,1,2,2-Tetrachloroethane	**<26.8**	ug/kg	74.2	26.8	1	02/27/23 07:30	02/27/23 14:12	79-34-5	
Tetrachloroethene	**<28.8**	ug/kg	74.2	28.8	1	02/27/23 07:30	02/27/23 14:12	127-18-4	
Toluene	**<18.7**	ug/kg	74.2	18.7	1	02/27/23 07:30	02/27/23 14:12	108-88-3	
1,2,3-Trichlorobenzene	**<82.6**	ug/kg	371	82.6	1	02/27/23 07:30	02/27/23 14:12	87-61-6	
1,2,4-Trichlorobenzene	**<61.1**	ug/kg	371	61.1	1	02/27/23 07:30	02/27/23 14:12	120-82-1	
1,1,1-Trichloroethane	**<19.0**	ug/kg	74.2	19.0	1	02/27/23 07:30	02/27/23 14:12	71-55-6	
1,1,2-Trichloroethane	**<27.0**	ug/kg	74.2	27.0	1	02/27/23 07:30	02/27/23 14:12	79-00-5	
Trichloroethene	**<27.7**	ug/kg	74.2	27.7	1	02/27/23 07:30	02/27/23 14:12	79-01-6	
Trichlorofluoromethane	**<21.5**	ug/kg	74.2	21.5	1	02/27/23 07:30	02/27/23 14:12	75-69-4	
1,2,3-Trichloropropane	**<36.0**	ug/kg	74.2	36.0	1	02/27/23 07:30	02/27/23 14:12	96-18-4	
1,2,4-Trimethylbenzene	**<22.1**	ug/kg	74.2	22.1	1	02/27/23 07:30	02/27/23 14:12	95-63-6	
1,3,5-Trimethylbenzene	**<23.9**	ug/kg	74.2	23.9	1	02/27/23 07:30	02/27/23 14:12	108-67-8	
Vinyl chloride	**<15.0**	ug/kg	74.2	15.0	1	02/27/23 07:30	02/27/23 14:12	75-01-4	
Xylene (Total)	**<53.5**	ug/kg	222	53.5	1	02/27/23 07:30	02/27/23 14:12	1330-20-7	
Surrogates									
Toluene-d8 (S)	169	%	69-153		1	02/27/23 07:30	02/27/23 14:12	2037-26-5	S3
4-Bromofluorobenzene (S)	182	%	68-156		1	02/27/23 07:30	02/27/23 14:12	460-00-4	S3
1,2-Dichlorobenzene-d4 (S)	142	%	71-161		1	02/27/23 07:30	02/27/23 14:12	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**19.5**	%	0.10	0.10	1		02/27/23 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2A **Lab ID: 40258659005** Collected: 02/24/23 11:05 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**11.8**	mg/kg	3.1	1.8	1	03/01/23 06:06	03/01/23 15:12	7440-38-2	
Barium	**70.8**	mg/kg	0.63	0.19	1	03/01/23 06:06	03/01/23 15:12	7440-39-3	
Cadmium	**0.19J**	mg/kg	0.63	0.17	1	03/01/23 06:06	03/01/23 15:12	7440-43-9	
Chromium	**19.1**	mg/kg	1.3	0.35	1	03/01/23 06:06	03/01/23 15:12	7440-47-3	
Lead	**10.4**	mg/kg	2.5	0.75	1	03/01/23 06:06	03/01/23 15:12	7439-92-1	
Selenium	**<1.6**	mg/kg	5.0	1.6	1	03/01/23 06:06	03/01/23 15:12	7782-49-2	
Silver	**<0.38**	mg/kg	1.3	0.38	1	03/01/23 06:06	03/01/23 15:12	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.025J**	mg/kg	0.044	0.013	1	03/08/23 08:45	03/09/23 10:22	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<300**	ug/kg	847	300	4	02/28/23 12:55	03/01/23 17:19	83-32-9	
Acenaphthylene	**<302**	ug/kg	847	302	4	02/28/23 12:55	03/01/23 17:19	208-96-8	
Anthracene	**<135**	ug/kg	847	135	4	02/28/23 12:55	03/01/23 17:19	120-12-7	
Benzo(a)anthracene	**<131**	ug/kg	847	131	4	02/28/23 12:55	03/01/23 17:19	56-55-3	
Benzo(a)pyrene	**<127**	ug/kg	847	127	4	02/28/23 12:55	03/01/23 17:19	50-32-8	
Benzo(b)fluoranthene	**<145**	ug/kg	847	145	4	02/28/23 12:55	03/01/23 17:19	205-99-2	
Benzo(g,h,i)perylene	**<221**	ug/kg	847	221	4	02/28/23 12:55	03/01/23 17:19	191-24-2	
Benzo(k)fluoranthene	**<203**	ug/kg	847	203	4	02/28/23 12:55	03/01/23 17:19	207-08-9	
4-Bromophenylphenyl ether	**<177**	ug/kg	847	177	4	02/28/23 12:55	03/01/23 17:19	101-55-3	
Butylbenzylphthalate	**<352**	ug/kg	847	352	4	02/28/23 12:55	03/01/23 17:19	85-68-7	CH
Carbazole	**<132**	ug/kg	847	132	4	02/28/23 12:55	03/01/23 17:19	86-74-8	
4-Chloro-3-methylphenol	**<263**	ug/kg	847	263	4	02/28/23 12:55	03/01/23 17:19	59-50-7	
4-Chloroaniline	**<139**	ug/kg	847	139	4	02/28/23 12:55	03/01/23 17:19	106-47-8	
bis(2-Chloroethoxy)methane	**<228**	ug/kg	847	228	4	02/28/23 12:55	03/01/23 17:19	111-91-1	
bis(2-Chloroethyl) ether	**<264**	ug/kg	847	264	4	02/28/23 12:55	03/01/23 17:19	111-44-4	
2-Chloronaphthalene	**<109**	ug/kg	847	109	4	02/28/23 12:55	03/01/23 17:19	91-58-7	
2-Chlorophenol	**<211**	ug/kg	847	211	4	02/28/23 12:55	03/01/23 17:19	95-57-8	
4-Chlorophenylphenyl ether	**<158**	ug/kg	847	158	4	02/28/23 12:55	03/01/23 17:19	7005-72-3	
Chrysene	**<127**	ug/kg	847	127	4	02/28/23 12:55	03/01/23 17:19	218-01-9	
Dibenz(a,h)anthracene	**<230**	ug/kg	847	230	4	02/28/23 12:55	03/01/23 17:19	53-70-3	
Dibenzofuran	**<102**	ug/kg	847	102	4	02/28/23 12:55	03/01/23 17:19	132-64-9	
1,2-Dichlorobenzene	**<266**	ug/kg	847	266	4	02/28/23 12:55	03/01/23 17:19	95-50-1	
1,3-Dichlorobenzene	**<117**	ug/kg	847	117	4	02/28/23 12:55	03/01/23 17:19	541-73-1	
1,4-Dichlorobenzene	**<118**	ug/kg	847	118	4	02/28/23 12:55	03/01/23 17:19	106-46-7	
3,3'-Dichlorobenzidine	**<230**	ug/kg	847	230	4	02/28/23 12:55	03/01/23 17:19	91-94-1	
2,4-Dichlorophenol	**<226**	ug/kg	847	226	4	02/28/23 12:55	03/01/23 17:19	120-83-2	
Diethylphthalate	**<140**	ug/kg	847	140	4	02/28/23 12:55	03/01/23 17:19	84-66-2	
2,4-Dimethylphenol	**<167**	ug/kg	847	167	4	02/28/23 12:55	03/01/23 17:19	105-67-9	
Dimethylphthalate	**<110**	ug/kg	847	110	4	02/28/23 12:55	03/01/23 17:19	131-11-3	
Di-n-butylphthalate	**<126**	ug/kg	847	126	4	02/28/23 12:55	03/01/23 17:19	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2A **Lab ID: 40258659005** Collected: 02/24/23 11:05 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<261**	ug/kg	847	261	4	02/28/23 12:55	03/01/23 17:19	534-52-1	
2,4-Dinitrophenol	**<665**	ug/kg	1670	665	4	02/28/23 12:55	03/01/23 17:19	51-28-5	
2,4-Dinitrotoluene	**<121**	ug/kg	847	121	4	02/28/23 12:55	03/01/23 17:19	121-14-2	
2,6-Dinitrotoluene	**<161**	ug/kg	847	161	4	02/28/23 12:55	03/01/23 17:19	606-20-2	
Di-n-octylphthalate	**<190**	ug/kg	847	190	4	02/28/23 12:55	03/01/23 17:19	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<289**	ug/kg	847	289	4	02/28/23 12:55	03/01/23 17:19	117-81-7	CH
Fluoranthene	**<120**	ug/kg	847	120	4	02/28/23 12:55	03/01/23 17:19	206-44-0	
Fluorene	**<98.9**	ug/kg	847	98.9	4	02/28/23 12:55	03/01/23 17:19	86-73-7	
Hexachloro-1,3-butadiene	**<216**	ug/kg	847	216	4	02/28/23 12:55	03/01/23 17:19	87-68-3	
Hexachlorobenzene	**<142**	ug/kg	847	142	4	02/28/23 12:55	03/01/23 17:19	118-74-1	
Hexachlorocyclopentadiene	**<200**	ug/kg	847	200	4	02/28/23 12:55	03/01/23 17:19	77-47-4	
Hexachloroethane	**<135**	ug/kg	847	135	4	02/28/23 12:55	03/01/23 17:19	67-72-1	
Indeno(1,2,3-cd)pyrene	**<183**	ug/kg	847	183	4	02/28/23 12:55	03/01/23 17:19	193-39-5	
Isophorone	**<130**	ug/kg	847	130	4	02/28/23 12:55	03/01/23 17:19	78-59-1	
2-Methylnaphthalene	**<220**	ug/kg	847	220	4	02/28/23 12:55	03/01/23 17:19	91-57-6	
2-Methylphenol(o-Cresol)	**<154**	ug/kg	847	154	4	02/28/23 12:55	03/01/23 17:19	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<155**	ug/kg	847	155	4	02/28/23 12:55	03/01/23 17:19		
Naphthalene	**<296**	ug/kg	847	296	4	02/28/23 12:55	03/01/23 17:19	91-20-3	
2-Nitroaniline	**<241**	ug/kg	847	241	4	02/28/23 12:55	03/01/23 17:19	88-74-4	
3-Nitroaniline	**<144**	ug/kg	847	144	4	02/28/23 12:55	03/01/23 17:19	99-09-2	
4-Nitroaniline	**<351**	ug/kg	847	351	4	02/28/23 12:55	03/01/23 17:19	100-01-6	
Nitrobenzene	**<172**	ug/kg	847	172	4	02/28/23 12:55	03/01/23 17:19	98-95-3	
2-Nitrophenol	**<267**	ug/kg	847	267	4	02/28/23 12:55	03/01/23 17:19	88-75-5	
4-Nitrophenol	**<213**	ug/kg	847	213	4	02/28/23 12:55	03/01/23 17:19	100-02-7	
N-Nitroso-di-n-propylamine	**<134**	ug/kg	847	134	4	02/28/23 12:55	03/01/23 17:19	621-64-7	
N-Nitrosodiphenylamine	**<223**	ug/kg	847	223	4	02/28/23 12:55	03/01/23 17:19	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<218**	ug/kg	847	218	4	02/28/23 12:55	03/01/23 17:19	108-60-1	
Pentachlorophenol	**<186**	ug/kg	847	186	4	02/28/23 12:55	03/01/23 17:19	87-86-5	
Phenanthrene	**<109**	ug/kg	847	109	4	02/28/23 12:55	03/01/23 17:19	85-01-8	
Phenol	**<201**	ug/kg	847	201	4	02/28/23 12:55	03/01/23 17:19	108-95-2	D3
Pyrene	**<188**	ug/kg	847	188	4	02/28/23 12:55	03/01/23 17:19	129-00-0	
1,2,4-Trichlorobenzene	**<95.7**	ug/kg	847	95.7	4	02/28/23 12:55	03/01/23 17:19	120-82-1	
2,4,5-Trichlorophenol	**<149**	ug/kg	847	149	4	02/28/23 12:55	03/01/23 17:19	95-95-4	
2,4,6-Trichlorophenol	**<129**	ug/kg	847	129	4	02/28/23 12:55	03/01/23 17:19	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	59	%	10-125		4	02/28/23 12:55	03/01/23 17:19	4165-60-0	
2-Fluorobiphenyl (S)	64	%	12-118		4	02/28/23 12:55	03/01/23 17:19	321-60-8	
Terphenyl-d14 (S)	71	%	10-124		4	02/28/23 12:55	03/01/23 17:19	1718-51-0	
Phenol-d6 (S)	54	%	10-125		4	02/28/23 12:55	03/01/23 17:19	13127-88-3	
2-Fluorophenol (S)	59	%	10-130		4	02/28/23 12:55	03/01/23 17:19	367-12-4	
2,4,6-Tribromophenol (S)	66	%	10-144		4	02/28/23 12:55	03/01/23 17:19	118-79-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2A **Lab ID: 40258659005** Collected: 02/24/23 11:05 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<18.3**	ug/kg	30.7	18.3	1	02/27/23 07:30	02/27/23 14:32	71-43-2	
Bromobenzene	**<29.9**	ug/kg	76.8	29.9	1	02/27/23 07:30	02/27/23 14:32	108-86-1	
Bromochloromethane	**<21.0**	ug/kg	76.8	21.0	1	02/27/23 07:30	02/27/23 14:32	74-97-5	
Bromodichloromethane	**<18.3**	ug/kg	76.8	18.3	1	02/27/23 07:30	02/27/23 14:32	75-27-4	
Bromoform	**<338**	ug/kg	384	338	1	02/27/23 07:30	02/27/23 14:32	75-25-2	
Bromomethane	**<108**	ug/kg	384	108	1	02/27/23 07:30	02/27/23 14:32	74-83-9	
n-Butylbenzene	**<35.2**	ug/kg	76.8	35.2	1	02/27/23 07:30	02/27/23 14:32	104-51-8	
sec-Butylbenzene	**<18.7**	ug/kg	76.8	18.7	1	02/27/23 07:30	02/27/23 14:32	135-98-8	
tert-Butylbenzene	**<24.1**	ug/kg	76.8	24.1	1	02/27/23 07:30	02/27/23 14:32	98-06-6	
Carbon tetrachloride	**<16.9**	ug/kg	76.8	16.9	1	02/27/23 07:30	02/27/23 14:32	56-23-5	
Chlorobenzene	**<9.2**	ug/kg	76.8	9.2	1	02/27/23 07:30	02/27/23 14:32	108-90-7	
Chloroethane	**<32.4**	ug/kg	384	32.4	1	02/27/23 07:30	02/27/23 14:32	75-00-3	
Chloroform	**<55.0**	ug/kg	384	55.0	1	02/27/23 07:30	02/27/23 14:32	67-66-3	
Chloromethane	**<29.2**	ug/kg	76.8	29.2	1	02/27/23 07:30	02/27/23 14:32	74-87-3	
2-Chlorotoluene	**<24.9**	ug/kg	76.8	24.9	1	02/27/23 07:30	02/27/23 14:32	95-49-8	
4-Chlorotoluene	**<29.2**	ug/kg	76.8	29.2	1	02/27/23 07:30	02/27/23 14:32	106-43-4	
1,2-Dibromo-3-chloropropane	**<59.6**	ug/kg	384	59.6	1	02/27/23 07:30	02/27/23 14:32	96-12-8	
Dibromochloromethane	**<262**	ug/kg	384	262	1	02/27/23 07:30	02/27/23 14:32	124-48-1	
1,2-Dibromoethane (EDB)	**<21.0**	ug/kg	76.8	21.0	1	02/27/23 07:30	02/27/23 14:32	106-93-4	
Dibromomethane	**<22.7**	ug/kg	76.8	22.7	1	02/27/23 07:30	02/27/23 14:32	74-95-3	
1,2-Dichlorobenzene	**<23.8**	ug/kg	76.8	23.8	1	02/27/23 07:30	02/27/23 14:32	95-50-1	
1,3-Dichlorobenzene	**<21.0**	ug/kg	76.8	21.0	1	02/27/23 07:30	02/27/23 14:32	541-73-1	
1,4-Dichlorobenzene	**<21.0**	ug/kg	76.8	21.0	1	02/27/23 07:30	02/27/23 14:32	106-46-7	
Dichlorodifluoromethane	**<33.0**	ug/kg	76.8	33.0	1	02/27/23 07:30	02/27/23 14:32	75-71-8	
1,1-Dichloroethane	**<19.6**	ug/kg	76.8	19.6	1	02/27/23 07:30	02/27/23 14:32	75-34-3	
1,2-Dichloroethane	**<17.7**	ug/kg	76.8	17.7	1	02/27/23 07:30	02/27/23 14:32	107-06-2	
1,1-Dichloroethene	**<25.5**	ug/kg	76.8	25.5	1	02/27/23 07:30	02/27/23 14:32	75-35-4	
cis-1,2-Dichloroethene	**<16.4**	ug/kg	76.8	16.4	1	02/27/23 07:30	02/27/23 14:32	156-59-2	
trans-1,2-Dichloroethene	**<16.6**	ug/kg	76.8	16.6	1	02/27/23 07:30	02/27/23 14:32	156-60-5	
1,2-Dichloropropane	**<18.3**	ug/kg	76.8	18.3	1	02/27/23 07:30	02/27/23 14:32	78-87-5	
1,3-Dichloropropane	**<16.7**	ug/kg	76.8	16.7	1	02/27/23 07:30	02/27/23 14:32	142-28-9	
2,2-Dichloropropane	**<20.7**	ug/kg	76.8	20.7	1	02/27/23 07:30	02/27/23 14:32	594-20-7	
1,1-Dichloropropene	**<24.9**	ug/kg	76.8	24.9	1	02/27/23 07:30	02/27/23 14:32	563-58-6	
cis-1,3-Dichloropropene	**<50.7**	ug/kg	384	50.7	1	02/27/23 07:30	02/27/23 14:32	10061-01-5	
trans-1,3-Dichloropropene	**<220**	ug/kg	384	220	1	02/27/23 07:30	02/27/23 14:32	10061-02-6	
Diisopropyl ether	**<19.0**	ug/kg	76.8	19.0	1	02/27/23 07:30	02/27/23 14:32	108-20-3	
Ethylbenzene	**<18.3**	ug/kg	76.8	18.3	1	02/27/23 07:30	02/27/23 14:32	100-41-4	
Hexachloro-1,3-butadiene	**<153**	ug/kg	384	153	1	02/27/23 07:30	02/27/23 14:32	87-68-3	
Isopropylbenzene (Cumene)	**<20.7**	ug/kg	76.8	20.7	1	02/27/23 07:30	02/27/23 14:32	98-82-8	
p-Isopropyltoluene	**<23.3**	ug/kg	76.8	23.3	1	02/27/23 07:30	02/27/23 14:32	99-87-6	
Methylene Chloride	**<21.3**	ug/kg	76.8	21.3	1	02/27/23 07:30	02/27/23 14:32	75-09-2	
Methyl-tert-butyl ether	**<22.6**	ug/kg	76.8	22.6	1	02/27/23 07:30	02/27/23 14:32	1634-04-4	
Naphthalene	**<23.9**	ug/kg	384	23.9	1	02/27/23 07:30	02/27/23 14:32	91-20-3	
n-Propylbenzene	**<18.4**	ug/kg	76.8	18.4	1	02/27/23 07:30	02/27/23 14:32	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2A **Lab ID: 40258659005** Collected: 02/24/23 11:05 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<19.6**	ug/kg	76.8	19.6	1	02/27/23 07:30	02/27/23 14:32	100-42-5	
1,1,1,2-Tetrachloroethane	**<18.4**	ug/kg	76.8	18.4	1	02/27/23 07:30	02/27/23 14:32	630-20-6	
1,1,2,2-Tetrachloroethane	**<27.8**	ug/kg	76.8	27.8	1	02/27/23 07:30	02/27/23 14:32	79-34-5	
Tetrachloroethene	**<29.8**	ug/kg	76.8	29.8	1	02/27/23 07:30	02/27/23 14:32	127-18-4	
Toluene	**<19.3**	ug/kg	76.8	19.3	1	02/27/23 07:30	02/27/23 14:32	108-88-3	
1,2,3-Trichlorobenzene	**<85.5**	ug/kg	384	85.5	1	02/27/23 07:30	02/27/23 14:32	87-61-6	
1,2,4-Trichlorobenzene	**<63.2**	ug/kg	384	63.2	1	02/27/23 07:30	02/27/23 14:32	120-82-1	
1,1,1-Trichloroethane	**<19.6**	ug/kg	76.8	19.6	1	02/27/23 07:30	02/27/23 14:32	71-55-6	
1,1,2-Trichloroethane	**<27.9**	ug/kg	76.8	27.9	1	02/27/23 07:30	02/27/23 14:32	79-00-5	
Trichloroethene	**<28.7**	ug/kg	76.8	28.7	1	02/27/23 07:30	02/27/23 14:32	79-01-6	
Trichlorofluoromethane	**<22.3**	ug/kg	76.8	22.3	1	02/27/23 07:30	02/27/23 14:32	75-69-4	
1,2,3-Trichloropropane	**<37.3**	ug/kg	76.8	37.3	1	02/27/23 07:30	02/27/23 14:32	96-18-4	
1,2,4-Trimethylbenzene	**<22.9**	ug/kg	76.8	22.9	1	02/27/23 07:30	02/27/23 14:32	95-63-6	
1,3,5-Trimethylbenzene	**<24.7**	ug/kg	76.8	24.7	1	02/27/23 07:30	02/27/23 14:32	108-67-8	
Vinyl chloride	**<15.5**	ug/kg	76.8	15.5	1	02/27/23 07:30	02/27/23 14:32	75-01-4	
Xylene (Total)	**<55.4**	ug/kg	230	55.4	1	02/27/23 07:30	02/27/23 14:32	1330-20-7	
Surrogates									
Toluene-d8 (S)	90	%	69-153		1	02/27/23 07:30	02/27/23 14:32	2037-26-5	
4-Bromofluorobenzene (S)	127	%	68-156		1	02/27/23 07:30	02/27/23 14:32	460-00-4	
1,2-Dichlorobenzene-d4 (S)	130	%	71-161		1	02/27/23 07:30	02/27/23 14:32	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**21.1**	%	0.10	0.10	1		02/27/23 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659006** Collected: 02/24/23 11:10 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**6.3**	mg/kg	2.9	1.7	1	03/01/23 06:06	03/01/23 15:14	7440-38-2	
Barium	**109**	mg/kg	0.59	0.18	1	03/01/23 06:06	03/01/23 15:14	7440-39-3	
Cadmium	**<0.16**	mg/kg	0.59	0.16	1	03/01/23 06:06	03/01/23 15:14	7440-43-9	
Chromium	**27.7**	mg/kg	1.2	0.33	1	03/01/23 06:06	03/01/23 15:14	7440-47-3	
Lead	**13.6**	mg/kg	2.3	0.70	1	03/01/23 06:06	03/01/23 15:14	7439-92-1	
Selenium	**<1.5**	mg/kg	4.7	1.5	1	03/01/23 06:06	03/01/23 15:14	7782-49-2	
Silver	**<0.36**	mg/kg	1.2	0.36	1	03/01/23 06:06	03/01/23 15:14	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.048**	mg/kg	0.041	0.012	1	03/08/23 08:45	03/09/23 10:24	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<286**	ug/kg	806	286	4	02/28/23 12:55	03/01/23 16:36	83-32-9	
Acenaphthylene	**<288**	ug/kg	806	288	4	02/28/23 12:55	03/01/23 16:36	208-96-8	
Anthracene	**<129**	ug/kg	806	129	4	02/28/23 12:55	03/01/23 16:36	120-12-7	
Benzo(a)anthracene	**<125**	ug/kg	806	125	4	02/28/23 12:55	03/01/23 16:36	56-55-3	
Benzo(a)pyrene	**<121**	ug/kg	806	121	4	02/28/23 12:55	03/01/23 16:36	50-32-8	
Benzo(b)fluoranthene	**<138**	ug/kg	806	138	4	02/28/23 12:55	03/01/23 16:36	205-99-2	
Benzo(g,h,i)perylene	**<211**	ug/kg	806	211	4	02/28/23 12:55	03/01/23 16:36	191-24-2	
Benzo(k)fluoranthene	**<193**	ug/kg	806	193	4	02/28/23 12:55	03/01/23 16:36	207-08-9	
4-Bromophenylphenyl ether	**<169**	ug/kg	806	169	4	02/28/23 12:55	03/01/23 16:36	101-55-3	
Butylbenzylphthalate	**<335**	ug/kg	806	335	4	02/28/23 12:55	03/01/23 16:36	85-68-7	CH
Carbazole	**<126**	ug/kg	806	126	4	02/28/23 12:55	03/01/23 16:36	86-74-8	
4-Chloro-3-methylphenol	**<251**	ug/kg	806	251	4	02/28/23 12:55	03/01/23 16:36	59-50-7	
4-Chloroaniline	**<132**	ug/kg	806	132	4	02/28/23 12:55	03/01/23 16:36	106-47-8	
bis(2-Chloroethoxy)methane	**<217**	ug/kg	806	217	4	02/28/23 12:55	03/01/23 16:36	111-91-1	
bis(2-Chloroethyl) ether	**<252**	ug/kg	806	252	4	02/28/23 12:55	03/01/23 16:36	111-44-4	
2-Chloronaphthalene	**<103**	ug/kg	806	103	4	02/28/23 12:55	03/01/23 16:36	91-58-7	
2-Chlorophenol	**<201**	ug/kg	806	201	4	02/28/23 12:55	03/01/23 16:36	95-57-8	
4-Chlorophenylphenyl ether	**<150**	ug/kg	806	150	4	02/28/23 12:55	03/01/23 16:36	7005-72-3	
Chrysene	**<121**	ug/kg	806	121	4	02/28/23 12:55	03/01/23 16:36	218-01-9	
Dibenz(a,h)anthracene	**<219**	ug/kg	806	219	4	02/28/23 12:55	03/01/23 16:36	53-70-3	
Dibenzofuran	**<97.6**	ug/kg	806	97.6	4	02/28/23 12:55	03/01/23 16:36	132-64-9	
1,2-Dichlorobenzene	**<253**	ug/kg	806	253	4	02/28/23 12:55	03/01/23 16:36	95-50-1	
1,3-Dichlorobenzene	**<112**	ug/kg	806	112	4	02/28/23 12:55	03/01/23 16:36	541-73-1	
1,4-Dichlorobenzene	**<112**	ug/kg	806	112	4	02/28/23 12:55	03/01/23 16:36	106-46-7	
3,3'-Dichlorobenzidine	**<219**	ug/kg	806	219	4	02/28/23 12:55	03/01/23 16:36	91-94-1	
2,4-Dichlorophenol	**<215**	ug/kg	806	215	4	02/28/23 12:55	03/01/23 16:36	120-83-2	
Diethylphthalate	**<134**	ug/kg	806	134	4	02/28/23 12:55	03/01/23 16:36	84-66-2	
2,4-Dimethylphenol	**<159**	ug/kg	806	159	4	02/28/23 12:55	03/01/23 16:36	105-67-9	
Dimethylphthalate	**<105**	ug/kg	806	105	4	02/28/23 12:55	03/01/23 16:36	131-11-3	
Di-n-butylphthalate	**<120**	ug/kg	806	120	4	02/28/23 12:55	03/01/23 16:36	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659006** Collected: 02/24/23 11:10 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<248**	ug/kg	806	248	4	02/28/23 12:55	03/01/23 16:36	534-52-1	
2,4-Dinitrophenol	**<634**	ug/kg	1590	634	4	02/28/23 12:55	03/01/23 16:36	51-28-5	
2,4-Dinitrotoluene	**<115**	ug/kg	806	115	4	02/28/23 12:55	03/01/23 16:36	121-14-2	
2,6-Dinitrotoluene	**<153**	ug/kg	806	153	4	02/28/23 12:55	03/01/23 16:36	606-20-2	
Di-n-octylphthalate	**<181**	ug/kg	806	181	4	02/28/23 12:55	03/01/23 16:36	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<275**	ug/kg	806	275	4	02/28/23 12:55	03/01/23 16:36	117-81-7	CH
Fluoranthene	**<114**	ug/kg	806	114	4	02/28/23 12:55	03/01/23 16:36	206-44-0	
Fluorene	**<94.2**	ug/kg	806	94.2	4	02/28/23 12:55	03/01/23 16:36	86-73-7	
Hexachloro-1,3-butadiene	**<205**	ug/kg	806	205	4	02/28/23 12:55	03/01/23 16:36	87-68-3	
Hexachlorobenzene	**<136**	ug/kg	806	136	4	02/28/23 12:55	03/01/23 16:36	118-74-1	
Hexachlorocyclopentadiene	**<191**	ug/kg	806	191	4	02/28/23 12:55	03/01/23 16:36	77-47-4	
Hexachloroethane	**<129**	ug/kg	806	129	4	02/28/23 12:55	03/01/23 16:36	67-72-1	
Indeno(1,2,3-cd)pyrene	**<174**	ug/kg	806	174	4	02/28/23 12:55	03/01/23 16:36	193-39-5	
Isophorone	**<124**	ug/kg	806	124	4	02/28/23 12:55	03/01/23 16:36	78-59-1	
2-Methylnaphthalene	**<209**	ug/kg	806	209	4	02/28/23 12:55	03/01/23 16:36	91-57-6	
2-Methylphenol(o-Cresol)	**<146**	ug/kg	806	146	4	02/28/23 12:55	03/01/23 16:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<148**	ug/kg	806	148	4	02/28/23 12:55	03/01/23 16:36		
Naphthalene	**<282**	ug/kg	806	282	4	02/28/23 12:55	03/01/23 16:36	91-20-3	
2-Nitroaniline	**<230**	ug/kg	806	230	4	02/28/23 12:55	03/01/23 16:36	88-74-4	
3-Nitroaniline	**<137**	ug/kg	806	137	4	02/28/23 12:55	03/01/23 16:36	99-09-2	
4-Nitroaniline	**<335**	ug/kg	806	335	4	02/28/23 12:55	03/01/23 16:36	100-01-6	
Nitrobenzene	**<163**	ug/kg	806	163	4	02/28/23 12:55	03/01/23 16:36	98-95-3	
2-Nitrophenol	**<254**	ug/kg	806	254	4	02/28/23 12:55	03/01/23 16:36	88-75-5	
4-Nitrophenol	**<203**	ug/kg	806	203	4	02/28/23 12:55	03/01/23 16:36	100-02-7	
N-Nitroso-di-n-propylamine	**<128**	ug/kg	806	128	4	02/28/23 12:55	03/01/23 16:36	621-64-7	
N-Nitrosodiphenylamine	**<212**	ug/kg	806	212	4	02/28/23 12:55	03/01/23 16:36	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<208**	ug/kg	806	208	4	02/28/23 12:55	03/01/23 16:36	108-60-1	
Pentachlorophenol	**<177**	ug/kg	806	177	4	02/28/23 12:55	03/01/23 16:36	87-86-5	
Phenanthrene	**<103**	ug/kg	806	103	4	02/28/23 12:55	03/01/23 16:36	85-01-8	
Phenol	**<191**	ug/kg	806	191	4	02/28/23 12:55	03/01/23 16:36	108-95-2	D3
Pyrene	**<179**	ug/kg	806	179	4	02/28/23 12:55	03/01/23 16:36	129-00-0	
1,2,4-Trichlorobenzene	**<91.1**	ug/kg	806	91.1	4	02/28/23 12:55	03/01/23 16:36	120-82-1	
2,4,5-Trichlorophenol	**<142**	ug/kg	806	142	4	02/28/23 12:55	03/01/23 16:36	95-95-4	
2,4,6-Trichlorophenol	**<123**	ug/kg	806	123	4	02/28/23 12:55	03/01/23 16:36	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	59	%	10-125		4	02/28/23 12:55	03/01/23 16:36	4165-60-0	
2-Fluorobiphenyl (S)	56	%	12-118		4	02/28/23 12:55	03/01/23 16:36	321-60-8	
Terphenyl-d14 (S)	68	%	10-124		4	02/28/23 12:55	03/01/23 16:36	1718-51-0	
Phenol-d6 (S)	51	%	10-125		4	02/28/23 12:55	03/01/23 16:36	13127-88-3	
2-Fluorophenol (S)	48	%	10-130		4	02/28/23 12:55	03/01/23 16:36	367-12-4	
2,4,6-Tribromophenol (S)	56	%	10-144		4	02/28/23 12:55	03/01/23 16:36	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659006** Collected: 02/24/23 11:10 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<16.8**	ug/kg	28.3	16.8	1	02/27/23 07:30	02/27/23 14:51	71-43-2	
Bromobenzene	**<27.5**	ug/kg	70.6	27.5	1	02/27/23 07:30	02/27/23 14:51	108-86-1	
Bromochloromethane	**<19.4**	ug/kg	70.6	19.4	1	02/27/23 07:30	02/27/23 14:51	74-97-5	
Bromodichloromethane	**<16.8**	ug/kg	70.6	16.8	1	02/27/23 07:30	02/27/23 14:51	75-27-4	
Bromoform	**<311**	ug/kg	353	311	1	02/27/23 07:30	02/27/23 14:51	75-25-2	
Bromomethane	**<99.0**	ug/kg	353	99.0	1	02/27/23 07:30	02/27/23 14:51	74-83-9	
n-Butylbenzene	**<32.4**	ug/kg	70.6	32.4	1	02/27/23 07:30	02/27/23 14:51	104-51-8	
sec-Butylbenzene	**<17.2**	ug/kg	70.6	17.2	1	02/27/23 07:30	02/27/23 14:51	135-98-8	
tert-Butylbenzene	**<22.2**	ug/kg	70.6	22.2	1	02/27/23 07:30	02/27/23 14:51	98-06-6	
Carbon tetrachloride	**<15.5**	ug/kg	70.6	15.5	1	02/27/23 07:30	02/27/23 14:51	56-23-5	
Chlorobenzene	**<8.5**	ug/kg	70.6	8.5	1	02/27/23 07:30	02/27/23 14:51	108-90-7	
Chloroethane	**<29.8**	ug/kg	353	29.8	1	02/27/23 07:30	02/27/23 14:51	75-00-3	
Chloroform	**<50.6**	ug/kg	353	50.6	1	02/27/23 07:30	02/27/23 14:51	67-66-3	
Chloromethane	**<26.8**	ug/kg	70.6	26.8	1	02/27/23 07:30	02/27/23 14:51	74-87-3	
2-Chlorotoluene	**<22.9**	ug/kg	70.6	22.9	1	02/27/23 07:30	02/27/23 14:51	95-49-8	
4-Chlorotoluene	**<26.8**	ug/kg	70.6	26.8	1	02/27/23 07:30	02/27/23 14:51	106-43-4	
1,2-Dibromo-3-chloropropane	**<54.8**	ug/kg	353	54.8	1	02/27/23 07:30	02/27/23 14:51	96-12-8	
Dibromochloromethane	**<241**	ug/kg	353	241	1	02/27/23 07:30	02/27/23 14:51	124-48-1	
1,2-Dibromoethane (EDB)	**<19.4**	ug/kg	70.6	19.4	1	02/27/23 07:30	02/27/23 14:51	106-93-4	
Dibromomethane	**<20.9**	ug/kg	70.6	20.9	1	02/27/23 07:30	02/27/23 14:51	74-95-3	
1,2-Dichlorobenzene	**<21.9**	ug/kg	70.6	21.9	1	02/27/23 07:30	02/27/23 14:51	95-50-1	
1,3-Dichlorobenzene	**<19.4**	ug/kg	70.6	19.4	1	02/27/23 07:30	02/27/23 14:51	541-73-1	
1,4-Dichlorobenzene	**<19.4**	ug/kg	70.6	19.4	1	02/27/23 07:30	02/27/23 14:51	106-46-7	
Dichlorodifluoromethane	**<30.4**	ug/kg	70.6	30.4	1	02/27/23 07:30	02/27/23 14:51	75-71-8	
1,1-Dichloroethane	**<18.1**	ug/kg	70.6	18.1	1	02/27/23 07:30	02/27/23 14:51	75-34-3	
1,2-Dichloroethane	**<16.2**	ug/kg	70.6	16.2	1	02/27/23 07:30	02/27/23 14:51	107-06-2	
1,1-Dichloroethene	**<23.5**	ug/kg	70.6	23.5	1	02/27/23 07:30	02/27/23 14:51	75-35-4	
cis-1,2-Dichloroethene	**<15.1**	ug/kg	70.6	15.1	1	02/27/23 07:30	02/27/23 14:51	156-59-2	
trans-1,2-Dichloroethene	**<15.3**	ug/kg	70.6	15.3	1	02/27/23 07:30	02/27/23 14:51	156-60-5	
1,2-Dichloropropane	**<16.8**	ug/kg	70.6	16.8	1	02/27/23 07:30	02/27/23 14:51	78-87-5	
1,3-Dichloropropane	**<15.4**	ug/kg	70.6	15.4	1	02/27/23 07:30	02/27/23 14:51	142-28-9	
2,2-Dichloropropane	**<19.1**	ug/kg	70.6	19.1	1	02/27/23 07:30	02/27/23 14:51	594-20-7	
1,1-Dichloropropene	**<22.9**	ug/kg	70.6	22.9	1	02/27/23 07:30	02/27/23 14:51	563-58-6	
cis-1,3-Dichloropropene	**<46.6**	ug/kg	353	46.6	1	02/27/23 07:30	02/27/23 14:51	10061-01-5	
trans-1,3-Dichloropropene	**<202**	ug/kg	353	202	1	02/27/23 07:30	02/27/23 14:51	10061-02-6	
Diisopropyl ether	**<17.5**	ug/kg	70.6	17.5	1	02/27/23 07:30	02/27/23 14:51	108-20-3	
Ethylbenzene	**<16.8**	ug/kg	70.6	16.8	1	02/27/23 07:30	02/27/23 14:51	100-41-4	
Hexachloro-1,3-butadiene	**<140**	ug/kg	353	140	1	02/27/23 07:30	02/27/23 14:51	87-68-3	
Isopropylbenzene (Cumene)	**<19.1**	ug/kg	70.6	19.1	1	02/27/23 07:30	02/27/23 14:51	98-82-8	
p-Isopropyltoluene	**<21.5**	ug/kg	70.6	21.5	1	02/27/23 07:30	02/27/23 14:51	99-87-6	
Methylene Chloride	**<19.6**	ug/kg	70.6	19.6	1	02/27/23 07:30	02/27/23 14:51	75-09-2	
Methyl-tert-butyl ether	**<20.8**	ug/kg	70.6	20.8	1	02/27/23 07:30	02/27/23 14:51	1634-04-4	
Naphthalene	**<22.0**	ug/kg	353	22.0	1	02/27/23 07:30	02/27/23 14:51	91-20-3	
n-Propylbenzene	**<17.0**	ug/kg	70.6	17.0	1	02/27/23 07:30	02/27/23 14:51	103-65-1	

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659006** Collected: 02/24/23 11:10 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<18.1**	ug/kg	70.6	18.1	1	02/27/23 07:30	02/27/23 14:51	100-42-5	
1,1,1,2-Tetrachloroethane	**<17.0**	ug/kg	70.6	17.0	1	02/27/23 07:30	02/27/23 14:51	630-20-6	
1,1,2,2-Tetrachloroethane	**<25.6**	ug/kg	70.6	25.6	1	02/27/23 07:30	02/27/23 14:51	79-34-5	
Tetrachloroethene	**<27.4**	ug/kg	70.6	27.4	1	02/27/23 07:30	02/27/23 14:51	127-18-4	
Toluene	**<17.8**	ug/kg	70.6	17.8	1	02/27/23 07:30	02/27/23 14:51	108-88-3	
1,2,3-Trichlorobenzene	**<78.7**	ug/kg	353	78.7	1	02/27/23 07:30	02/27/23 14:51	87-61-6	
1,2,4-Trichlorobenzene	**<58.2**	ug/kg	353	58.2	1	02/27/23 07:30	02/27/23 14:51	120-82-1	
1,1,1-Trichloroethane	**<18.1**	ug/kg	70.6	18.1	1	02/27/23 07:30	02/27/23 14:51	71-55-6	
1,1,2-Trichloroethane	**<25.7**	ug/kg	70.6	25.7	1	02/27/23 07:30	02/27/23 14:51	79-00-5	
Trichloroethene	**<26.4**	ug/kg	70.6	26.4	1	02/27/23 07:30	02/27/23 14:51	79-01-6	
Trichlorofluoromethane	**<20.5**	ug/kg	70.6	20.5	1	02/27/23 07:30	02/27/23 14:51	75-69-4	
1,2,3-Trichloropropane	**<34.3**	ug/kg	70.6	34.3	1	02/27/23 07:30	02/27/23 14:51	96-18-4	
1,2,4-Trimethylbenzene	**<21.0**	ug/kg	70.6	21.0	1	02/27/23 07:30	02/27/23 14:51	95-63-6	
1,3,5-Trimethylbenzene	**<22.7**	ug/kg	70.6	22.7	1	02/27/23 07:30	02/27/23 14:51	108-67-8	
Vinyl chloride	**<14.3**	ug/kg	70.6	14.3	1	02/27/23 07:30	02/27/23 14:51	75-01-4	
Xylene (Total)	**<51.0**	ug/kg	212	51.0	1	02/27/23 07:30	02/27/23 14:51	1330-20-7	
Surrogates									
Toluene-d8 (S)	136	%	69-153		1	02/27/23 07:30	02/27/23 14:51	2037-26-5	
4-Bromofluorobenzene (S)	146	%	68-156		1	02/27/23 07:30	02/27/23 14:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	148	%	71-161		1	02/27/23 07:30	02/27/23 14:51	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**17.1**	%	0.10	0.10	1		02/27/23 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2C **Lab ID: 40258659007** Collected: 02/24/23 11:15 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**2.8J**	mg/kg	2.9	1.7	1	03/01/23 06:06	03/01/23 15:15	7440-38-2	
Barium	**57.9**	mg/kg	0.58	0.17	1	03/01/23 06:06	03/01/23 15:15	7440-39-3	
Cadmium	**0.36J**	mg/kg	0.58	0.15	1	03/01/23 06:06	03/01/23 15:15	7440-43-9	
Chromium	**16.5**	mg/kg	1.2	0.32	1	03/01/23 06:06	03/01/23 15:15	7440-47-3	
Lead	**18.4**	mg/kg	2.3	0.69	1	03/01/23 06:06	03/01/23 15:15	7439-92-1	
Selenium	**<1.5**	mg/kg	4.6	1.5	1	03/01/23 06:06	03/01/23 15:15	7782-49-2	
Silver	**<0.35**	mg/kg	1.2	0.35	1	03/01/23 06:06	03/01/23 15:15	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.024J**	mg/kg	0.042	0.012	1	03/08/23 08:45	03/09/23 10:27	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<70.3**	ug/kg	198	70.3	1	02/28/23 12:55	03/01/23 13:03	83-32-9	
Acenaphthylene	**<70.8**	ug/kg	198	70.8	1	02/28/23 12:55	03/01/23 13:03	208-96-8	
Anthracene	**<31.7**	ug/kg	198	31.7	1	02/28/23 12:55	03/01/23 13:03	120-12-7	
Benzo(a)anthracene	**51.9J**	ug/kg	198	30.7	1	02/28/23 12:55	03/01/23 13:03	56-55-3	
Benzo(a)pyrene	**66.5J**	ug/kg	198	29.8	1	02/28/23 12:55	03/01/23 13:03	50-32-8	
Benzo(b)fluoranthene	**106J**	ug/kg	198	34.1	1	02/28/23 12:55	03/01/23 13:03	205-99-2	
Benzo(g,h,i)perylene	**115J**	ug/kg	198	51.9	1	02/28/23 12:55	03/01/23 13:03	191-24-2	
Benzo(k)fluoranthene	**63.7J**	ug/kg	198	47.5	1	02/28/23 12:55	03/01/23 13:03	207-08-9	
4-Bromophenylphenyl ether	**<41.5**	ug/kg	198	41.5	1	02/28/23 12:55	03/01/23 13:03	101-55-3	
Butylbenzylphthalate	**<82.6**	ug/kg	198	82.6	1	02/28/23 12:55	03/01/23 13:03	85-68-7	CH
Carbazole	**<31.1**	ug/kg	198	31.1	1	02/28/23 12:55	03/01/23 13:03	86-74-8	
4-Chloro-3-methylphenol	**<61.7**	ug/kg	198	61.7	1	02/28/23 12:55	03/01/23 13:03	59-50-7	
4-Chloroaniline	**<32.6**	ug/kg	198	32.6	1	02/28/23 12:55	03/01/23 13:03	106-47-8	
bis(2-Chloroethoxy)methane	**<53.4**	ug/kg	198	53.4	1	02/28/23 12:55	03/01/23 13:03	111-91-1	
bis(2-Chloroethyl) ether	**<61.9**	ug/kg	198	61.9	1	02/28/23 12:55	03/01/23 13:03	111-44-4	
2-Chloronaphthalene	**<25.5**	ug/kg	198	25.5	1	02/28/23 12:55	03/01/23 13:03	91-58-7	
2-Chlorophenol	**<49.5**	ug/kg	198	49.5	1	02/28/23 12:55	03/01/23 13:03	95-57-8	
4-Chlorophenylphenyl ether	**<36.9**	ug/kg	198	36.9	1	02/28/23 12:55	03/01/23 13:03	7005-72-3	
Chrysene	**111J**	ug/kg	198	29.7	1	02/28/23 12:55	03/01/23 13:03	218-01-9	
Dibenz(a,h)anthracene	**69.9J**	ug/kg	198	53.9	1	02/28/23 12:55	03/01/23 13:03	53-70-3	
Dibenzofuran	**<24.0**	ug/kg	198	24.0	1	02/28/23 12:55	03/01/23 13:03	132-64-9	
1,2-Dichlorobenzene	**<62.4**	ug/kg	198	62.4	1	02/28/23 12:55	03/01/23 13:03	95-50-1	
1,3-Dichlorobenzene	**<27.5**	ug/kg	198	27.5	1	02/28/23 12:55	03/01/23 13:03	541-73-1	
1,4-Dichlorobenzene	**<27.6**	ug/kg	198	27.6	1	02/28/23 12:55	03/01/23 13:03	106-46-7	
3,3'-Dichlorobenzidine	**<53.8**	ug/kg	198	53.8	1	02/28/23 12:55	03/01/23 13:03	91-94-1	
2,4-Dichlorophenol	**<53.0**	ug/kg	198	53.0	1	02/28/23 12:55	03/01/23 13:03	120-83-2	
Diethylphthalate	**<32.9**	ug/kg	198	32.9	1	02/28/23 12:55	03/01/23 13:03	84-66-2	
2,4-Dimethylphenol	**<39.2**	ug/kg	198	39.2	1	02/28/23 12:55	03/01/23 13:03	105-67-9	
Dimethylphthalate	**<25.8**	ug/kg	198	25.8	1	02/28/23 12:55	03/01/23 13:03	131-11-3	
Di-n-butylphthalate	**<29.6**	ug/kg	198	29.6	1	02/28/23 12:55	03/01/23 13:03	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2C **Lab ID: 40258659007** Collected: 02/24/23 11:15 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<61.1**	ug/kg	198	61.1	1	02/28/23 12:55	03/01/23 13:03	534-52-1	
2,4-Dinitrophenol	**<156**	ug/kg	392	156	1	02/28/23 12:55	03/01/23 13:03	51-28-5	
2,4-Dinitrotoluene	**<28.4**	ug/kg	198	28.4	1	02/28/23 12:55	03/01/23 13:03	121-14-2	
2,6-Dinitrotoluene	**<37.7**	ug/kg	198	37.7	1	02/28/23 12:55	03/01/23 13:03	606-20-2	
Di-n-octylphthalate	**<44.6**	ug/kg	198	44.6	1	02/28/23 12:55	03/01/23 13:03	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<67.7**	ug/kg	198	67.7	1	02/28/23 12:55	03/01/23 13:03	117-81-7	CH
Fluoranthene	**164J**	ug/kg	198	28.1	1	02/28/23 12:55	03/01/23 13:03	206-44-0	
Fluorene	**<23.2**	ug/kg	198	23.2	1	02/28/23 12:55	03/01/23 13:03	86-73-7	
Hexachloro-1,3-butadiene	**<50.5**	ug/kg	198	50.5	1	02/28/23 12:55	03/01/23 13:03	87-68-3	
Hexachlorobenzene	**<33.4**	ug/kg	198	33.4	1	02/28/23 12:55	03/01/23 13:03	118-74-1	
Hexachlorocyclopentadiene	**<46.9**	ug/kg	198	46.9	1	02/28/23 12:55	03/01/23 13:03	77-47-4	
Hexachloroethane	**<31.7**	ug/kg	198	31.7	1	02/28/23 12:55	03/01/23 13:03	67-72-1	
Indeno(1,2,3-cd)pyrene	**120J**	ug/kg	198	42.9	1	02/28/23 12:55	03/01/23 13:03	193-39-5	B
Isophorone	**<30.5**	ug/kg	198	30.5	1	02/28/23 12:55	03/01/23 13:03	78-59-1	
2-Methylnaphthalene	**<51.5**	ug/kg	198	51.5	1	02/28/23 12:55	03/01/23 13:03	91-57-6	
2-Methylphenol(o-Cresol)	**<36.0**	ug/kg	198	36.0	1	02/28/23 12:55	03/01/23 13:03	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<36.4**	ug/kg	198	36.4	1	02/28/23 12:55	03/01/23 13:03		
Naphthalene	**<69.4**	ug/kg	198	69.4	1	02/28/23 12:55	03/01/23 13:03	91-20-3	
2-Nitroaniline	**<56.5**	ug/kg	198	56.5	1	02/28/23 12:55	03/01/23 13:03	88-74-4	
3-Nitroaniline	**<33.7**	ug/kg	198	33.7	1	02/28/23 12:55	03/01/23 13:03	99-09-2	
4-Nitroaniline	**<82.3**	ug/kg	198	82.3	1	02/28/23 12:55	03/01/23 13:03	100-01-6	
Nitrobenzene	**<40.2**	ug/kg	198	40.2	1	02/28/23 12:55	03/01/23 13:03	98-95-3	
2-Nitrophenol	**<62.6**	ug/kg	198	62.6	1	02/28/23 12:55	03/01/23 13:03	88-75-5	
4-Nitrophenol	**<50.0**	ug/kg	198	50.0	1	02/28/23 12:55	03/01/23 13:03	100-02-7	
N-Nitroso-di-n-propylamine	**<31.5**	ug/kg	198	31.5	1	02/28/23 12:55	03/01/23 13:03	621-64-7	
N-Nitrosodiphenylamine	**<52.2**	ug/kg	198	52.2	1	02/28/23 12:55	03/01/23 13:03	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<51.2**	ug/kg	198	51.2	1	02/28/23 12:55	03/01/23 13:03	108-60-1	
Pentachlorophenol	**<43.7**	ug/kg	198	43.7	1	02/28/23 12:55	03/01/23 13:03	87-86-5	
Phenanthrene	**70.1J**	ug/kg	198	25.5	1	02/28/23 12:55	03/01/23 13:03	85-01-8	
Phenol	**<47.1**	ug/kg	198	47.1	1	02/28/23 12:55	03/01/23 13:03	108-95-2	
Pyrene	**145J**	ug/kg	198	44.0	1	02/28/23 12:55	03/01/23 13:03	129-00-0	
1,2,4-Trichlorobenzene	**<22.4**	ug/kg	198	22.4	1	02/28/23 12:55	03/01/23 13:03	120-82-1	
2,4,5-Trichlorophenol	**<35.0**	ug/kg	198	35.0	1	02/28/23 12:55	03/01/23 13:03	95-95-4	
2,4,6-Trichlorophenol	**<30.2**	ug/kg	198	30.2	1	02/28/23 12:55	03/01/23 13:03	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	65	%	10-125		1	02/28/23 12:55	03/01/23 13:03	4165-60-0	
2-Fluorobiphenyl (S)	65	%	12-118		1	02/28/23 12:55	03/01/23 13:03	321-60-8	
Terphenyl-d14 (S)	75	%	10-124		1	02/28/23 12:55	03/01/23 13:03	1718-51-0	
Phenol-d6 (S)	52	%	10-125		1	02/28/23 12:55	03/01/23 13:03	13127-88-3	
2-Fluorophenol (S)	57	%	10-130		1	02/28/23 12:55	03/01/23 13:03	367-12-4	
2,4,6-Tribromophenol (S)	71	%	10-144		1	02/28/23 12:55	03/01/23 13:03	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2C **Lab ID: 40258659007** Collected: 02/24/23 11:15 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<16.3**	ug/kg	27.5	16.3	1	02/27/23 07:30	02/27/23 12:53	71-43-2	
Bromobenzene	**<26.8**	ug/kg	68.7	26.8	1	02/27/23 07:30	02/27/23 12:53	108-86-1	
Bromochloromethane	**<18.8**	ug/kg	68.7	18.8	1	02/27/23 07:30	02/27/23 12:53	74-97-5	
Bromodichloromethane	**<16.3**	ug/kg	68.7	16.3	1	02/27/23 07:30	02/27/23 12:53	75-27-4	
Bromoform	**<302**	ug/kg	343	302	1	02/27/23 07:30	02/27/23 12:53	75-25-2	
Bromomethane	**<96.3**	ug/kg	343	96.3	1	02/27/23 07:30	02/27/23 12:53	74-83-9	
n-Butylbenzene	**146**	ug/kg	68.7	31.5	1	02/27/23 07:30	02/27/23 12:53	104-51-8	
sec-Butylbenzene	**152**	ug/kg	68.7	16.8	1	02/27/23 07:30	02/27/23 12:53	135-98-8	
tert-Butylbenzene	**<21.6**	ug/kg	68.7	21.6	1	02/27/23 07:30	02/27/23 12:53	98-06-6	
Carbon tetrachloride	**<15.1**	ug/kg	68.7	15.1	1	02/27/23 07:30	02/27/23 12:53	56-23-5	
Chlorobenzene	**<8.2**	ug/kg	68.7	8.2	1	02/27/23 07:30	02/27/23 12:53	108-90-7	
Chloroethane	**<29.0**	ug/kg	343	29.0	1	02/27/23 07:30	02/27/23 12:53	75-00-3	
Chloroform	**<49.2**	ug/kg	343	49.2	1	02/27/23 07:30	02/27/23 12:53	67-66-3	
Chloromethane	**<26.1**	ug/kg	68.7	26.1	1	02/27/23 07:30	02/27/23 12:53	74-87-3	
2-Chlorotoluene	**<22.3**	ug/kg	68.7	22.3	1	02/27/23 07:30	02/27/23 12:53	95-49-8	
4-Chlorotoluene	**<26.1**	ug/kg	68.7	26.1	1	02/27/23 07:30	02/27/23 12:53	106-43-4	
1,2-Dibromo-3-chloropropane	**<53.3**	ug/kg	343	53.3	1	02/27/23 07:30	02/27/23 12:53	96-12-8	
Dibromochloromethane	**<235**	ug/kg	343	235	1	02/27/23 07:30	02/27/23 12:53	124-48-1	
1,2-Dibromoethane (EDB)	**<18.8**	ug/kg	68.7	18.8	1	02/27/23 07:30	02/27/23 12:53	106-93-4	
Dibromomethane	**<20.3**	ug/kg	68.7	20.3	1	02/27/23 07:30	02/27/23 12:53	74-95-3	
1,2-Dichlorobenzene	**<21.3**	ug/kg	68.7	21.3	1	02/27/23 07:30	02/27/23 12:53	95-50-1	
1,3-Dichlorobenzene	**<18.8**	ug/kg	68.7	18.8	1	02/27/23 07:30	02/27/23 12:53	541-73-1	
1,4-Dichlorobenzene	**<18.8**	ug/kg	68.7	18.8	1	02/27/23 07:30	02/27/23 12:53	106-46-7	
Dichlorodifluoromethane	**<29.5**	ug/kg	68.7	29.5	1	02/27/23 07:30	02/27/23 12:53	75-71-8	
1,1-Dichloroethane	**<17.6**	ug/kg	68.7	17.6	1	02/27/23 07:30	02/27/23 12:53	75-34-3	
1,2-Dichloroethane	**<15.8**	ug/kg	68.7	15.8	1	02/27/23 07:30	02/27/23 12:53	107-06-2	
1,1-Dichloroethene	**<22.8**	ug/kg	68.7	22.8	1	02/27/23 07:30	02/27/23 12:53	75-35-4	
cis-1,2-Dichloroethene	**<14.7**	ug/kg	68.7	14.7	1	02/27/23 07:30	02/27/23 12:53	156-59-2	
trans-1,2-Dichloroethene	**<14.8**	ug/kg	68.7	14.8	1	02/27/23 07:30	02/27/23 12:53	156-60-5	
1,2-Dichloropropane	**<16.3**	ug/kg	68.7	16.3	1	02/27/23 07:30	02/27/23 12:53	78-87-5	
1,3-Dichloropropane	**<15.0**	ug/kg	68.7	15.0	1	02/27/23 07:30	02/27/23 12:53	142-28-9	
2,2-Dichloropropane	**<18.5**	ug/kg	68.7	18.5	1	02/27/23 07:30	02/27/23 12:53	594-20-7	
1,1-Dichloropropene	**<22.3**	ug/kg	68.7	22.3	1	02/27/23 07:30	02/27/23 12:53	563-58-6	
cis-1,3-Dichloropropene	**<45.3**	ug/kg	343	45.3	1	02/27/23 07:30	02/27/23 12:53	10061-01-5	
trans-1,3-Dichloropropene	**<196**	ug/kg	343	196	1	02/27/23 07:30	02/27/23 12:53	10061-02-6	
Diisopropyl ether	**<17.0**	ug/kg	68.7	17.0	1	02/27/23 07:30	02/27/23 12:53	108-20-3	
Ethylbenzene	**<16.3**	ug/kg	68.7	16.3	1	02/27/23 07:30	02/27/23 12:53	100-41-4	
Hexachloro-1,3-butadiene	**<137**	ug/kg	343	137	1	02/27/23 07:30	02/27/23 12:53	87-68-3	
Isopropylbenzene (Cumene)	**<18.5**	ug/kg	68.7	18.5	1	02/27/23 07:30	02/27/23 12:53	98-82-8	
p-Isopropyltoluene	**25.6J**	ug/kg	68.7	20.9	1	02/27/23 07:30	02/27/23 12:53	99-87-6	
Methylene Chloride	**<19.1**	ug/kg	68.7	19.1	1	02/27/23 07:30	02/27/23 12:53	75-09-2	
Methyl-tert-butyl ether	**<20.2**	ug/kg	68.7	20.2	1	02/27/23 07:30	02/27/23 12:53	1634-04-4	
Naphthalene	**<21.4**	ug/kg	343	21.4	1	02/27/23 07:30	02/27/23 12:53	91-20-3	
n-Propylbenzene	**<16.5**	ug/kg	68.7	16.5	1	02/27/23 07:30	02/27/23 12:53	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2C **Lab ID: 40258659007** Collected: 02/24/23 11:15 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<17.6**	ug/kg	68.7	17.6	1	02/27/23 07:30	02/27/23 12:53	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.5**	ug/kg	68.7	16.5	1	02/27/23 07:30	02/27/23 12:53	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.9**	ug/kg	68.7	24.9	1	02/27/23 07:30	02/27/23 12:53	79-34-5	
Tetrachloroethene	**<26.7**	ug/kg	68.7	26.7	1	02/27/23 07:30	02/27/23 12:53	127-18-4	
Toluene	**<17.3**	ug/kg	68.7	17.3	1	02/27/23 07:30	02/27/23 12:53	108-88-3	
1,2,3-Trichlorobenzene	**<76.5**	ug/kg	343	76.5	1	02/27/23 07:30	02/27/23 12:53	87-61-6	
1,2,4-Trichlorobenzene	**<56.6**	ug/kg	343	56.6	1	02/27/23 07:30	02/27/23 12:53	120-82-1	
1,1,1-Trichloroethane	**<17.6**	ug/kg	68.7	17.6	1	02/27/23 07:30	02/27/23 12:53	71-55-6	
1,1,2-Trichloroethane	**<25.0**	ug/kg	68.7	25.0	1	02/27/23 07:30	02/27/23 12:53	79-00-5	
Trichloroethene	**<25.7**	ug/kg	68.7	25.7	1	02/27/23 07:30	02/27/23 12:53	79-01-6	
Trichlorofluoromethane	**<19.9**	ug/kg	68.7	19.9	1	02/27/23 07:30	02/27/23 12:53	75-69-4	
1,2,3-Trichloropropane	**<33.4**	ug/kg	68.7	33.4	1	02/27/23 07:30	02/27/23 12:53	96-18-4	
1,2,4-Trimethylbenzene	**<20.5**	ug/kg	68.7	20.5	1	02/27/23 07:30	02/27/23 12:53	95-63-6	
1,3,5-Trimethylbenzene	**<22.1**	ug/kg	68.7	22.1	1	02/27/23 07:30	02/27/23 12:53	108-67-8	
Vinyl chloride	**<13.9**	ug/kg	68.7	13.9	1	02/27/23 07:30	02/27/23 12:53	75-01-4	
Xylene (Total)	**<49.6**	ug/kg	206	49.6	1	02/27/23 07:30	02/27/23 12:53	1330-20-7	
Surrogates									
Toluene-d8 (S)	131	%	69-153		1	02/27/23 07:30	02/27/23 12:53	2037-26-5	
4-Bromofluorobenzene (S)	128	%	68-156		1	02/27/23 07:30	02/27/23 12:53	460-00-4	
1,2-Dichlorobenzene-d4 (S)	139	%	71-161		1	02/27/23 07:30	02/27/23 12:53	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**15.7**	%	0.10	0.10	1		02/27/23 11:37		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659008** Collected: 02/24/23 11:20 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**5.4**	mg/kg	2.7	1.6	1	03/01/23 06:06	03/01/23 15:17	7440-38-2	
Barium	**86.2**	mg/kg	0.55	0.16	1	03/01/23 06:06	03/01/23 15:17	7440-39-3	
Cadmium	**0.83**	mg/kg	0.55	0.15	1	03/01/23 06:06	03/01/23 15:17	7440-43-9	
Chromium	**21.4**	mg/kg	1.1	0.30	1	03/01/23 06:06	03/01/23 15:17	7440-47-3	
Lead	**17.5**	mg/kg	2.2	0.65	1	03/01/23 06:06	03/01/23 15:17	7439-92-1	
Selenium	**<1.4**	mg/kg	4.4	1.4	1	03/01/23 06:06	03/01/23 15:17	7782-49-2	
Silver	**<0.34**	mg/kg	1.1	0.34	1	03/01/23 06:06	03/01/23 15:17	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**<0.011**	mg/kg	0.039	0.011	1	03/08/23 08:45	03/09/23 10:29	7439-97-6	
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
Acenaphthene	**<282**	ug/kg	795	282	4	02/28/23 12:55	03/01/23 15:54	83-32-9	
Acenaphthylene	**<284**	ug/kg	795	284	4	02/28/23 12:55	03/01/23 15:54	208-96-8	
Anthracene	**<127**	ug/kg	795	127	4	02/28/23 12:55	03/01/23 15:54	120-12-7	
Benzo(a)anthracene	**<123**	ug/kg	795	123	4	02/28/23 12:55	03/01/23 15:54	56-55-3	
Benzo(a)pyrene	**<120**	ug/kg	795	120	4	02/28/23 12:55	03/01/23 15:54	50-32-8	
Benzo(b)fluoranthene	**<137**	ug/kg	795	137	4	02/28/23 12:55	03/01/23 15:54	205-99-2	
Benzo(g,h,i)perylene	**<208**	ug/kg	795	208	4	02/28/23 12:55	03/01/23 15:54	191-24-2	
Benzo(k)fluoranthene	**<190**	ug/kg	795	190	4	02/28/23 12:55	03/01/23 15:54	207-08-9	
4-Bromophenylphenyl ether	**<166**	ug/kg	795	166	4	02/28/23 12:55	03/01/23 15:54	101-55-3	
Butylbenzylphthalate	**<331**	ug/kg	795	331	4	02/28/23 12:55	03/01/23 15:54	85-68-7	CH
Carbazole	**<124**	ug/kg	795	124	4	02/28/23 12:55	03/01/23 15:54	86-74-8	
4-Chloro-3-methylphenol	**<247**	ug/kg	795	247	4	02/28/23 12:55	03/01/23 15:54	59-50-7	
4-Chloroaniline	**<131**	ug/kg	795	131	4	02/28/23 12:55	03/01/23 15:54	106-47-8	
bis(2-Chloroethoxy)methane	**<214**	ug/kg	795	214	4	02/28/23 12:55	03/01/23 15:54	111-91-1	
bis(2-Chloroethyl) ether	**<248**	ug/kg	795	248	4	02/28/23 12:55	03/01/23 15:54	111-44-4	
2-Chloronaphthalene	**<102**	ug/kg	795	102	4	02/28/23 12:55	03/01/23 15:54	91-58-7	
2-Chlorophenol	**<198**	ug/kg	795	198	4	02/28/23 12:55	03/01/23 15:54	95-57-8	
4-Chlorophenylphenyl ether	**<148**	ug/kg	795	148	4	02/28/23 12:55	03/01/23 15:54	7005-72-3	
Chrysene	**<119**	ug/kg	795	119	4	02/28/23 12:55	03/01/23 15:54	218-01-9	
Dibenz(a,h)anthracene	**<216**	ug/kg	795	216	4	02/28/23 12:55	03/01/23 15:54	53-70-3	
Dibenzofuran	**<96.2**	ug/kg	795	96.2	4	02/28/23 12:55	03/01/23 15:54	132-64-9	
1,2-Dichlorobenzene	**<250**	ug/kg	795	250	4	02/28/23 12:55	03/01/23 15:54	95-50-1	
1,3-Dichlorobenzene	**<110**	ug/kg	795	110	4	02/28/23 12:55	03/01/23 15:54	541-73-1	
1,4-Dichlorobenzene	**<111**	ug/kg	795	111	4	02/28/23 12:55	03/01/23 15:54	106-46-7	
3,3'-Dichlorobenzidine	**<216**	ug/kg	795	216	4	02/28/23 12:55	03/01/23 15:54	91-94-1	
2,4-Dichlorophenol	**<212**	ug/kg	795	212	4	02/28/23 12:55	03/01/23 15:54	120-83-2	
Diethylphthalate	**<132**	ug/kg	795	132	4	02/28/23 12:55	03/01/23 15:54	84-66-2	
2,4-Dimethylphenol	**<157**	ug/kg	795	157	4	02/28/23 12:55	03/01/23 15:54	105-67-9	
Dimethylphthalate	**<103**	ug/kg	795	103	4	02/28/23 12:55	03/01/23 15:54	131-11-3	
Di-n-butylphthalate	**<119**	ug/kg	795	119	4	02/28/23 12:55	03/01/23 15:54	84-74-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659008** Collected: 02/24/23 11:20 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270E Preparation Method: EPA 3546 Pace Analytical Services - Green Bay								
4,6-Dinitro-2-methylphenol	**<245**	ug/kg	795	245	4	02/28/23 12:55	03/01/23 15:54	534-52-1	
2,4-Dinitrophenol	**<625**	ug/kg	1570	625	4	02/28/23 12:55	03/01/23 15:54	51-28-5	
2,4-Dinitrotoluene	**<114**	ug/kg	795	114	4	02/28/23 12:55	03/01/23 15:54	121-14-2	
2,6-Dinitrotoluene	**<151**	ug/kg	795	151	4	02/28/23 12:55	03/01/23 15:54	606-20-2	
Di-n-octylphthalate	**<179**	ug/kg	795	179	4	02/28/23 12:55	03/01/23 15:54	117-84-0	CH
bis(2-Ethylhexyl)phthalate	**<271**	ug/kg	795	271	4	02/28/23 12:55	03/01/23 15:54	117-81-7	CH
Fluoranthene	**<112**	ug/kg	795	112	4	02/28/23 12:55	03/01/23 15:54	206-44-0	
Fluorene	**<92.9**	ug/kg	795	92.9	4	02/28/23 12:55	03/01/23 15:54	86-73-7	
Hexachloro-1,3-butadiene	**<202**	ug/kg	795	202	4	02/28/23 12:55	03/01/23 15:54	87-68-3	
Hexachlorobenzene	**<134**	ug/kg	795	134	4	02/28/23 12:55	03/01/23 15:54	118-74-1	
Hexachlorocyclopentadiene	**<188**	ug/kg	795	188	4	02/28/23 12:55	03/01/23 15:54	77-47-4	
Hexachloroethane	**<127**	ug/kg	795	127	4	02/28/23 12:55	03/01/23 15:54	67-72-1	
Indeno(1,2,3-cd)pyrene	**<172**	ug/kg	795	172	4	02/28/23 12:55	03/01/23 15:54	193-39-5	
Isophorone	**<122**	ug/kg	795	122	4	02/28/23 12:55	03/01/23 15:54	78-59-1	
2-Methylnaphthalene	**<206**	ug/kg	795	206	4	02/28/23 12:55	03/01/23 15:54	91-57-6	
2-Methylphenol(o-Cresol)	**<144**	ug/kg	795	144	4	02/28/23 12:55	03/01/23 15:54	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<146**	ug/kg	795	146	4	02/28/23 12:55	03/01/23 15:54		
Naphthalene	**<278**	ug/kg	795	278	4	02/28/23 12:55	03/01/23 15:54	91-20-3	
2-Nitroaniline	**<226**	ug/kg	795	226	4	02/28/23 12:55	03/01/23 15:54	88-74-4	
3-Nitroaniline	**<135**	ug/kg	795	135	4	02/28/23 12:55	03/01/23 15:54	99-09-2	
4-Nitroaniline	**<330**	ug/kg	795	330	4	02/28/23 12:55	03/01/23 15:54	100-01-6	
Nitrobenzene	**<161**	ug/kg	795	161	4	02/28/23 12:55	03/01/23 15:54	98-95-3	
2-Nitrophenol	**<251**	ug/kg	795	251	4	02/28/23 12:55	03/01/23 15:54	88-75-5	
4-Nitrophenol	**<200**	ug/kg	795	200	4	02/28/23 12:55	03/01/23 15:54	100-02-7	
N-Nitroso-di-n-propylamine	**<126**	ug/kg	795	126	4	02/28/23 12:55	03/01/23 15:54	621-64-7	
N-Nitrosodiphenylamine	**<209**	ug/kg	795	209	4	02/28/23 12:55	03/01/23 15:54	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<205**	ug/kg	795	205	4	02/28/23 12:55	03/01/23 15:54	108-60-1	
Pentachlorophenol	**<175**	ug/kg	795	175	4	02/28/23 12:55	03/01/23 15:54	87-86-5	
Phenanthrene	**<102**	ug/kg	795	102	4	02/28/23 12:55	03/01/23 15:54	85-01-8	
Phenol	**<189**	ug/kg	795	189	4	02/28/23 12:55	03/01/23 15:54	108-95-2	D3
Pyrene	**<176**	ug/kg	795	176	4	02/28/23 12:55	03/01/23 15:54	129-00-0	
1,2,4-Trichlorobenzene	**<89.8**	ug/kg	795	89.8	4	02/28/23 12:55	03/01/23 15:54	120-82-1	
2,4,5-Trichlorophenol	**<140**	ug/kg	795	140	4	02/28/23 12:55	03/01/23 15:54	95-95-4	
2,4,6-Trichlorophenol	**<121**	ug/kg	795	121	4	02/28/23 12:55	03/01/23 15:54	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	44	%	10-125		4	02/28/23 12:55	03/01/23 15:54	4165-60-0	
2-Fluorobiphenyl (S)	45	%	12-118		4	02/28/23 12:55	03/01/23 15:54	321-60-8	
Terphenyl-d14 (S)	57	%	10-124		4	02/28/23 12:55	03/01/23 15:54	1718-51-0	
Phenol-d6 (S)	40	%	10-125		4	02/28/23 12:55	03/01/23 15:54	13127-88-3	
2-Fluorophenol (S)	40	%	10-130		4	02/28/23 12:55	03/01/23 15:54	367-12-4	
2,4,6-Tribromophenol (S)	43	%	10-144		4	02/28/23 12:55	03/01/23 15:54	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659008** Collected: 02/24/23 11:20 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<16.4**	ug/kg	27.6	16.4	1	02/27/23 07:30	02/27/23 15:11	71-43-2	
Bromobenzene	**<26.9**	ug/kg	69.0	26.9	1	02/27/23 07:30	02/27/23 15:11	108-86-1	
Bromochloromethane	**<18.9**	ug/kg	69.0	18.9	1	02/27/23 07:30	02/27/23 15:11	74-97-5	
Bromodichloromethane	**<16.4**	ug/kg	69.0	16.4	1	02/27/23 07:30	02/27/23 15:11	75-27-4	
Bromoform	**<303**	ug/kg	345	303	1	02/27/23 07:30	02/27/23 15:11	75-25-2	
Bromomethane	**<96.7**	ug/kg	345	96.7	1	02/27/23 07:30	02/27/23 15:11	74-83-9	
n-Butylbenzene	**<31.6**	ug/kg	69.0	31.6	1	02/27/23 07:30	02/27/23 15:11	104-51-8	
sec-Butylbenzene	**<16.8**	ug/kg	69.0	16.8	1	02/27/23 07:30	02/27/23 15:11	135-98-8	
tert-Butylbenzene	**<21.7**	ug/kg	69.0	21.7	1	02/27/23 07:30	02/27/23 15:11	98-06-6	
Carbon tetrachloride	**<15.2**	ug/kg	69.0	15.2	1	02/27/23 07:30	02/27/23 15:11	56-23-5	
Chlorobenzene	**<8.3**	ug/kg	69.0	8.3	1	02/27/23 07:30	02/27/23 15:11	108-90-7	
Chloroethane	**<29.1**	ug/kg	345	29.1	1	02/27/23 07:30	02/27/23 15:11	75-00-3	
Chloroform	**<49.4**	ug/kg	345	49.4	1	02/27/23 07:30	02/27/23 15:11	67-66-3	
Chloromethane	**<26.2**	ug/kg	69.0	26.2	1	02/27/23 07:30	02/27/23 15:11	74-87-3	
2-Chlorotoluene	**<22.3**	ug/kg	69.0	22.3	1	02/27/23 07:30	02/27/23 15:11	95-49-8	
4-Chlorotoluene	**<26.2**	ug/kg	69.0	26.2	1	02/27/23 07:30	02/27/23 15:11	106-43-4	
1,2-Dibromo-3-chloropropane	**<53.5**	ug/kg	345	53.5	1	02/27/23 07:30	02/27/23 15:11	96-12-8	
Dibromochloromethane	**<236**	ug/kg	345	236	1	02/27/23 07:30	02/27/23 15:11	124-48-1	
1,2-Dibromoethane (EDB)	**<18.9**	ug/kg	69.0	18.9	1	02/27/23 07:30	02/27/23 15:11	106-93-4	
Dibromomethane	**<20.4**	ug/kg	69.0	20.4	1	02/27/23 07:30	02/27/23 15:11	74-95-3	
1,2-Dichlorobenzene	**<21.4**	ug/kg	69.0	21.4	1	02/27/23 07:30	02/27/23 15:11	95-50-1	
1,3-Dichlorobenzene	**<18.9**	ug/kg	69.0	18.9	1	02/27/23 07:30	02/27/23 15:11	541-73-1	
1,4-Dichlorobenzene	**<18.9**	ug/kg	69.0	18.9	1	02/27/23 07:30	02/27/23 15:11	106-46-7	
Dichlorodifluoromethane	**<29.7**	ug/kg	69.0	29.7	1	02/27/23 07:30	02/27/23 15:11	75-71-8	
1,1-Dichloroethane	**<17.7**	ug/kg	69.0	17.7	1	02/27/23 07:30	02/27/23 15:11	75-34-3	
1,2-Dichloroethane	**<15.9**	ug/kg	69.0	15.9	1	02/27/23 07:30	02/27/23 15:11	107-06-2	
1,1-Dichloroethene	**<22.9**	ug/kg	69.0	22.9	1	02/27/23 07:30	02/27/23 15:11	75-35-4	
cis-1,2-Dichloroethene	**<14.8**	ug/kg	69.0	14.8	1	02/27/23 07:30	02/27/23 15:11	156-59-2	
trans-1,2-Dichloroethene	**<14.9**	ug/kg	69.0	14.9	1	02/27/23 07:30	02/27/23 15:11	156-60-5	
1,2-Dichloropropane	**<16.4**	ug/kg	69.0	16.4	1	02/27/23 07:30	02/27/23 15:11	78-87-5	
1,3-Dichloropropane	**<15.0**	ug/kg	69.0	15.0	1	02/27/23 07:30	02/27/23 15:11	142-28-9	
2,2-Dichloropropane	**<18.6**	ug/kg	69.0	18.6	1	02/27/23 07:30	02/27/23 15:11	594-20-7	
1,1-Dichloropropene	**<22.3**	ug/kg	69.0	22.3	1	02/27/23 07:30	02/27/23 15:11	563-58-6	
cis-1,3-Dichloropropene	**<45.5**	ug/kg	345	45.5	1	02/27/23 07:30	02/27/23 15:11	10061-01-5	
trans-1,3-Dichloropropene	**<197**	ug/kg	345	197	1	02/27/23 07:30	02/27/23 15:11	10061-02-6	
Diisopropyl ether	**<17.1**	ug/kg	69.0	17.1	1	02/27/23 07:30	02/27/23 15:11	108-20-3	
Ethylbenzene	**<16.4**	ug/kg	69.0	16.4	1	02/27/23 07:30	02/27/23 15:11	100-41-4	
Hexachloro-1,3-butadiene	**<137**	ug/kg	345	137	1	02/27/23 07:30	02/27/23 15:11	87-68-3	
Isopropylbenzene (Cumene)	**<18.6**	ug/kg	69.0	18.6	1	02/27/23 07:30	02/27/23 15:11	98-82-8	
p-Isopropyltoluene	**<21.0**	ug/kg	69.0	21.0	1	02/27/23 07:30	02/27/23 15:11	99-87-6	
Methylene Chloride	**<19.2**	ug/kg	69.0	19.2	1	02/27/23 07:30	02/27/23 15:11	75-09-2	
Methyl-tert-butyl ether	**<20.3**	ug/kg	69.0	20.3	1	02/27/23 07:30	02/27/23 15:11	1634-04-4	
Naphthalene	**<21.5**	ug/kg	345	21.5	1	02/27/23 07:30	02/27/23 15:11	91-20-3	
n-Propylbenzene	**<16.5**	ug/kg	69.0	16.5	1	02/27/23 07:30	02/27/23 15:11	103-65-1	

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ANALYTICAL RESULTS

Project: 128TH ARW
Pace Project No.: 40258659

Sample: OWS 2B **Lab ID: 40258659008** Collected: 02/24/23 11:20 Received: 02/25/23 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Styrene	**<17.7**	ug/kg	69.0	17.7	1	02/27/23 07:30	02/27/23 15:11	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.5**	ug/kg	69.0	16.5	1	02/27/23 07:30	02/27/23 15:11	630-20-6	
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	69.0	25.0	1	02/27/23 07:30	02/27/23 15:11	79-34-5	
Tetrachloroethene	**<26.8**	ug/kg	69.0	26.8	1	02/27/23 07:30	02/27/23 15:11	127-18-4	
Toluene	**<17.4**	ug/kg	69.0	17.4	1	02/27/23 07:30	02/27/23 15:11	108-88-3	
1,2,3-Trichlorobenzene	**<76.8**	ug/kg	345	76.8	1	02/27/23 07:30	02/27/23 15:11	87-61-6	
1,2,4-Trichlorobenzene	**<56.8**	ug/kg	345	56.8	1	02/27/23 07:30	02/27/23 15:11	120-82-1	
1,1,1-Trichloroethane	**<17.7**	ug/kg	69.0	17.7	1	02/27/23 07:30	02/27/23 15:11	71-55-6	
1,1,2-Trichloroethane	**<25.1**	ug/kg	69.0	25.1	1	02/27/23 07:30	02/27/23 15:11	79-00-5	
Trichloroethene	**<25.8**	ug/kg	69.0	25.8	1	02/27/23 07:30	02/27/23 15:11	79-01-6	
Trichlorofluoromethane	**<20.0**	ug/kg	69.0	20.0	1	02/27/23 07:30	02/27/23 15:11	75-69-4	
1,2,3-Trichloropropane	**<33.5**	ug/kg	69.0	33.5	1	02/27/23 07:30	02/27/23 15:11	96-18-4	
1,2,4-Trimethylbenzene	**<20.5**	ug/kg	69.0	20.5	1	02/27/23 07:30	02/27/23 15:11	95-63-6	
1,3,5-Trimethylbenzene	**<22.2**	ug/kg	69.0	22.2	1	02/27/23 07:30	02/27/23 15:11	108-67-8	
Vinyl chloride	**<13.9**	ug/kg	69.0	13.9	1	02/27/23 07:30	02/27/23 15:11	75-01-4	
Xylene (Total)	**<49.8**	ug/kg	207	49.8	1	02/27/23 07:30	02/27/23 15:11	1330-20-7	
Surrogates									
Toluene-d8 (S)	92	%	69-153		1	02/27/23 07:30	02/27/23 15:11	2037-26-5	
4-Bromofluorobenzene (S)	130	%	68-156		1	02/27/23 07:30	02/27/23 15:11	460-00-4	
1,2-Dichlorobenzene-d4 (S)	130	%	71-161		1	02/27/23 07:30	02/27/23 15:11	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**15.9**	%	0.10	0.10	1		02/27/23 11:37		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

QC Batch: 439397
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

METHOD BLANK: 2523774 Matrix: Solid
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.010	0.035	03/09/23 09:54	

LABORATORY CONTROL SAMPLE: 2523775

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.83	0.84	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2523776 2523777

Parameter	Units	40258950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.011	0.92	0.92	0.93	0.92	100	101	85-115	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

QC Batch: 438789
QC Batch Method: EPA 3050B
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

METHOD BLANK: 2520862 Matrix: Solid
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.5	2.5	03/01/23 14:48	
Barium	mg/kg	<0.15	0.50	03/01/23 14:48	
Cadmium	mg/kg	<0.13	0.50	03/01/23 14:48	
Chromium	mg/kg	<0.28	1.0	03/01/23 14:48	
Lead	mg/kg	0.62J	2.0	03/01/23 14:48	
Selenium	mg/kg	<1.3	4.0	03/01/23 14:48	
Silver	mg/kg	<0.31	1.0	03/01/23 14:48	

LABORATORY CONTROL SAMPLE: 2520863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	25	24.2	97	80-120	
Barium	mg/kg	25	25.8	103	80-120	
Cadmium	mg/kg	25	25.9	104	80-120	
Chromium	mg/kg	25	26.0	104	80-120	
Lead	mg/kg	25	26.6	106	80-120	
Selenium	mg/kg	25	26.4	106	80-120	
Silver	mg/kg	12.5	12.7	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2520864 2520865

Parameter	Units	40258659001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	4.8	29	29.1	34.1	31.9	101	93	75-125	7	20	
Barium	mg/kg	58.3	29	29.1	111	108	181	170	75-125	3	20	M0
Cadmium	mg/kg	0.37J	29	29.1	30.6	30.9	104	105	75-125	1	20	
Chromium	mg/kg	15.6	29	29.1	49.2	47.8	116	111	75-125	3	20	
Lead	mg/kg	35.4	29	29.1	81.8	82.4	160	161	75-125	1	20	M0
Selenium	mg/kg	<1.5	29	29.1	30.6	30.9	105	105	75-125	1	20	
Silver	mg/kg	<0.36	14.5	14.6	15.0	15.2	103	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

QC Batch: 438695
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

METHOD BLANK: 2520623 Matrix: Solid
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<12.0	50.0	02/27/23 11:15	
1,1,1-Trichloroethane	ug/kg	<12.8	50.0	02/27/23 11:15	
1,1,2,2-Tetrachloroethane	ug/kg	<18.1	50.0	02/27/23 11:15	
1,1,2-Trichloroethane	ug/kg	<18.2	50.0	02/27/23 11:15	
1,1-Dichloroethane	ug/kg	<12.8	50.0	02/27/23 11:15	
1,1-Dichloroethene	ug/kg	<16.6	50.0	02/27/23 11:15	
1,1-Dichloropropene	ug/kg	<16.2	50.0	02/27/23 11:15	
1,2,3-Trichlorobenzene	ug/kg	<55.7	250	02/27/23 11:15	
1,2,3-Trichloropropane	ug/kg	<24.3	50.0	02/27/23 11:15	
1,2,4-Trichlorobenzene	ug/kg	<41.2	250	02/27/23 11:15	
1,2,4-Trimethylbenzene	ug/kg	<14.9	50.0	02/27/23 11:15	
1,2-Dibromo-3-chloropropane	ug/kg	<38.8	250	02/27/23 11:15	
1,2-Dibromoethane (EDB)	ug/kg	<13.7	50.0	02/27/23 11:15	
1,2-Dichlorobenzene	ug/kg	<15.5	50.0	02/27/23 11:15	
1,2-Dichloroethane	ug/kg	<11.5	50.0	02/27/23 11:15	
1,2-Dichloropropane	ug/kg	<11.9	50.0	02/27/23 11:15	
1,3,5-Trimethylbenzene	ug/kg	<16.1	50.0	02/27/23 11:15	
1,3-Dichlorobenzene	ug/kg	<13.7	50.0	02/27/23 11:15	
1,3-Dichloropropane	ug/kg	<10.9	50.0	02/27/23 11:15	
1,4-Dichlorobenzene	ug/kg	<13.7	50.0	02/27/23 11:15	
2,2-Dichloropropane	ug/kg	<13.5	50.0	02/27/23 11:15	
2-Chlorotoluene	ug/kg	<16.2	50.0	02/27/23 11:15	
4-Chlorotoluene	ug/kg	<19.0	50.0	02/27/23 11:15	
Benzene	ug/kg	<11.9	20.0	02/27/23 11:15	
Bromobenzene	ug/kg	<19.5	50.0	02/27/23 11:15	
Bromochloromethane	ug/kg	<13.7	50.0	02/27/23 11:15	
Bromodichloromethane	ug/kg	<11.9	50.0	02/27/23 11:15	
Bromoform	ug/kg	<220	250	02/27/23 11:15	
Bromomethane	ug/kg	<70.1	250	02/27/23 11:15	
Carbon tetrachloride	ug/kg	<11.0	50.0	02/27/23 11:15	
Chlorobenzene	ug/kg	<6.0	50.0	02/27/23 11:15	
Chloroethane	ug/kg	<21.1	250	02/27/23 11:15	
Chloroform	ug/kg	<35.8	250	02/27/23 11:15	
Chloromethane	ug/kg	<19.0	50.0	02/27/23 11:15	
cis-1,2-Dichloroethene	ug/kg	<10.7	50.0	02/27/23 11:15	
cis-1,3-Dichloropropene	ug/kg	<33.0	250	02/27/23 11:15	
Dibromochloromethane	ug/kg	<171	250	02/27/23 11:15	
Dibromomethane	ug/kg	<14.8	50.0	02/27/23 11:15	
Dichlorodifluoromethane	ug/kg	<21.5	50.0	02/27/23 11:15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

METHOD BLANK: 2520623 Matrix: Solid
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/kg	<12.4	50.0	02/27/23 11:15	
Ethylbenzene	ug/kg	<11.9	50.0	02/27/23 11:15	
Hexachloro-1,3-butadiene	ug/kg	<99.4	250	02/27/23 11:15	
Isopropylbenzene (Cumene)	ug/kg	<13.5	50.0	02/27/23 11:15	
Methyl-tert-butyl ether	ug/kg	<14.7	50.0	02/27/23 11:15	
Methylene Chloride	ug/kg	<13.9	50.0	02/27/23 11:15	
n-Butylbenzene	ug/kg	<22.9	50.0	02/27/23 11:15	
n-Propylbenzene	ug/kg	<12.0	50.0	02/27/23 11:15	
Naphthalene	ug/kg	<15.6	250	02/27/23 11:15	
p-Isopropyltoluene	ug/kg	<15.2	50.0	02/27/23 11:15	
sec-Butylbenzene	ug/kg	<12.2	50.0	02/27/23 11:15	
Styrene	ug/kg	<12.8	50.0	02/27/23 11:15	
tert-Butylbenzene	ug/kg	<15.7	50.0	02/27/23 11:15	
Tetrachloroethene	ug/kg	<19.4	50.0	02/27/23 11:15	
Toluene	ug/kg	<12.6	50.0	02/27/23 11:15	
trans-1,2-Dichloroethene	ug/kg	<10.8	50.0	02/27/23 11:15	
trans-1,3-Dichloropropene	ug/kg	<143	250	02/27/23 11:15	
Trichloroethene	ug/kg	<18.7	50.0	02/27/23 11:15	
Trichlorofluoromethane	ug/kg	<14.5	50.0	02/27/23 11:15	
Vinyl chloride	ug/kg	<10.1	50.0	02/27/23 11:15	
Xylene (Total)	ug/kg	<36.1	150	02/27/23 11:15	
1,2-Dichlorobenzene-d4 (S)	%	104	71-161	02/27/23 11:15	
4-Bromofluorobenzene (S)	%	106	68-156	02/27/23 11:15	
Toluene-d8 (S)	%	78	69-153	02/27/23 11:15	

LABORATORY CONTROL SAMPLE: 2520624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2540	101	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2520	101	70-130	
1,1,2-Trichloroethane	ug/kg	2500	2470	99	70-130	
1,1-Dichloroethane	ug/kg	2500	2560	102	70-130	
1,1-Dichloroethene	ug/kg	2500	2520	101	77-120	
1,2,4-Trichlorobenzene	ug/kg	2500	2280	91	67-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2420	97	70-130	
1,2-Dibromoethane (EDB)	ug/kg	2500	2470	99	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2440	97	70-130	
1,2-Dichloroethane	ug/kg	2500	2680	107	70-130	
1,2-Dichloropropane	ug/kg	2500	2610	105	80-123	
1,3-Dichlorobenzene	ug/kg	2500	2410	97	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2270	91	70-130	
Benzene	ug/kg	2500	2620	105	70-130	
Bromodichloromethane	ug/kg	2500	2670	107	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

LABORATORY CONTROL SAMPLE: 2520624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/kg	2500	2620	105	60-130	
Bromomethane	ug/kg	2500	2770	111	45-153	
Carbon tetrachloride	ug/kg	2500	2710	108	70-130	
Chlorobenzene	ug/kg	2500	2510	100	70-130	
Chloroethane	ug/kg	2500	2760	110	55-160	
Chloroform	ug/kg	2500	2560	103	80-120	
Chloromethane	ug/kg	2500	2070	83	47-130	
cis-1,2-Dichloroethene	ug/kg	2500	2410	97	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2580	103	70-130	
Dibromochloromethane	ug/kg	2500	2510	101	70-130	
Dichlorodifluoromethane	ug/kg	2500	1630	65	16-83	
Ethylbenzene	ug/kg	2500	2500	100	80-120	
Isopropylbenzene (Cumene)	ug/kg	2500	2470	99	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2620	105	65-130	
Methylene Chloride	ug/kg	2500	2480	99	70-130	
Styrene	ug/kg	2500	3030	121	70-130	
Tetrachloroethene	ug/kg	2500	2450	98	70-130	
Toluene	ug/kg	2500	2470	99	80-120	
trans-1,2-Dichloroethene	ug/kg	2500	2600	104	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2490	100	70-130	
Trichloroethene	ug/kg	2500	2580	103	70-130	
Trichlorofluoromethane	ug/kg	2500	2610	104	70-130	
Vinyl chloride	ug/kg	2500	2170	87	59-114	
Xylene (Total)	ug/kg	7500	7480	100	70-130	
1,2-Dichlorobenzene-d4 (S)	%			102	71-161	
4-Bromofluorobenzene (S)	%			107	68-156	
Toluene-d8 (S)	%			100	69-153	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2520625 2520626

Parameter	Units	40258659007 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/kg	<17.6	1380	1380	1030	1010	75	73	69-130	2	20	
1,1,2,2-Tetrachloroethane	ug/kg	<24.9	1380	1380	1490	1400	109	102	70-130	7	20	
1,1,2-Trichloroethane	ug/kg	<25.0	1380	1380	1360	1430	99	104	70-130	5	20	
1,1-Dichloroethane	ug/kg	<17.6	1380	1380	1240	1210	90	88	70-130	2	20	
1,1-Dichloroethene	ug/kg	<22.8	1380	1380	974	921	71	67	55-120	6	22	
1,2,4-Trichlorobenzene	ug/kg	<56.6	1380	1380	1490	1410	108	103	67-130	6	20	
1,2-Dibromo-3-chloropropane	ug/kg	<53.3	1380	1380	1390	1290	102	94	70-130	8	22	
1,2-Dibromoethane (EDB)	ug/kg	<18.8	1380	1380	1420	1320	103	96	70-130	7	20	
1,2-Dichlorobenzene	ug/kg	<21.3	1380	1380	1510	1490	110	108	70-130	1	20	
1,2-Dichloroethane	ug/kg	<15.8	1380	1380	1380	1420	100	103	70-130	3	20	
1,2-Dichloropropane	ug/kg	<16.3	1380	1380	1350	1380	98	101	80-123	2	20	
1,3-Dichlorobenzene	ug/kg	<18.8	1380	1380	1500	1430	109	104	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: 128TH ARW
Pace Project No.: 40258659

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2520625 2520626

Parameter	Units	40258659007 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/kg	<18.8	1380	1380	1420	1360	103	99	70-130	4	20	
Benzene	ug/kg	<16.3	1380	1380	1270	1270	93	92	70-130	0	20	
Bromodichloromethane	ug/kg	<16.3	1380	1380	1340	1380	98	100	70-130	3	20	
Bromoform	ug/kg	<302	1380	1380	1390	1340	101	97	60-130	4	20	
Bromomethane	ug/kg	<96.3	1380	1380	1470	1490	107	109	38-153	1	20	
Carbon tetrachloride	ug/kg	<15.1	1380	1380	977	921	71	67	62-130	6	20	
Chlorobenzene	ug/kg	<8.2	1380	1380	1360	1320	99	96	70-130	3	20	
Chloroethane	ug/kg	<29.0	1380	1380	1340	1270	98	93	53-160	5	24	
Chloroform	ug/kg	<49.2	1380	1380	1360	1420	99	103	80-120	4	20	
Chloromethane	ug/kg	<26.1	1380	1380	993	940	72	68	10-130	5	20	
cis-1,2-Dichloroethene	ug/kg	<14.7	1380	1380	1170	1270	85	92	70-130	8	20	
cis-1,3-Dichloropropene	ug/kg	<45.3	1380	1380	1320	1360	96	99	70-130	3	20	
Dibromochloromethane	ug/kg	<235	1380	1380	1320	1340	96	98	70-130	2	20	
Dichlorodifluoromethane	ug/kg	<29.5	1380	1380	487	484	35	35	10-83	1	31	
Ethylbenzene	ug/kg	<16.3	1380	1380	1230	1180	90	86	80-120	4	20	
Isopropylbenzene (Cumene)	ug/kg	<18.5	1380	1380	1180	1090	86	79	70-130	8	20	
Methyl-tert-butyl ether	ug/kg	<20.2	1380	1380	1350	1390	98	101	66-130	3	20	
Methylene Chloride	ug/kg	<19.1	1380	1380	1310	1390	95	101	70-130	6	20	
Styrene	ug/kg	<17.6	1380	1380	1590	1540	116	112	70-130	3	20	
Tetrachloroethene	ug/kg	<26.7	1380	1380	1090	1040	80	76	69-130	4	20	
Toluene	ug/kg	<17.3	1380	1380	1270	1190	92	86	79-120	7	20	
trans-1,2-Dichloroethene	ug/kg	<14.8	1380	1380	1180	1210	86	88	70-130	3	20	
trans-1,3-Dichloropropene	ug/kg	<196	1380	1380	1350	1310	98	95	69-130	3	20	
Trichloroethene	ug/kg	<25.7	1380	1380	1210	1150	88	84	70-130	5	20	
Trichlorofluoromethane	ug/kg	<19.9	1380	1380	801	804	58	59	50-130	0	22	
Vinyl chloride	ug/kg	<13.9	1380	1380	867	808	63	59	26-114	7	20	
Xylene (Total)	ug/kg	<49.6	4120	4120	3900	3790	95	92	70-130	3	20	
1,2-Dichlorobenzene-d4 (S)	%						143	144	71-161			
4-Bromofluorobenzene (S)	%						145	142	68-156			
Toluene-d8 (S)	%						130	131	69-153			

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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: 128TH ARW
Pace Project No.: 40258659

QC Batch: 438781
QC Batch Method: EPA 3546
Analysis Method: EPA 8270E
Analysis Description: 8270E Solid MSSV Microwave
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

METHOD BLANK: 2520838
Matrix: Solid
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	<18.9	167	03/01/23 11:38	
1,2-Dichlorobenzene	ug/kg	<52.5	167	03/01/23 11:38	
1,3-Dichlorobenzene	ug/kg	<23.1	167	03/01/23 11:38	
1,4-Dichlorobenzene	ug/kg	<23.3	167	03/01/23 11:38	
2,2'-Oxybis(1-chloropropane)	ug/kg	<43.0	167	03/01/23 11:38	
2,4,5-Trichlorophenol	ug/kg	<29.5	167	03/01/23 11:38	
2,4,6-Trichlorophenol	ug/kg	<25.5	167	03/01/23 11:38	
2,4-Dichlorophenol	ug/kg	<44.6	167	03/01/23 11:38	
2,4-Dimethylphenol	ug/kg	<33.0	167	03/01/23 11:38	
2,4-Dinitrophenol	ug/kg	<131	330	03/01/23 11:38	
2,4-Dinitrotoluene	ug/kg	<23.9	167	03/01/23 11:38	
2,6-Dinitrotoluene	ug/kg	<31.7	167	03/01/23 11:38	
2-Chloronaphthalene	ug/kg	<21.4	167	03/01/23 11:38	
2-Chlorophenol	ug/kg	<41.7	167	03/01/23 11:38	
2-Methylnaphthalene	ug/kg	<43.3	167	03/01/23 11:38	
2-Methylphenol(o-Cresol)	ug/kg	<30.3	167	03/01/23 11:38	
2-Nitroaniline	ug/kg	<47.6	167	03/01/23 11:38	
2-Nitrophenol	ug/kg	<52.7	167	03/01/23 11:38	
3&4-Methylphenol(m&p Cresol)	ug/kg	<30.6	167	03/01/23 11:38	
3,3'-Dichlorobenzidine	ug/kg	<45.3	167	03/01/23 11:38	
3-Nitroaniline	ug/kg	<28.4	167	03/01/23 11:38	
4,6-Dinitro-2-methylphenol	ug/kg	<51.4	167	03/01/23 11:38	
4-Bromophenylphenyl ether	ug/kg	<35.0	167	03/01/23 11:38	
4-Chloro-3-methylphenol	ug/kg	<51.9	167	03/01/23 11:38	
4-Chloroaniline	ug/kg	<27.4	167	03/01/23 11:38	
4-Chlorophenylphenyl ether	ug/kg	<31.1	167	03/01/23 11:38	
4-Nitroaniline	ug/kg	<69.3	167	03/01/23 11:38	
4-Nitrophenol	ug/kg	<42.0	167	03/01/23 11:38	
Acenaphthene	ug/kg	<59.2	167	03/01/23 11:38	
Acenaphthylene	ug/kg	<59.5	167	03/01/23 11:38	
Anthracene	ug/kg	<26.7	167	03/01/23 11:38	
Benzo(a)anthracene	ug/kg	<25.9	167	03/01/23 11:38	
Benzo(a)pyrene	ug/kg	<25.1	167	03/01/23 11:38	
Benzo(b)fluoranthene	ug/kg	<28.7	167	03/01/23 11:38	
Benzo(g,h,i)perylene	ug/kg	<43.7	167	03/01/23 11:38	
Benzo(k)fluoranthene	ug/kg	<40.0	167	03/01/23 11:38	
bis(2-Chloroethoxy)methane	ug/kg	<45.0	167	03/01/23 11:38	
bis(2-Chloroethyl) ether	ug/kg	<52.1	167	03/01/23 11:38	
bis(2-Ethylhexyl)phthalate	ug/kg	<57.0	167	03/01/23 11:38	CH

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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: 128TH ARW
Pace Project No.: 40258659

METHOD BLANK: 2520838 Matrix: Solid
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Butylbenzylphthalate	ug/kg	<69.5	167	03/01/23 11:38	CH
Carbazole	ug/kg	<26.1	167	03/01/23 11:38	
Chrysene	ug/kg	<25.0	167	03/01/23 11:38	
Di-n-butylphthalate	ug/kg	<24.9	167	03/01/23 11:38	
Di-n-octylphthalate	ug/kg	<37.5	167	03/01/23 11:38	CH
Dibenz(a,h)anthracene	ug/kg	<45.3	167	03/01/23 11:38	
Dibenzofuran	ug/kg	<20.2	167	03/01/23 11:38	
Diethylphthalate	ug/kg	<27.7	167	03/01/23 11:38	
Dimethylphthalate	ug/kg	<21.7	167	03/01/23 11:38	
Fluoranthene	ug/kg	<23.6	167	03/01/23 11:38	
Fluorene	ug/kg	<19.5	167	03/01/23 11:38	
Hexachloro-1,3-butadiene	ug/kg	<42.5	167	03/01/23 11:38	
Hexachlorobenzene	ug/kg	<28.1	167	03/01/23 11:38	
Hexachlorocyclopentadiene	ug/kg	<39.5	167	03/01/23 11:38	
Hexachloroethane	ug/kg	<26.7	167	03/01/23 11:38	
Indeno(1,2,3-cd)pyrene	ug/kg	46.5J	167	03/01/23 11:38	
Isophorone	ug/kg	<25.7	167	03/01/23 11:38	
N-Nitroso-di-n-propylamine	ug/kg	<26.5	167	03/01/23 11:38	
N-Nitrosodiphenylamine	ug/kg	<44.0	167	03/01/23 11:38	
Naphthalene	ug/kg	<58.4	167	03/01/23 11:38	
Nitrobenzene	ug/kg	<33.8	167	03/01/23 11:38	
Pentachlorophenol	ug/kg	<36.8	167	03/01/23 11:38	
Phenanthrene	ug/kg	<21.4	167	03/01/23 11:38	
Phenol	ug/kg	<39.6	167	03/01/23 11:38	
Pyrene	ug/kg	<37.0	167	03/01/23 11:38	
2,4,6-Tribromophenol (S)	%	81	10-144	03/01/23 11:38	
2-Fluorobiphenyl (S)	%	83	12-118	03/01/23 11:38	
2-Fluorophenol (S)	%	71	10-130	03/01/23 11:38	
Nitrobenzene-d5 (S)	%	71	10-125	03/01/23 11:38	
Phenol-d6 (S)	%	68	10-125	03/01/23 11:38	
Terphenyl-d14 (S)	%	100	10-124	03/01/23 11:38	

LABORATORY CONTROL SAMPLE: 2520839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	1460	87	70-130	
1,2-Dichlorobenzene	ug/kg	1670	1530	92	66-130	
1,3-Dichlorobenzene	ug/kg	1670	1510	91	66-130	
1,4-Dichlorobenzene	ug/kg	1670	1540	92	64-130	
2,2'-Oxybis(1-chloropropane)	ug/kg	1670	1600	96	65-130	
2,4,5-Trichlorophenol	ug/kg	1670	1580	95	70-125	
2,4,6-Trichlorophenol	ug/kg	1670	1560	93	70-124	
2,4-Dichlorophenol	ug/kg	1670	1490	90	70-121	

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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: 128TH ARW
Pace Project No.: 40258659

LABORATORY CONTROL SAMPLE: 2520839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dimethylphenol	ug/kg	1670	1510	91	70-130	
2,4-Dinitrophenol	ug/kg	1670	1050	63	26-103	
2,4-Dinitrotoluene	ug/kg	1670	1790	107	70-130	
2,6-Dinitrotoluene	ug/kg	1670	1770	106	70-130	
2-Chloronaphthalene	ug/kg	1670	1660	100	70-130	
2-Chlorophenol	ug/kg	1670	1530	92	67-130	
2-Methylnaphthalene	ug/kg	1670	1460	88	70-130	
2-Methylphenol(o-Cresol)	ug/kg	1670	1560	94	69-130	
2-Nitroaniline	ug/kg	1670	1690	102	70-124	
2-Nitrophenol	ug/kg	1670	1540	92	70-130	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1380	83	70-130	
3,3'-Dichlorobenzidine	ug/kg	1670	1250	75	48-112	
3-Nitroaniline	ug/kg	1670	1480	89	57-121	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1610	96	59-115	
4-Bromophenylphenyl ether	ug/kg	1670	1560	94	70-130	
4-Chloro-3-methylphenol	ug/kg	1670	1480	89	70-130	
4-Chloroaniline	ug/kg	1670	1050	63	45-130	
4-Chlorophenylphenyl ether	ug/kg	1670	1550	93	70-130	
4-Nitroaniline	ug/kg	1670	1160	69	62-127	
4-Nitrophenol	ug/kg	1670	1390	84	50-126	
Acenaphthene	ug/kg	1670	1580	95	70-130	
Acenaphthylene	ug/kg	1670	1710	103	70-130	
Anthracene	ug/kg	1670	1680	101	70-130	
Benzo(a)anthracene	ug/kg	1670	1570	94	70-130	
Benzo(a)pyrene	ug/kg	1670	1490	90	70-130	
Benzo(b)fluoranthene	ug/kg	1670	1330	80	70-130	
Benzo(g,h,i)perylene	ug/kg	1670	1160	70	65-130	
Benzo(k)fluoranthene	ug/kg	1670	1780	107	70-130	
bis(2-Chloroethoxy)methane	ug/kg	1670	1420	85	70-130	
bis(2-Chloroethyl) ether	ug/kg	1670	1420	85	68-130	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	2010	121	70-130	CH
Butylbenzylphthalate	ug/kg	1670	1970	118	70-130	CH
Carbazole	ug/kg	1670	1620	97	70-130	
Chrysene	ug/kg	1670	1850	111	70-130	
Di-n-butylphthalate	ug/kg	1670	1760	106	70-130	
Di-n-octylphthalate	ug/kg	1670	2030	122	67-134	CH
Dibenz(a,h)anthracene	ug/kg	1670	1320	79	68-130	
Dibenzofuran	ug/kg	1670	1650	99	70-130	
Diethylphthalate	ug/kg	1670	1690	101	70-130	
Dimethylphthalate	ug/kg	1670	1650	99	70-130	
Fluoranthene	ug/kg	1670	1570	94	70-130	
Fluorene	ug/kg	1670	1660	100	70-130	
Hexachloro-1,3-butadiene	ug/kg	1670	1410	85	67-130	
Hexachlorobenzene	ug/kg	1670	1560	93	70-130	
Hexachlorocyclopentadiene	ug/kg	1670	1160	70	54-114	
Hexachloroethane	ug/kg	1670	1650	99	64-130	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1240	74	63-130	

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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: 128TH ARW
Pace Project No.: 40258659

LABORATORY CONTROL SAMPLE: 2520839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isophorone	ug/kg	1670	1470	89	70-130	
N-Nitroso-di-n-propylamine	ug/kg	1670	1500	90	70-130	
N-Nitrosodiphenylamine	ug/kg	1670	1650	99	70-130	
Naphthalene	ug/kg	1670	1490	90	70-130	
Nitrobenzene	ug/kg	1670	1490	90	70-130	
Pentachlorophenol	ug/kg	1670	1190	71	47-108	
Phenanthrene	ug/kg	1670	1650	99	70-130	
Phenol	ug/kg	1670	1450	87	67-130	
Pyrene	ug/kg	1670	1780	107	70-130	
2,4,6-Tribromophenol (S)	%			94	10-144	
2-Fluorobiphenyl (S)	%			93	12-118	
2-Fluorophenol (S)	%			78	10-130	
Nitrobenzene-d5 (S)	%			87	10-125	
Phenol-d6 (S)	%			85	10-125	
Terphenyl-d14 (S)	%			97	10-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2520840 2520841

Parameter	Units	40258659002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	<88.5	1950	1960	1450	1440	74	74	45-130	0	28	
1,2-Dichlorobenzene	ug/kg	<246	1950	1960	1360	1590	70	82	45-130	16	29	
1,3-Dichlorobenzene	ug/kg	<108	1950	1960	1320	1510	68	77	42-130	13	30	
1,4-Dichlorobenzene	ug/kg	<109	1950	1960	1370	1530	70	78	42-130	12	32	
2,2'-Oxybis(1-chloropropane)	ug/kg	<202	1950	1960	1520	1640	78	84	44-130	8	26	
2,4,5-Trichlorophenol	ug/kg	<138	1950	1960	1200	1400	61	72	11-125	16	30	
2,4,6-Trichlorophenol	ug/kg	<119	1950	1960	1220	1320	63	68	16-124	8	31	
2,4-Dichlorophenol	ug/kg	<209	1950	1960	1140	877J	58	45	19-121		29	
2,4-Dimethylphenol	ug/kg	<155	1950	1960	1080	1280	55	65	29-130	17	32	
2,4-Dinitrophenol	ug/kg	<615	1950	1960	<768	<769	0	0	10-103		50	M1
2,4-Dinitrotoluene	ug/kg	<112	1950	1960	1250	1270	64	65	38-130	2	27	
2,6-Dinitrotoluene	ug/kg	<149	1950	1960	1370	1520	70	78	41-130	11	28	
2-Chloronaphthalene	ug/kg	<100	1950	1960	1410	1550	72	79	44-130	9	24	
2-Chlorophenol	ug/kg	<195	1950	1960	1090	1330	56	68	33-130	20	30	
2-Methylnaphthalene	ug/kg	<203	1950	1960	1340	1360	68	69	46-130	2	23	
2-Methylphenol(o-Cresol)	ug/kg	<142	1950	1960	1290	1410	66	72	30-130	9	30	
2-Nitroaniline	ug/kg	<223	1950	1960	1130	1150	58	59	27-124	2	25	
2-Nitrophenol	ug/kg	<247	1950	1960	1190	1270	61	65	10-130	6	27	
3&4-Methylphenol(m&p Cresol)	ug/kg	<143	1950	1960	1030	934J	53	48	28-130		33	
3,3'-Dichlorobenzidine	ug/kg	<212	1950	1960	1190	1190	61	61	10-112	0	43	
3-Nitroaniline	ug/kg	<133	1950	1960	732J	720J	37	37	10-121		33	
4,6-Dinitro-2-methylphenol	ug/kg	<241	1950	1960	801J	891J	41	46	10-115		50	
4-Bromophenylphenyl ether	ug/kg	<164	1950	1960	1220	1450	63	74	40-130	17	25	
4-Chloro-3-methylphenol	ug/kg	<243	1950	1960	1320	1250	68	64	30-130	5	29	

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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: 128TH ARW
Pace Project No.: 40258659

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2520840 2520841

Parameter	Units	40258659002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Chloroaniline	ug/kg	<129	1950	1960	763J	804J	39	41	16-130		33	
4-Chlorophenylphenyl ether	ug/kg	<146	1950	1960	1420	1420	73	73	46-130	0	24	
4-Nitroaniline	ug/kg	<325	1950	1960	881J	597J	45	31	10-127		40	
4-Nitrophenol	ug/kg	<197	1950	1960	<246	<246	3	6	10-128		50	M1
Acenaphthene	ug/kg	<277	1950	1960	1440	1570	74	80	47-130	9	21	
Acenaphthylene	ug/kg	<279	1950	1960	1580	1580	81	81	49-130	0	22	
Anthracene	ug/kg	<125	1950	1960	1540	1510	73	72	46-130	2	27	
Benzo(a)anthracene	ug/kg	432J	1950	1960	1610	1780	60	69	45-130	10	24	
Benzo(a)pyrene	ug/kg	346J	1950	1960	1380	1450	53	57	48-130	5	27	
Benzo(b)fluoranthene	ug/kg	554J	1950	1960	1310	1560	39	51	41-130	18	31	M1
Benzo(g,h,i)perylene	ug/kg	300J	1950	1960	1240	1310	48	52	37-130	6	31	
Benzo(k)fluoranthene	ug/kg	240J	1950	1960	1530	1540	66	67	46-130	1	27	
bis(2-Chloroethoxy)methane	ug/kg	<211	1950	1960	1110	1220	57	62	38-130	10	26	
bis(2-Chloroethyl) ether	ug/kg	<244	1950	1960	776J	939J	40	48	42-130		29	M1
bis(2-Ethylhexyl)phthalate	ug/kg	<267	1950	1960	1980	2000	102	102	39-130	1	27	CH,D3
Butylbenzylphthalate	ug/kg	<326	1950	1960	1810	1930	93	99	39-130	6	27	CH,D3
Carbazole	ug/kg	<123	1950	1960	1530	1600	79	82	44-130	5	24	
Chrysene	ug/kg	575J	1950	1960	1790	2070	62	76	44-130	14	25	
Di-n-butylphthalate	ug/kg	<117	1950	1960	1640	1700	84	87	45-130	3	26	
Di-n-octylphthalate	ug/kg	<176	1950	1960	2060	2100	106	108	40-134	2	27	CH,D3
Dibenz(a,h)anthracene	ug/kg	<213	1950	1960	1070	1120	50	52	41-130	4	33	
Dibenzofuran	ug/kg	<94.7	1950	1960	1500	1550	77	79	47-130	3	23	
Diethylphthalate	ug/kg	<130	1950	1960	1690	1700	87	87	46-130	1	24	
Dimethylphthalate	ug/kg	<102	1950	1960	1460	1520	75	78	47-130	4	24	
Fluoranthene	ug/kg	1060	1950	1960	1810	1890	38	43	50-130	5	27	M1
Fluorene	ug/kg	<91.5	1950	1960	1500	1580	77	81	48-130	6	25	
Hexachloro-1,3-butadiene	ug/kg	<199	1950	1960	1360	1480	70	76	42-130	9	27	
Hexachlorobenzene	ug/kg	<132	1950	1960	1390	1480	71	75	51-130	6	24	
Hexachlorocyclopentadiene	ug/kg	<185	1950	1960	457J	461J	23	24	10-114		50	
Hexachloroethane	ug/kg	<125	1950	1960	1520	1620	78	83	33-130	6	35	
Indeno(1,2,3-cd)pyrene	ug/kg	269J	1950	1960	1600	1620	68	69	34-130	1	38	
Isophorone	ug/kg	<120	1950	1960	1230	1350	63	69	45-130	9	28	
N-Nitroso-di-n-propylamine	ug/kg	<124	1950	1960	1250	1310	64	67	47-130	4	27	
N-Nitrosodiphenylamine	ug/kg	<206	1950	1960	1310	1410	67	72	42-130	7	25	
Naphthalene	ug/kg	<274	1950	1960	1370	1450	70	74	48-130	6	24	
Nitrobenzene	ug/kg	<159	1950	1960	1190	1240	61	63	42-130	4	25	
Pentachlorophenol	ug/kg	<172	1950	1960	427J	658J	22	34	10-108		50	
Phenanthrene	ug/kg	543J	1950	1960	1580	1730	53	61	50-130	9	27	
Phenol	ug/kg	<186	1950	1960	1310	1190	67	61	37-130	9	30	D3
Pyrene	ug/kg	924	1950	1960	1770	2040	43	57	43-130	14	29	
2,4,6-Tribromophenol (S)	%						69	65	10-144			
2-Fluorobiphenyl (S)	%						65	68	12-118			
2-Fluorophenol (S)	%						47	53	10-130			
Nitrobenzene-d5 (S)	%						55	62	10-125			
Phenol-d6 (S)	%						53	60	10-125			

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2520840 2520841

Parameter	Units	40258659002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Terphenyl-d14 (S)	%						72	76	10-124			

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

QUALITY CONTROL DATA

Project: 128TH ARW
Pace Project No.: 40258659

QC Batch: 438702
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40258659001, 40258659002, 40258659003, 40258659004, 40258659005, 40258659006, 40258659007, 40258659008

SAMPLE DUPLICATE: 2520633

Parameter	Units	40258603001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.2	6.1	2	10	

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

QUALIFIERS

Project: 128TH ARW
Pace Project No.: 40258659

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
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.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 128TH ARW
Pace Project No.: 40258659

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40258659001	OWS 1A	EPA 3050B	438789	EPA 6010D	438901
40258659002	OWS 1B	EPA 3050B	438789	EPA 6010D	438901
40258659003	OWS 1C	EPA 3050B	438789	EPA 6010D	438901
40258659004	OWS 1D	EPA 3050B	438789	EPA 6010D	438901
40258659005	OWS 2A	EPA 3050B	438789	EPA 6010D	438901
40258659006	OWS 2B	EPA 3050B	438789	EPA 6010D	438901
40258659007	OWS 2C	EPA 3050B	438789	EPA 6010D	438901
40258659008	OWS 2B	EPA 3050B	438789	EPA 6010D	438901
40258659001	OWS 1A	EPA 7471	439397	EPA 7471	439459
40258659002	OWS 1B	EPA 7471	439397	EPA 7471	439459
40258659003	OWS 1C	EPA 7471	439397	EPA 7471	439459
40258659004	OWS 1D	EPA 7471	439397	EPA 7471	439459
40258659005	OWS 2A	EPA 7471	439397	EPA 7471	439459
40258659006	OWS 2B	EPA 7471	439397	EPA 7471	439459
40258659007	OWS 2C	EPA 7471	439397	EPA 7471	439459
40258659008	OWS 2B	EPA 7471	439397	EPA 7471	439459
40258659001	OWS 1A	EPA 3546	438781	EPA 8270E	438826
40258659002	OWS 1B	EPA 3546	438781	EPA 8270E	438826
40258659003	OWS 1C	EPA 3546	438781	EPA 8270E	438826
40258659004	OWS 1D	EPA 3546	438781	EPA 8270E	438826
40258659005	OWS 2A	EPA 3546	438781	EPA 8270E	438826
40258659006	OWS 2B	EPA 3546	438781	EPA 8270E	438826
40258659007	OWS 2C	EPA 3546	438781	EPA 8270E	438826
40258659008	OWS 2B	EPA 3546	438781	EPA 8270E	438826
40258659001	OWS 1A	EPA 5035/5030B	438695	EPA 8260	438699
40258659002	OWS 1B	EPA 5035/5030B	438695	EPA 8260	438699
40258659003	OWS 1C	EPA 5035/5030B	438695	EPA 8260	438699
40258659004	OWS 1D	EPA 5035/5030B	438695	EPA 8260	438699
40258659005	OWS 2A	EPA 5035/5030B	438695	EPA 8260	438699
40258659006	OWS 2B	EPA 5035/5030B	438695	EPA 8260	438699
40258659007	OWS 2C	EPA 5035/5030B	438695	EPA 8260	438699
40258659008	OWS 2B	EPA 5035/5030B	438695	EPA 8260	438699
40258659001	OWS 1A	ASTM D2974-87	438702		
40258659002	OWS 1B	ASTM D2974-87	438702		
40258659003	OWS 1C	ASTM D2974-87	438702		
40258659004	OWS 1D	ASTM D2974-87	438702		
40258659005	OWS 2A	ASTM D2974-87	438702		
40258659006	OWS 2B	ASTM D2974-87	438702		
40258659007	OWS 2C	ASTM D2974-87	438702		
40258659008	OWS 2B	ASTM D2974-87	438702		

REPORT OF LABORATORY ANALYSIS

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

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

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 40258659

ALL SHADED AREAS are for LAB USE ONLY

Company: GILES ENGINEERING.	Billing Information:
Address:	
Report To: MICHELLE PEED.	Email To:
Copy To: CODY REICH, BROOKE HANSON	Site Collection Info/Address:
Customer Project Name/Number: 128TH ARW.	State: / County/City: Time Zone Collected: [ ]PT [ ]MT [ ]CT [ ]ET
Phone: 262 544 0118 Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): BROOKE HANSON.	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature): Brooke Hanson	Turnaround Date Required: Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **: | Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: VOC 8260.	SVOC 8270.	RCRA METALS	PFAS	Lab Profile/Line
OWS 1A	SOIL	GRAB	2/24	8:30					X	X	X	X	001
OWS 1B				8:35									002
OWS 1C				8:40									003
OWS 1D				8:45									004
													~~005~~ 2/25/2356
OWS 2A				11:05									005
OWS 2B				11:10									006
OWS 2C				11:15									007
OWS 2B.				11:20									008

Lab Sample Receipt Checklist:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: (1)

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

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

Lab Tracking #: 2824181

Samples received via: FEDEX UPS Client Courier Pace Courier

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

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Brooke Hanson	2/24 11:38	Giles Engineering	
	2/24/23 4:45pm	Giles Engineering	
CS Logistics	2/25/23 0400		2/25/23 0400

MTJL LAB USE ONLY
Table #:
Acctnum:
Template: (1)
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Client Name: Giles Engineering

Sample Preservation Receipt Form

Project # 402598659

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

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

Pace Lab #	Glass							Plastic						Vials						Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2							
001																																	2.5 / 5
002																																	2.5 / 5
003																																	2.5 / 5
004																																	2.5 / 5
005																																	2.5 / 5
006																																	2.5 / 5
007																																	2.5 / 5
008																																	2.5 / 5
009																																	2.5 / 5
010																																	2.5 / 5
011																																	2.5 / 5
012																																	2.5 / 5
013																																	2.5 / 5
014																																	2.5 / 5
015																																	2.5 / 5
016																																	2.5 / 5
017																																	2.5 / 5
018																																	2.5 / 5
019																																	2.5 / 5
020																																	2.5 / 5

2/25/23 SG

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	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	125 poly unpres
						GN 2	

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40258659

40258659

Client Name: Giles 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 - 9 **Type of Ice:** Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr 1.5 /Corr 2.5

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

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

Person examining contents:
Date: 2/25/25 Initials: SG

Labeled By Initials: MVR

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out	☐Yes ☑No ☐N/A	2. billing pg # 2/25/25 SG
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.
- DI 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.
Correct Type: (Pace Green Bay) Pace IR, Non-Pace		
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: S	☐Yes ☑No ☐N/A	12. No Times 2/25/25 SG
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 logi

Report of Analysis

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

Project Name: 128TH ARW

Project Number: 40258659

Lot Number:**YB28016**

Date Completed:03/27/2023

03/28/2023 7:43 PM
Approved and released by:
Project Coordinator 1: **Jenna S. Holliday**

Case Narrative
Pace Analytical Services, LLC
Lot Number: YB28016

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

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

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

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18.

Where applicable, all soil sample results (including LOQ and DL if requested) are corrected for dry weight unless flagged with a "W" qualifier.

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

Sample Summary
Pace Analytical Services, LLC
Lot Number: YB28016
Project Name: 128TH ARW
Project Number: 40258659

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	OWS 1A	Solid	02/24/2023 0830	02/28/2023
002	OWS 1B	Solid	02/24/2023 0835	02/28/2023
003	OWS 1C	Solid	02/24/2023 0840	02/28/2023
004	OWS 1D	Solid	02/24/2023 0845	02/28/2023
005	OWS 2A	Solid	02/24/2023 1105	02/28/2023
006	OWS 2B	Solid	02/24/2023 1110	02/28/2023
007	OWS 2C	Solid	02/24/2023 1115	02/28/2023
008	OWS 2B	Solid	02/24/2023 1120	02/28/2023

(8 samples)

Detection Summary

Pace Analytical Services, LLC

Lot Number: YB28016

Project Name: 128TH ARW

Project Number: 40258659

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	OWS 1A	Solid	PFBS	PFAS by ID	0.63	J	ug/kg	6
001	OWS 1A	Solid	PFHpS	PFAS by ID	0.88	J	ug/kg	6
001	OWS 1A	Solid	PFOSA	PFAS by ID	0.76	J	ug/kg	6
001	OWS 1A	Solid	PFPeS	PFAS by ID	1.3		ug/kg	6
001	OWS 1A	Solid	PFHxS	PFAS by ID	28		ug/kg	6
001	OWS 1A	Solid	PFDA	PFAS by ID	0.34	J	ug/kg	6
001	OWS 1A	Solid	PFHpA	PFAS by ID	0.18	J	ug/kg	6
001	OWS 1A	Solid	PFHxA	PFAS by ID	1.2		ug/kg	6
001	OWS 1A	Solid	PFNA	PFAS by ID	0.40	J	ug/kg	6
001	OWS 1A	Solid	PFOA	PFAS by ID	5.8		ug/kg	6
001	OWS 1A	Solid	PFPeA	PFAS by ID	0.48	J	ug/kg	6
001	OWS 1A	Solid	PFOS	PFAS by ID	71		ug/kg	6
002	OWS 1B	Solid	PFBS	PFAS by ID	0.33	J	ug/kg	8
002	OWS 1B	Solid	PFHpS	PFAS by ID	0.51	J	ug/kg	8
002	OWS 1B	Solid	PFOSA	PFAS by ID	0.18	J	ug/kg	8
002	OWS 1B	Solid	PFPeS	PFAS by ID	0.72	J	ug/kg	8
002	OWS 1B	Solid	PFHxS	PFAS by ID	19		ug/kg	8
002	OWS 1B	Solid	PFDA	PFAS by ID	0.20	J	ug/kg	8
002	OWS 1B	Solid	PFHxA	PFAS by ID	0.80	J	ug/kg	8
002	OWS 1B	Solid	PFNA	PFAS by ID	0.24	J	ug/kg	8
002	OWS 1B	Solid	PFOA	PFAS by ID	2.5		ug/kg	8
002	OWS 1B	Solid	PFPeA	PFAS by ID	0.50	J	ug/kg	8
002	OWS 1B	Solid	PFOS	PFAS by ID	24		ug/kg	8
003	OWS 1C	Solid	PFHxS	PFAS by ID	10		ug/kg	10
003	OWS 1C	Solid	PFHxA	PFAS by ID	1.3	J	ug/kg	10
003	OWS 1C	Solid	PFOA	PFAS by ID	1.4	J	ug/kg	10
003	OWS 1C	Solid	PFPeA	PFAS by ID	0.88	J	ug/kg	10
003	OWS 1C	Solid	PFOS	PFAS by ID	120		ug/kg	10
004	OWS 1D	Solid	PFHxS	PFAS by ID	3.0		ug/kg	12
004	OWS 1D	Solid	PFHpA	PFAS by ID	0.24	J	ug/kg	12
004	OWS 1D	Solid	PFHxA	PFAS by ID	1.1	J	ug/kg	12
004	OWS 1D	Solid	PFOA	PFAS by ID	0.86	J	ug/kg	12
004	OWS 1D	Solid	PFPeA	PFAS by ID	0.51	J	ug/kg	12
004	OWS 1D	Solid	PFOS	PFAS by ID	12		ug/kg	12
005	OWS 2A	Solid	PFHxS	PFAS by ID	0.89	J	ug/kg	14
005	OWS 2A	Solid	PFNA	PFAS by ID	0.16	J	ug/kg	14
005	OWS 2A	Solid	PFOA	PFAS by ID	0.24	J	ug/kg	14
005	OWS 2A	Solid	PFPeA	PFAS by ID	0.22	J	ug/kg	14
005	OWS 2A	Solid	PFOS	PFAS by ID	7.5		ug/kg	14
006	OWS 2B	Solid	8:2 FTS	PFAS by ID	0.87	J	ug/kg	16
006	OWS 2B	Solid	PFHxS	PFAS by ID	0.68	J	ug/kg	16
006	OWS 2B	Solid	PFNA	PFAS by ID	0.30	J	ug/kg	16
006	OWS 2B	Solid	PFOS	PFAS by ID	51		ug/kg	16

Detection Summary (Continued)

Lot Number: YB28016

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
007	OWS 2C	Solid	PFHxS	PFAS by ID	0.37	J	ug/kg	18
007	OWS 2C	Solid	PFDA	PFAS by ID	0.23	J	ug/kg	18
007	OWS 2C	Solid	PFOS	PFAS by ID	11		ug/kg	18
008	OWS 2B	Solid	PFHxS	PFAS by ID	0.23	J	ug/kg	20
008	OWS 2B	Solid	PFOS	PFAS by ID	5.2		ug/kg	20

(48 detections)

PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-001**

Description: **OWS 1A** Matrix: **Solid**

Date Sampled: **02/24/2023 0830** Project Name: **128TH ARW** % Solids: **80.0** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1620	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.2	0.17	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.2	0.19	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.2	0.30	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.2	0.34	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.2	0.24	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.4	0.64	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.2	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.2	0.39	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.2	0.32	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.2	0.25	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.2	0.38	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.2	0.43	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.2	0.37	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**0.63**	**J**	**1.1**	**0.14**	**ug/kg**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	**375-92-8**	**PFAS by ID SOP**	**0.88**	**J**	**1.1**	**0.19**	**ug/kg**	**1**
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	**754-91-6**	**PFAS by ID SOP**	**0.76**	**J**	**1.1**	**0.19**	**ug/kg**	**1**
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**1.3**		**1.1**	**0.20**	**ug/kg**	**1**
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.28	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**28**		**1.1**	**0.19**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.46	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	**335-76-2**	**PFAS by ID SOP**	**0.34**	**J**	**1.1**	**0.17**	**ug/kg**	**1**
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**0.18**	**J**	**1.1**	**0.16**	**ug/kg**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**1.2**		**1.1**	**0.20**	**ug/kg**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.40**	**J**	**1.1**	**0.16**	**ug/kg**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**5.8**		**1.1**	**0.23**	**ug/kg**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**0.48**	**J**	**1.1**	**0.17**	**ug/kg**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**71**		**1.1**	**0.39**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		114	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		116	25-150
13C2_PFDoA		106	25-150
13C2_PFTeDA		116	25-150
13C3_PFBS		103	25-150
13C3_PFHxS		100	25-150
13C3-HFPO-DA		86	25-150
13C4_PFBA		90	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-001**

Description: **OWS 1A** Matrix: **Solid**

Date Sampled: **02/24/2023 0830** Project Name: **128TH ARW** % Solids: **80.0** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		94	25-150
13C5_PFHxA		91	25-150
13C5_PFPeA		93	25-150
13C6_PFDA		102	25-150
13C7_PFUdA		103	25-150
13C8_PFOA		98	25-150
13C8_PFOS		97	25-150
13C8_PFOSA		85	10-150
13C9_PFNA		93	25-150
d-EtFOSA		79	10-150
d5-EtFOSAA		105	25-150
d9-EtFOSE		78	10-150
d-MeFOSA		74	10-150
d3-MeFOSAA		108	25-150
d7-MeFOSE		79	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-002**

Description: **OWS 1B** Matrix: **Solid**

Date Sampled: **02/24/2023 0835** Project Name: **128TH ARW** % Solids: **85.7** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1631	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.0	0.16	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.0	0.17	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.0	0.28	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.0	0.31	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.0	0.22	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.1	0.59	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.0	0.15	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.0	0.36	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.0	0.29	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.0	0.23	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.0	0.35	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.0	0.40	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.0	0.34	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**0.33**	**J**	**1.0**	**0.13**	**ug/kg**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.0	0.23	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	**375-92-8**	**PFAS by ID SOP**	**0.51**	**J**	**1.0**	**0.18**	**ug/kg**	**1**
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.0	0.22	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	**754-91-6**	**PFAS by ID SOP**	**0.18**	**J**	**1.0**	**0.18**	**ug/kg**	**1**
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**0.72**	**J**	**1.0**	**0.19**	**ug/kg**	**1**
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.0	0.26	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**19**		**1.0**	**0.18**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.0	0.42	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	**335-76-2**	**PFAS by ID SOP**	**0.20**	**J**	**1.0**	**0.16**	**ug/kg**	**1**
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.0	0.14	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**0.80**	**J**	**1.0**	**0.19**	**ug/kg**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.24**	**J**	**1.0**	**0.15**	**ug/kg**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**2.5**		**1.0**	**0.22**	**ug/kg**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**0.50**	**J**	**1.0**	**0.16**	**ug/kg**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.0	0.17	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**24**		**1.0**	**0.36**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		124	25-150
13C2_6:2FTS		122	25-150
13C2_8:2FTS		123	25-150
13C2_PFDoA		117	25-150
13C2_PFTeDA		130	25-150
13C3_PFBS		115	25-150
13C3_PFHxS		108	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBA		111	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC**		Laboratory ID: **YB28016-002**	
Description: **OWS 1B**		Matrix: **Solid**	
Date Sampled: **02/24/2023 0835**	Project Name: **128TH ARW**	% Solids: **85.7**	**03/02/2023 2100**
Date Received: **02/28/2023**	Project Number: **40258659**		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		113	25-150
13C5_PFHxA		105	25-150
13C5_PFPeA		108	25-150
13C6_PFDA		110	25-150
13C7_PFUdA		117	25-150
13C8_PFOA		114	25-150
13C8_PFOS		110	25-150
13C8_PFOSA		106	10-150
13C9_PFNA		107	25-150
d-EtFOSA		88	10-150
d5-EtFOSAA		123	25-150
d9-EtFOSE		86	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		120	25-150
d7-MeFOSE		90	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-003**

Description: **OWS 1C** Matrix: **Solid**

Date Sampled: **02/24/2023 0840** Project Name: **128TH ARW** % Solids: **84.7** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	5	03/24/2023 1642	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		11	0.84	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		11	0.91	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		11	1.5	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		11	1.6	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		11	1.2	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		21	3.1	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		11	0.80	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		11	1.9	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		11	1.5	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		11	1.2	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		11	1.9	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		11	2.1	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		11	1.8	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		5.3	0.69	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		5.3	1.2	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		5.3	0.93	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		5.3	1.2	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		5.3	0.94	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		5.3	0.99	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		5.3	1.4	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**10**		**5.3**	**0.94**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		5.3	2.2	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		5.3	0.84	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		5.3	0.93	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		5.3	0.76	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**1.3**	**J**	**5.3**	**0.98**	**ug/kg**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		5.3	0.79	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**1.4**	**J**	**5.3**	**1.1**	**ug/kg**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**0.88**	**J**	**5.3**	**0.84**	**ug/kg**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		5.3	1.0	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		5.3	0.92	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		5.3	0.98	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**120**		**5.3**	**1.9**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		114	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		108	25-150
13C2_PFDoA		106	25-150
13C2_PFTeDA		116	25-150
13C3_PFBS		103	25-150
13C3_PFHxS		105	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBA		102	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-003**

Description: **OWS 1C** Matrix: **Solid**

Date Sampled: **02/24/2023 0840** Project Name: **128TH ARW** % Solids: **84.7** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		100	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		102	25-150
13C6_PFDA		98	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		107	25-150
13C8_PFOS		106	25-150
13C8_PFOSA		88	10-150
13C9_PFNA		101	25-150
d-EtFOSA		87	10-150
d5-EtFOSAA		106	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		106	25-150
d7-MeFOSE		85	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-004**

Description: **OWS 1D** Matrix: **Solid**

Date Sampled: **02/24/2023 0845** Project Name: **128TH ARW** % Solids: **81.0** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1653	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.3	0.18	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.3	0.20	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.3	0.32	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.3	0.35	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.3	0.25	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.6	0.67	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.3	0.17	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.3	0.41	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.3	0.33	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.3	0.26	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.3	0.40	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.3	0.46	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.3	0.39	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.2	0.15	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.2	0.26	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.2	0.25	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.2	0.30	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**3.0**		**1.2**	**0.20**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.2	0.48	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.2	0.18	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**0.24**	**J**	**1.2**	**0.16**	**ug/kg**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**1.1**	**J**	**1.2**	**0.21**	**ug/kg**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.2	0.17	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**0.86**	**J**	**1.2**	**0.25**	**ug/kg**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**0.51**	**J**	**1.2**	**0.18**	**ug/kg**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**12**		**1.2**	**0.41**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		89	25-150
13C2_6:2FTS		82	25-150
13C2_8:2FTS		73	25-150
13C2_PFDoA		85	25-150
13C2_PFTeDA		106	25-150
13C3_PFBS		89	25-150
13C3_PFHxS		90	25-150
13C3-HFPO-DA		85	25-150
13C4_PFBA		87	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC**		Laboratory ID: **YB28016-004**	
Description: **OWS 1D**		Matrix: **Solid**	
Date Sampled: **02/24/2023 0845**	Project Name: **128TH ARW**	% Solids: **81.0**	**03/02/2023 2100**
Date Received: **02/28/2023**	Project Number: **40258659**		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		90	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		90	25-150
13C6_PFDA		81	25-150
13C7_PFUdA		85	25-150
13C8_PFOA		89	25-150
13C8_PFOS		85	25-150
13C8_PFOSA		75	10-150
13C9_PFNA		84	25-150
d-EtFOSA		72	10-150
d5-EtFOSAA		77	25-150
d9-EtFOSE		73	10-150
d-MeFOSA		74	10-150
d3-MeFOSAA		77	25-150
d7-MeFOSE		78	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-005**

Description: **OWS 2A** Matrix: **Solid**

Date Sampled: **02/24/2023 1105** Project Name: **128TH ARW** % Solids: **83.7** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1726	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.1	0.17	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.1	0.18	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.1	0.29	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.1	0.32	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.1	0.23	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.2	0.61	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.1	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.1	0.38	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.1	0.31	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.1	0.24	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.1	0.37	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.1	0.42	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.1	0.35	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.14	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.23	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.27	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**0.89**	**J**	**1.1**	**0.19**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.44	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.16**	**J**	**1.1**	**0.16**	**ug/kg**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**0.24**	**J**	**1.1**	**0.22**	**ug/kg**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**0.22**	**J**	**1.1**	**0.17**	**ug/kg**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**7.5**		**1.1**	**0.38**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150
13C2_6:2FTS		106	25-150
13C2_8:2FTS		103	25-150
13C2_PFDoA		124	25-150
13C2_PFTeDA		138	25-150
13C3_PFBS		118	25-150
13C3_PFHxS		117	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBA		110	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC**		Laboratory ID: **YB28016-005**	
Description: **OWS 2A**		Matrix: **Solid**	
Date Sampled: **02/24/2023 1105**	Project Name: **128TH ARW**	% Solids: **83.7**	**03/02/2023 2100**
Date Received: **02/28/2023**	Project Number: **40258659**		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		115	25-150
13C5_PFHxA		111	25-150
13C5_PFPeA		115	25-150
13C6_PFDA		108	25-150
13C7_PFUdA		114	25-150
13C8_PFOA		117	25-150
13C8_PFOS		112	25-150
13C8_PFOSA		106	10-150
13C9_PFNA		106	25-150
d-EtFOSA		95	10-150
d5-EtFOSAA		104	25-150
d9-EtFOSE		105	10-150
d-MeFOSA		91	10-150
d3-MeFOSAA		101	25-150
d7-MeFOSE		97	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-006**

Description: **OWS 2B** Matrix: **Solid**

Date Sampled: **02/24/2023 1110** Project Name: **128TH ARW** % Solids: **82.1** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1737	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.1	0.16	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.1	0.18	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	**39108-34-4**	**PFAS by ID SOP**	**0.87**	**J**	**2.1**	**0.29**	**ug/kg**	**1**
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.1	0.32	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.1	0.23	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.2	0.60	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.1	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.1	0.37	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.1	0.30	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.1	0.24	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.1	0.36	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.1	0.41	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.1	0.35	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.0	0.14	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.0	0.23	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.0	0.23	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.0	0.27	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**0.68**	**J**	**1.0**	**0.18**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.0	0.43	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.0	0.16	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.0	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.30**	**J**	**1.0**	**0.16**	**ug/kg**	**1**
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.0	0.22	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.0	0.17	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.0	0.20	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**51**		**1.0**	**0.37**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		82	25-150
13C2_6:2FTS		84	25-150
13C2_8:2FTS		85	25-150
13C2_PFDoA		101	25-150
13C2_PFTeDA		118	25-150
13C3_PFBS		96	25-150
13C3_PFHxS		98	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBA		94	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-006**

Description: **OWS 2B** Matrix: **Solid**

Date Sampled: **02/24/2023 1110** Project Name: **128TH ARW** % Solids: **82.1** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		99	25-150
13C5_PFHxA		94	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		91	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		100	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		93	10-150
13C9_PFNA		89	25-150
d-EtFOSA		83	10-150
d5-EtFOSAA		85	25-150
d9-EtFOSE		90	10-150
d-MeFOSA		81	10-150
d3-MeFOSAA		84	25-150
d7-MeFOSE		79	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-007**

Description: **OWS 2C** Matrix: **Solid**

Date Sampled: **02/24/2023 1115** Project Name: **128TH ARW** % Solids: **86.3** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1748	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		1.9	0.15	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		1.9	0.16	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		1.9	0.26	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		1.9	0.30	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		1.9	0.21	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		3.9	0.56	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		1.9	0.15	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		1.9	0.34	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		1.9	0.28	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		1.9	0.22	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		1.9	0.34	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		1.9	0.38	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		1.9	0.32	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		0.97	0.13	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		0.97	0.22	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		0.97	0.17	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		0.97	0.21	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		0.97	0.17	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		0.97	0.18	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		0.97	0.25	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**0.37**	**J**	**0.97**	**0.17**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		0.97	0.40	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	**335-76-2**	**PFAS by ID SOP**	**0.23**	**J**	**0.97**	**0.15**	**ug/kg**	**1**
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		0.97	0.17	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		0.97	0.14	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		0.97	0.18	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		0.97	0.14	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		0.97	0.21	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		0.97	0.15	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		0.97	0.18	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		0.97	0.17	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		0.97	0.18	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**11**		**0.97**	**0.34**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		88	25-150
13C2_6:2FTS		87	25-150
13C2_8:2FTS		94	25-150
13C2_PFDoA		107	25-150
13C2_PFTeDA		123	25-150
13C3_PFBS		103	25-150
13C3_PFHxS		100	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBA		100	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC**		Laboratory ID: **YB28016-007**	
Description: **OWS 2C**		Matrix: **Solid**	
Date Sampled: **02/24/2023 1115**	Project Name: **128TH ARW**	% Solids: **86.3**	**03/02/2023 2100**
Date Received: **02/28/2023**	Project Number: **40258659**		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		102	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		102	25-150
13C6_PFDA		97	25-150
13C7_PFUdA		103	25-150
13C8_PFOA		102	25-150
13C8_PFOS		94	25-150
13C8_PFOSA		100	10-150
13C9_PFNA		94	25-150
d-EtFOSA		83	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		82	10-150
d3-MeFOSAA		87	25-150
d7-MeFOSE		85	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-008**

Description: **OWS 2B** Matrix: **Solid**

Date Sampled: **02/24/2023 1120** Project Name: **128TH ARW** % Solids: **82.6** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	03/24/2023 1759	OMNS	03/07/2023 1308	69303

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.0	0.16	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.0	0.17	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.0	0.28	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.0	0.31	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.0	0.22	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.1	0.59	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.0	0.15	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.0	0.36	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.0	0.29	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.0	0.23	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.0	0.35	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.0	0.40	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.0	0.34	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.0	0.13	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.0	0.23	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.0	0.22	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.0	0.26	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**0.23**	**J**	**1.0**	**0.18**	**ug/kg**	**1**
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.0	0.42	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.0	0.16	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.0	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.0	0.15	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.0	0.22	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.0	0.16	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.0	0.17	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**5.2**		**1.0**	**0.36**	**ug/kg**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		98	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		108	25-150
13C2_PFDoA		123	25-150
13C2_PFTeDA		135	25-150
13C3_PFBS		107	25-150
13C3_PFHxS		115	25-150
13C3-HFPO-DA		102	25-150
13C4_PFBA		109	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YB28016-008**

Description: **OWS 2B** Matrix: **Solid**

Date Sampled: **02/24/2023 1120** Project Name: **128TH ARW** % Solids: **82.6** **03/02/2023 2100**

Date Received: **02/28/2023** Project Number: **40258659**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		112	25-150
13C5_PFHxA		111	25-150
13C5_PFPeA		109	25-150
13C6_PFDA		102	25-150
13C7_PFUdA		108	25-150
13C8_PFOA		112	25-150
13C8_PFOS		106	25-150
13C8_PFOSA		110	10-150
13C9_PFNA		105	25-150
d-EtFOSA		89	10-150
d5-EtFOSAA		102	25-150
d9-EtFOSE		95	10-150
d-MeFOSA		92	10-150
d3-MeFOSAA		100	25-150
d7-MeFOSE		87	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: YQ69303-001
Batch: 69303
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 03/07/2023 1308

Parameter	Result	Q	Dil	LOQ	MDL	Units	Analysis Date
9Cl-PF3ONS	ND		1	2.0	0.16	ug/kg	03/23/2023 0343
11Cl-PF3OUdS	ND		1	2.0	0.17	ug/kg	03/23/2023 0343
8:2 FTS	ND		1	2.0	0.27	ug/kg	03/23/2023 0343
6:2 FTS	ND		1	2.0	0.31	ug/kg	03/23/2023 0343
4:2 FTS	ND		1	2.0	0.22	ug/kg	03/23/2023 0343
GenX	ND		1	4.0	0.58	ug/kg	03/23/2023 0343
ADONA	ND		1	2.0	0.15	ug/kg	03/23/2023 0343
EtFOSA	ND		1	2.0	0.36	ug/kg	03/23/2023 0343
EtFOSAA	ND		1	2.0	0.29	ug/kg	03/23/2023 0343
EtFOSE	ND		1	2.0	0.23	ug/kg	03/23/2023 0343
MeFOSA	ND		1	2.0	0.35	ug/kg	03/23/2023 0343
MeFOSAA	ND		1	2.0	0.40	ug/kg	03/23/2023 0343
MeFOSE	ND		1	2.0	0.33	ug/kg	03/23/2023 0343
PFBS	ND		1	1.0	0.13	ug/kg	03/23/2023 0343
PFDS	ND		1	1.0	0.22	ug/kg	03/23/2023 0343
PFHpS	ND		1	1.0	0.18	ug/kg	03/23/2023 0343
PFNS	ND		1	1.0	0.22	ug/kg	03/23/2023 0343
PFOSA	ND		1	1.0	0.18	ug/kg	03/23/2023 0343
PFPeS	ND		1	1.0	0.19	ug/kg	03/23/2023 0343
PFDOS	ND		1	1.0	0.26	ug/kg	03/23/2023 0343
PFHxS	ND		1	1.0	0.18	ug/kg	03/23/2023 0343
PFBA	ND		1	1.0	0.42	ug/kg	03/23/2023 0343
PFDA	ND		1	1.0	0.16	ug/kg	03/23/2023 0343
PFDoA	ND		1	1.0	0.18	ug/kg	03/23/2023 0343
PFHpA	ND		1	1.0	0.14	ug/kg	03/23/2023 0343
PFHxA	ND		1	1.0	0.18	ug/kg	03/23/2023 0343
PFNA	ND		1	1.0	0.15	ug/kg	03/23/2023 0343
PFOA	ND		1	1.0	0.21	ug/kg	03/23/2023 0343
PFPeA	ND		1	1.0	0.16	ug/kg	03/23/2023 0343
PFTeDA	ND		1	1.0	0.19	ug/kg	03/23/2023 0343
PFTrDA	ND		1	1.0	0.17	ug/kg	03/23/2023 0343
PFUdA	ND		1	1.0	0.18	ug/kg	03/23/2023 0343
PFOS	ND		1	1.0	0.36	ug/kg	03/23/2023 0343

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		90	25-150
13C2_6:2FTS		86	25-150
13C2_8:2FTS		84	25-150
13C2_PFDoA		86	25-150
13C2_PFTeDA		84	25-150
13C3_PFBS		91	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		81	25-150

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

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

PFAS by LC/MS/MS - MB

Sample ID: YQ69303-001
Batch: 69303
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 03/07/2023 1308

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		90	25-150
13C4_PFHpA		83	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		88	25-150
13C6_PFDA		83	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		88	25-150
13C8_PFOS		77	25-150
13C8_PFOSA		76	10-150
13C9_PFNA		88	25-150
d-EtFOSA		76	10-150
d5-EtFOSAA		90	25-150
d9-EtFOSE		77	10-150
d-MeFOSA		78	10-150
d3-MeFOSAA		86	25-150
d7-MeFOSE		92	10-150

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

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

PFAS by LC/MS/MS - LCS

Sample ID: YQ69303-002
Batch: 69303
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 03/07/2023 1308

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	1.9	2.1		1	111	50-150	03/23/2023 0353
11Cl-PF3OUdS	1.9	2.3		1	120	50-150	03/23/2023 0353
8:2 FTS	1.9	2.3		1	120	50-150	03/23/2023 0353
6:2 FTS	1.9	1.4		1	75	50-150	03/23/2023 0353
4:2 FTS	1.9	2.2		1	117	50-150	03/23/2023 0353
GenX	4.0	3.9		1	97	50-150	03/23/2023 0353
ADONA	1.9	1.8		1	95	50-150	03/23/2023 0353
EtFOSA	2.0	1.9		1	93	50-150	03/23/2023 0353
EtFOSAA	2.0	2.0		1	102	50-150	03/23/2023 0353
EtFOSE	2.0	2.1		1	104	50-150	03/23/2023 0353
MeFOSA	2.0	2.1		1	107	50-150	03/23/2023 0353
MeFOSAA	2.0	2.1		1	107	50-150	03/23/2023 0353
MeFOSE	2.0	2.0		1	100	50-150	03/23/2023 0353
PFBS	1.8	1.8		1	104	50-150	03/23/2023 0353
PFDS	1.9	2.4		1	125	50-150	03/23/2023 0353
PFHpS	1.9	1.8		1	95	50-150	03/23/2023 0353
PFNS	1.9	2.1		1	111	50-150	03/23/2023 0353
PFOSA	2.0	2.0		1	98	50-150	03/23/2023 0353
PFPeS	1.9	1.9		1	103	50-150	03/23/2023 0353
PFDOS	1.9	2.2		1	114	50-150	03/23/2023 0353
PFHxS	1.8	1.7		1	94	50-150	03/23/2023 0353
PFBA	2.0	2.0		1	100	50-150	03/23/2023 0353
PFDA	2.0	2.1		1	104	50-150	03/23/2023 0353
PFDoA	2.0	2.0		1	100	50-150	03/23/2023 0353
PFHpA	2.0	1.9		1	97	50-150	03/23/2023 0353
PFHxA	2.0	1.9		1	93	50-150	03/23/2023 0353
PFNA	2.0	2.0		1	101	50-150	03/23/2023 0353
PFOA	2.0	2.3		1	113	50-150	03/23/2023 0353
PFPeA	2.0	2.1		1	107	50-150	03/23/2023 0353
PFTeDA	2.0	2.1		1	107	50-150	03/23/2023 0353
PFTrDA	2.0	2.1		1	106	50-150	03/23/2023 0353
PFUdA	2.0	1.9		1	95	50-150	03/23/2023 0353
PFOS	1.9	2.0		1	107	50-150	03/23/2023 0353

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		126	25-150
13C2_6:2FTS		121	25-150
13C2_8:2FTS		107	25-150
13C2_PFDoA		106	25-150
13C2_PFTeDA		93	25-150
13C3_PFBS		118	25-150
13C3_PFHxS		125	25-150
13C3-HFPO-DA		104	25-150

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N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

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

PFAS by LC/MS/MS - LCS

Sample ID: YQ69303-002
Batch: 69303
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 03/07/2023 1308

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		112	25-150
13C4_PFHpA		118	25-150
13C5_PFHxA		133	25-150
13C5_PFPeA		114	25-150
13C6_PFDA		97	25-150
13C7_PFUdA		129	25-150
13C8_PFOA		94	25-150
13C8_PFOS		100	25-150
13C8_PFOSA		101	10-150
13C9_PFNA		109	25-150
d-EtFOSA		97	10-150
d5-EtFOSAA		110	25-150
d9-EtFOSE		99	10-150
d-MeFOSA		103	10-150
d3-MeFOSAA		113	25-150
d7-MeFOSE		103	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
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N = Recovery is out of criteria
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Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Internal Transfer Chain of Custody

Pace Analytical
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: WI
Cert. Needed: ☒ Yes ☐ No
Owner Received Date: 2/25/2023 **Results Requested By:** 3/28/2023

Workorder: 40258659 **Workorder Name:** 128TH ARW

Report To	Subcontract To
Dan Milewsky Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436	Pace Analytical West Columbia 106 Vantage Point Drive West Columbia, SC 29172 Phone (803)791-9700

YB28016

JSH

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	PFAS by ID (WDNR 33 Targets)	LAB USE ONLY
1	OWS 1A	PS	2/24/2023 08:30	40258659001	Solic	1	X	
2	OWS 1B	PS	2/24/2023 08:35	40258659002	Solic	1	X	
3	OWS 1C	PS	2/24/2023 08:40	40258659003	Solic	1	X	
4	OWS 1D	PS	2/24/2023 08:45	40258659004	Solic	1	X	
5	OWS 2A	PS	2/24/2023 11:05	40258659005	Solic	1	X	
6	OWS 2B	PS	2/24/2023 11:10	40258659006	Solid	1	X	
7	OWS 2C	PS	2/24/2023 11:15	40258659007	Solid	1	X	
8	OWS 2B	PS	2/24/2023 11:20	40258659008	Solid	1	X	

Comments:

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	2/27/23 1100		
2				
3	[signature]	2/27/23 1105	[signature]	2/27/23 1105

Cooler Temperature on Receipt 1.5 °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 Services, LLC (formerly Shealy Environmental Services, Inc.)
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

DC#_Title: ENV-FRM-WCOL-0286 v02_Samples Receipt Checklist (SRC)
Effective Date: 8/2/2022

Sample Receipt Checklist (SRC)

Client: Pace Cooler Inspected by/date: CDR / 02/28/2023 Lot #: YB28016

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other:

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

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 22-2027
1.5 / 1.5 °C NA / NA °C NA / NA °C NA / NA °C
Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 8 IR Gun Correction Factor: 0 °C
Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☑ Yes	☐ No	☐ NA	3. Were all coolers received at or below 6.0°C? If no, was Project Manager notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC and all sample containers?
☑ Yes	☐ No		7. Was collection date & time listed on the COC and all sample containers?
☑ Yes	☐ No		8. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		9. Were tests to be performed listed on the COC?
☑ Yes	☐ No		10. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		11. Was adequate sample volume available?
☐ Yes	☑ No		12. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☑ Yes	☐ No		13. Were all samples containers accounted for? (No missing/excess)
☐ Yes	☐ No	☑ NA	14. Were VOA, 8015C and RSK-175 samples free of bubbles >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	15. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	16. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	17. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☑ No	☐ NA	18. Was the quote number listed on the container label? If yes, Quote #

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

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA. ☐
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

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

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

Comments:

Qualtrax ID: 56360 Pace® Analytical Services, LLC Page 1 of 1

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Gloria L. McCutcheon, Regional Director

Sturtevant Service Center
9531 Rayne Rd Ste 4
Sturtevant, Wisconsin 53177
Telephone 262-884-2300
FAX 262-884-2307
TTY 262-884-2304

October 20, 2008

128th Air Refueling Wing
C/o Clair Breckenridge
1685 East Grange Ave.
Milwaukee, WI 53207

Subject: Navigability Determinations for all waterways

Dear Mr. Breckenridge:

On Monday June 18, 2008 I met with you for a follow up site visit to discuss the waterways located in the vicinity of the 128th Air Refueling Wing. The purpose of the site visit was to discuss past navigability determinations in 1992, 2000, 2006 and 2007 for various projects and to consider other waterways on the property that have not been reviewed by the Department up to this point. The 128th refueling wing and the Department agreed that one overall determination for this property, identifying and determining the status of all waterways, would be beneficial for both parties in the future for determining the permitting requirements of future projects.

When determining whether a waterway is navigable and public the Department visits the property to determine if the waterway exhibits a defined bed and bank, and a discernible flow such that the waterway does not maintain the necessary dimensions to float a small watercraft, such as a canoe, on a regularly recurring basis. The Department also reviews historical aerial photos, topographic maps, soils maps, the original government survey and the Bordner Survey for a historical prospective on the presence and possible modifications to the waterway. If a waterway appears to have been constructed for drainage and does not exhibit the necessary characteristics to float a small watercraft on a regular basis, the waterway will not meet the State's standards for navigability and would not be regulated under Wis. Stat. ch. 30.

The Department has reviewed all of the aforementioned materials and has made a determination regarding the navigability status of all of the waterbodies located on or adjacent to the 128th ARW property. Included with this letter is an aerial photo of the 128th ARW indicating the locations of the waterways reviewed by this recent jurisdictional request and below is a summary of the Department's findings and a jurisdictional determination.

Waterway	Background and Site Conditions	Jurisdictional Determination
A	These roadside ditches were reviewed by Rachel Sabre on 11/14/200	Not navigable
B	This is the headwaters of Wilson Park Creek. The waterway has been lined with concrete, flows into a culvert and does not re-emerge until it reaches the northeast corner of the airport property. It then becomes Wilson Park Creek.	Not Navigable

C	This waterway flows into Bailey's Pond and was historically dredged by the airport to remove vegetation. Some areas appear to be navigable but most areas lack a defined Ordinary High Water Mark and does not sustain a depth to float a small watercraft on a regularly recurring basis.	Not Navigable
D	This is a ditch that is currently mowed. The ditch does not exhibit any sign of an Ordinary High Water Mark nor a defined bed necessary to be deemed a public water.	Not Navigable
E	This waterway was determined to be navigable in 2000. However, I have reviewed the characteristics of this waterway in 2001 after relocation and enclosure and have reviewed the characteristics in 2008 and believe that the previous navigability determination was in error. The waterway lacks a distinct Ordinary High Water Mark due to a lack of persistent water. Further, although the banks appear large, this waterway was impacted by previous dredging and grading and do not appropriately reflect the characteristics of a bank which has developed because of the presence of flowing water. A defined bed is also absent.	Not navigable
F	This pond has been coined "Bailey's Pond". It is a stormwater pond that was constructed back in 1962 by the City to temporarily store floodwaters. The pond has developed wetland vegetation at the bottom of the pond. Based upon my review of the pond, it does not contain significant functional values such that it would be regulated under Wis. Adm. Code NR 103.06(4). Further, being a dry stormwater pond it would not be regulated as a public waterbody under Wis. Stat. ch. 30.	Private Stormwater Pond

Despite the Department's determination that many of these waterways are non-navigable and not regulated under Wis. Stat. ch. 30, please note that other state, local or federal programs may regulate any projects or activities which may occur on or adjacent to the 128th ARW. If you have any questions please feel free to call me at 262-884-2355 or email me at heidi.hopkins@wisconsin.gov.

Sincerely,

Heidi Hopkins
Water Management Specialist

CC: Greg Failey, Mitchell International
City of Milwaukee
Rebecca Gruber, ACOE
Rachel Sabre

A
B
C
D
E
F

Surface Water Data Viewer Map

Legend

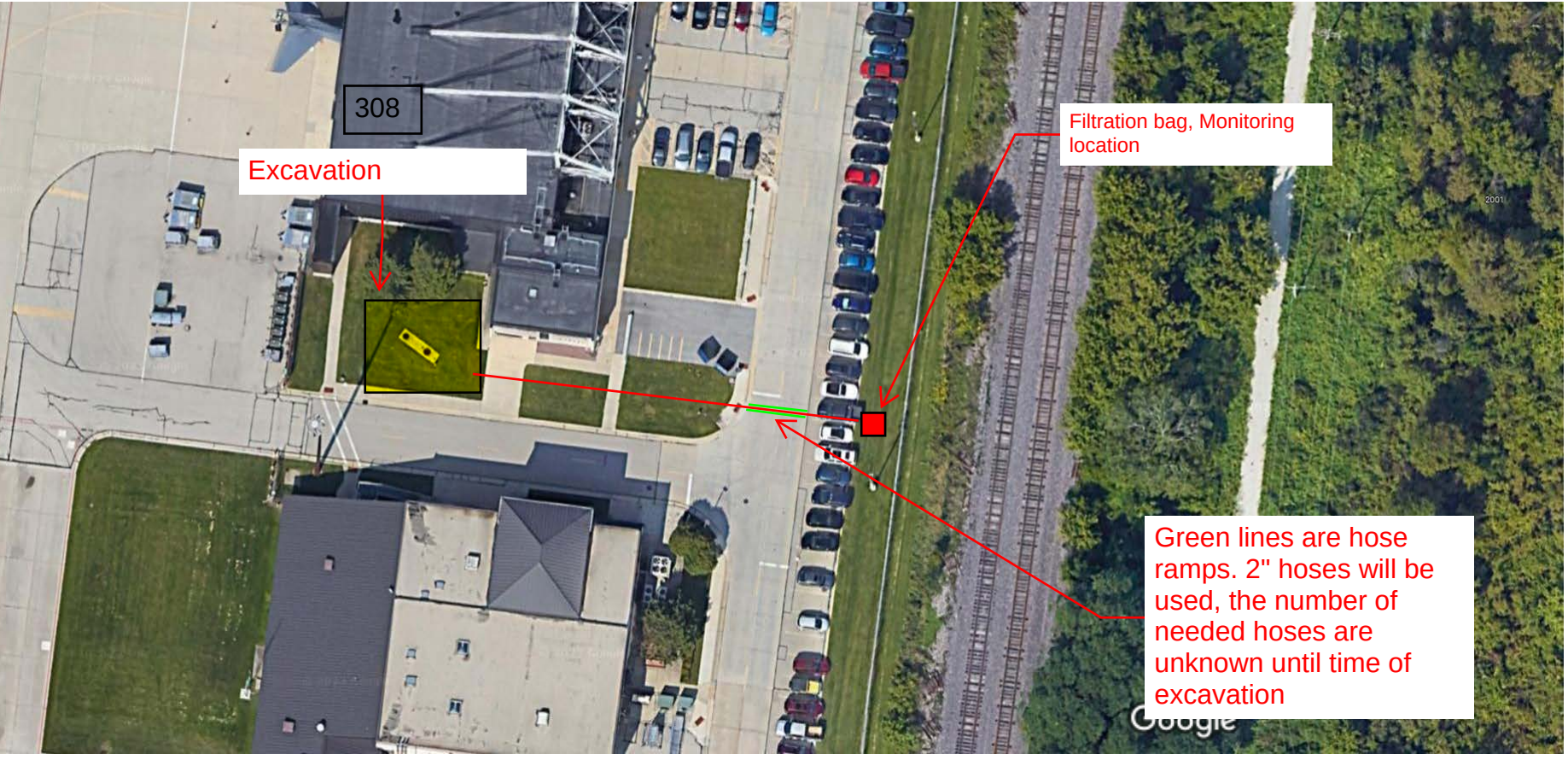
- Wetland Class Areas
- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled/drained wetland
  - Wetland too small to delineate
  - Filled excavated pond
- Filled Points
- Wetland Class Areas
- Filled Areas
- 2D Water Surface Elevation Grid
  - High : 937.629
  - Low : 853.184
- Station Points with Historic Data
- Station Points with Recent Data (10 years)
- Station Points without Data (Active, Usable)
- Station Points without Data (New Station, Pending)
- Station Lines with Historic Data
- Station Lines with Recent Data (10 years)
- Station Lines without Data (Active, Usable)
- Station Lines without Data (New Station, Pending)
- Station Areas with Historic Data
- Station Areas with Recent Data (10 years)
- Dams
  - Dam

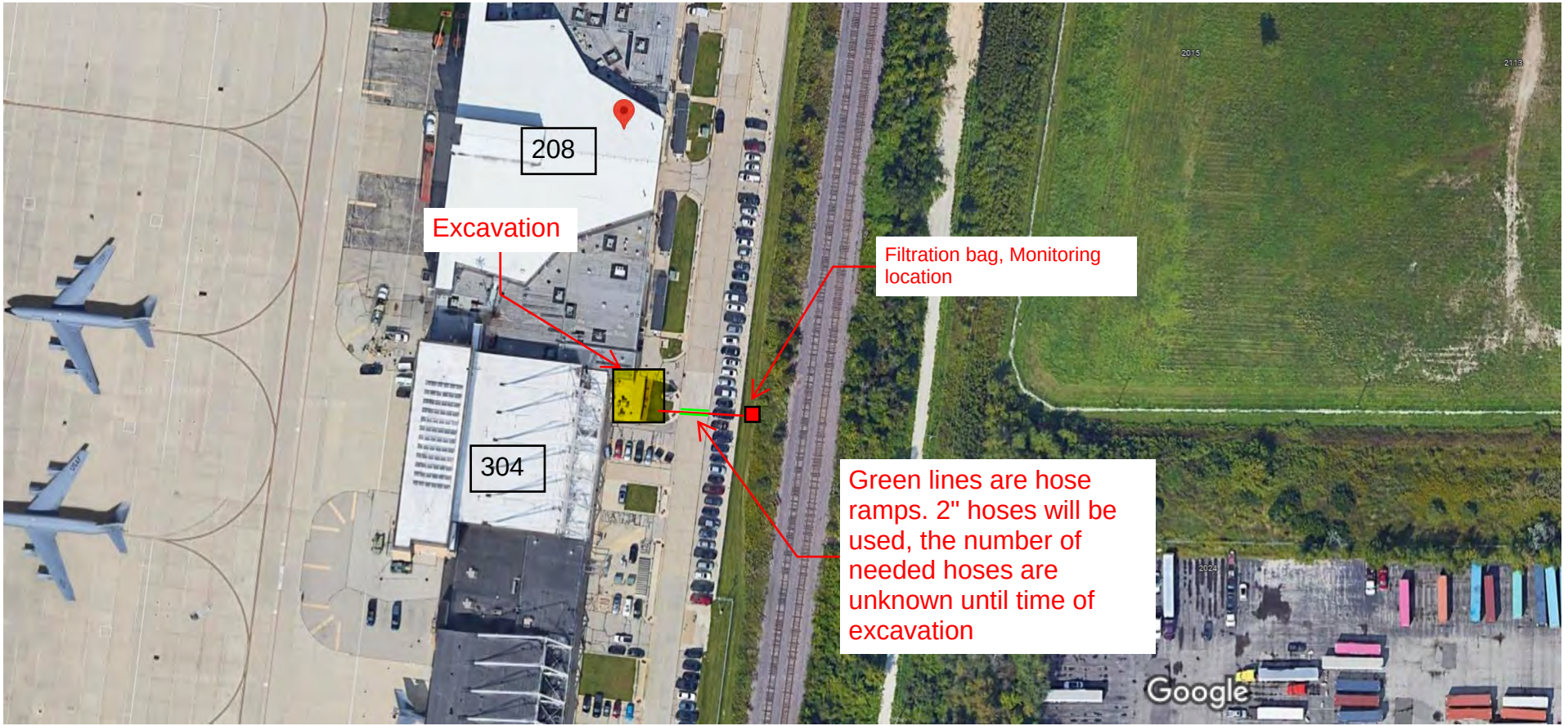
Notes

0.1 0 0.03 0.1 Miles

NAD_1983_HARN_Wisconsin_TM

1: 1,980


308
Excavation
Filtration bag, Monitoring location
Green lines are hose ramps. 2" hoses will be used, the number of needed hoses are unknown until time of excavation


208
Excavation
Filtration bag, Monitoring location
304
Green lines are hose ramps. 2" hoses will be used, the number of needed hoses are unknown until time of excavation
Google

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Southeast Regional Headquarters
1027 W Saint Paul Avenue
Milwaukee, WI 53233

Tony Evers, Governor
Adam N. Payne, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 71

April 24, 2023

Mr. Steve Adkins, Owner
CORNERSTONE ONE LLC
20875 Enterprise Avenue
Brookfield, WI 53045

SUBJECT: Coverage under WPDES General Permit No. WI-0046566-07-0

Permittee Name:	CornerStone One, LLC
Site Name:	Wisconsin Air National Guard 128th Refueling Wing
Site Address:	1919 E Grange Avenue, City of Milwaukee, Milwaukee County
Site ID (FIN):	8005

Dear Mr. Adkins:

The Wisconsin Department of Natural Resources (hereafter Department) has determined that the proposed discharge from the 128th Refueling Wing located at 1919 E Grange Avenue in Milwaukee County, is eligible for coverage and is hereby authorized under the *Contaminated Groundwater from Remedial Action Operations* Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-0046566-07-0. This determination was based on review of a complete electronic Notice of Intent (eNOI) and submitted Discharge Management Plan. Please download the permit and fact sheet from the Department website at: http://dnr.wi.gov/topic/wastewater/GeneralPermits.html.

The Department is also approving the discharge management plan in accordance with Section 3.2 of the *Contaminated Groundwater from Remedial Action Operations* WPDES General Permit No. WI-0046566-07-0. The approval of the discharge management plan hereby certifies that the discharge management plan requirements in Section 3 of the general permit are met.

The proposed discharge back to groundwater via seepage is eligible for coverage and is hereby authorized under the *Contaminated Groundwater from Remedial Action Operations* WPDES General Permit No. WI-0046566-07-0 in accordance with s. NR 205.08, Wis. Adm. Code. You are responsible for compliance with the general permit requirements and conditions listed below and all other applicable requirements and conditions contained in the general permit. **To assure you remain in compliance and avoid any enforcement action, please read the general permit over carefully.**

1. Coverage Effective Date: Coverage at the facility/project will become effective under this permit upon the date of this letter until termination of permit coverage, revoke and reissuance of this general permit, or reissuance of the general permit. This permit applies only to the discharge activities and sites described in the NOI for the above referenced facility/project.
2. Discharge Management Plan: The permittee shall operate consistent with the approved discharge management plan. A copy of the discharge management plan shall be retained by the permittee and this plan shall be made available upon department inspection or submitted to the department upon request. Permittees shall notify the department when the discharge management plan is amended to determine if the amendment requires department approval.

3. Sampling: The permittee shall sample the wastewater after treatment (if necessary) and prior to discharge to groundwater via Outfall 002 for all the parameters listed below based on the approved discharge management plan and Section 5.2.1 of general permit. Sampling is only required when there is a discharge during any month.

Outfall 002 – Groundwater Discharge via Seepage

Monitoring Requirements and Effluent Limitations						
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Reporting Frequency**	**Notes**
Flow Rate		gpd	Daily	Estimated	Monthly	See Section 5.4 of permit
Oil & Grease (Hexane)	Daily Max	10 mg/L	Weekly	Grab	Monthly	See Section 5.4 of permit

4. Reporting: The permit requires all monitoring data be submitted on an electronic discharge monitoring report (eDMR) form. The eDMR form is available through the Switchboard (https://dnr.wisconsin.gov/topic/Switchboard/). **The report for the month of April 2023 is due by May 21, 2023. The eDMR form shall be submitted to the department regardless of whether or not there is a discharge during the reporting frequency. For days with no flow, the flow rate shall be reported as "0" on those days on the eDMR form.**

   In order to access the eDMR forms, you must have or create a Wisconsin Web Access Management System (WAMS) ID and request access for each facility for which you intend to submit data. The Switchboard can be used to create a WAMS ID and register with your contact information and user roles. If you already have a WAMS ID, then you do not need to recreate one but still must request access to the facility. Help with the Switchboard can be found here: https://dnr.wisconsin.gov/topic/Switchboard/Help.html.

5. Laboratory Testing and Analysis: Samples collected under this general permit shall be tested and analyzed by a laboratory certified or registered under ch. NR 149, Wis. Adm. Code. A list of Wisconsin accredited laboratories can be found here: https://dnr.wisconsin.gov/topic/labCert/certified-lab-lists. A list of tests that are excluded from being tested and analyzed by a certified or registered laboratory are included under Section 7.3.13 of the permit and s. NR 219.037, Wis. Adm. Code.

6. Coverage Termination: If the project has been completed and/or the remedial action activities have ceased, please complete and submit a Notice of Termination (Form 3400-221) to the Department available at http://dnr.wi.gov/topic/wastewater/GeneralPermits.html.

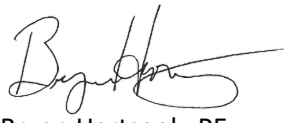
7. Change of Ownership: If the facility/project changes ownership in the future, please complete and submit a Transfer of Coverage (Form 3400-222) to the Department available at http://dnr.wi.gov/topic/wastewater/GeneralPermits.html

8. Change of Authorized Representative: If you plan on changing the authorized representative contact for the facility/project or you want to assign a new person to be a duly authorized representative to submit specific permit documents on your behalf, please complete and submit a Delegation of Signature Authority (Form 3400-220) to the Department available at http://dnr.wi.gov/topic/wastewater/GeneralPermits.html.

9. Facility/Project Changes: If there have been or will be any changes in the facility/project operations that result in new or different wastewater discharges to the waters of the state, please contact the Department consistent with the general permit conditions. If reapplication is necessary, please complete a notice of intent (NOI) form for the applicable general permit to verify that your discharge is eligible for that general permit. NOI forms are available at http://dnr.wi.gov/topic/wastewater/GeneralPermits.html.

Additional information regarding the Department's legal authority in this matter and your rights of appeal are shown below. Please contact me by email: bryan.hartsook@wisconsin.gov or by phone at 414-607-2275 if you have any questions.

Regards,



Bryan Hartsook, PE
Southeast Region Wastewater Field Supervisor
Bureau of Water Quality

cc: Howie Nissen – Site Utilities Manager, CornerStone One LLC
Riley Neumann – DNR Remediation and Redevelopment Project Manager (BRRTS Site No. 02-41-582725)
Leila Jenkins – DNR General Permits Coordinator
Permit File(s)

LEGAL AUTHORITIES AND APPEAL RIGHTS

Section 283.35(1), Wis. Stats., authorizes the Department to issue a general permit applicable to a designated area of the state authorizing discharges from specified categories or classes of point sources located within that area. Upon the request of the owner or operator of a point source, the Department shall withdraw the point source from the coverage of a general permit and issue an individual Wisconsin Pollutant Discharge Elimination System (WPDES) permit for that source in accordance with s. 283.35(2), Wis. Stats. Additionally, the Department may withdraw a point source from the coverage of a general permit and issue an individual WPDES permit if that source meets any of the factors listed in s. 283.35(3), Wis. Stats. Issuance of such an individual permit will provide for a public comment period, and potentially a public informational hearing and/or an adjudicatory hearing. In lieu of general permit withdrawal, the Department may refer any violation of a general permit to the Department of Justice for enforcement under s. 283.91, Wis. Stats., pursuant to s. 283.89, Wis. Stats. In order to remain in compliance and avoid any enforcement action, **please read your permit carefully**.

To challenge the reasonableness of or necessity for any term or condition of an issued, reissued, or modified general permit, s. 283.63, Wis. Stats., and ch. NR 203, Wis. Adm. Code, require that you file a verified petition for review with the Secretary of the Department of Natural Resources within 60 days after notice of the permit decision was issued by the Department. For other permit-related decisions, such as the decision to confer general permit coverage to your facility, that are not reviewable pursuant to s. 283.63, Wis. Stats., it may be possible for permittees or other persons to obtain an administrative review pursuant to s. 227.42, Wis. Stats., and s. NR 2.05(5), Wis. Adm. Code, or a judicial review pursuant to s. 227.52, Wis. Stats. If you choose to pursue one of these options, you should know that Wisconsin Statutes and Administrative Code establish time periods within which requests to review Department decisions must be filed.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 128TH AIR REFUELING WING (ANG)

10 May 2023

MEMORANDUM FOR WISCONSIN DEPARTMENT OF NATURAL RESOURCES

FROM: 128 CES/CEIE
1919 E Grange Ave
Milwaukee WI 53207-6142

SUBJECT: Cover Maintenance Plan – BRRTS # 02-41-582725

1. This document is the Cover Maintenance Plan in accordance with NR 724.13(2), Wis. Adm. Code for the 128th Air Refueling Wing located at 1919 East Grange Avenue, Milwaukee, Wisconsin. The property is located in the NW ¼ Section 34 Township 6 North, Range 22 East, Milwaukee County, Wisconsin. The maintenance activities relate to the cover which addresses or occupies the areas over the Perflourinated Compounds (PFAS) contaminated groundwater or soils.

2. **Description of Contamination –** Soil contaminated by PFAS is located at numerous possible release locations (PRLs) across the installation. Soil borings were done and samples taken at ranges from 0-15 feet below grade surface. Groundwater samples were taken from temporary monitoring wells from 0-15 feet below grade surface as part of the Site Inspection and found to be contaminated with PFAS. Results of samples can be found in the FY16 Phase 1 Regional Site Inspections for Perflourinated Compounds report.

3. **Description of Cover to be Maintained** – Soil from construction activities will fall into two types of cover to maintained. See attached map for cover locations.

- Contaminated soils will be placed under an impervious surface. Impervious surface would either be asphalt pavement system consisting typically of four inches of asphalt with a twelve inch compacted gravel base or a eight inch concrete pavement with a nine inch compacted gravel base.
- Contaminated soils will be placed back in the original excavation. Contaminated soils will be covered by minimum of one foot of clean soils, top soil, and seeded.

4. **Cover Purpose** – The cover over the contaminated soil serves as a barrier to prevent direct human contact with residual soil contamination that might otherwise pose a threat to human health. Additionally, the cover minimizes future soil to groundwater contamination for PFAS. Based on the current use of the property, industrial, the barrier should function as intended unless disturbed.

5. **Annual Inspection** – The cover overlying the contaminated soil and as depicted in the attached map will be inspected once a year, normally in the spring after all the snow and ice is gone, for deterioration, carcks, and other potential problems that can cause exposure to underlying soils. The inspections will be performed by the property owner or their designated represenatative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where soils have become or are likely to be come exposed will be documented. Inspections will be documented on Form 4400-305 and will include pictures showing current state each year.

6. **Maintenance Activites** – If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include patching, filling, resurfacing, or construction operations. In the event that necessary maintenance activities expose the underlying soil, the owner must inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment (PPE). The owner must sample any soil that is excavated from the site prior to disposal to

ascertain if contamination remains. The soil must be treated, stored, and disposed of by the owner in accordance with applicable local, state, and federal law.

In the event the cover overluing the contaminated soil is removed, or replaced, the replacement cover must be equal to cover that was removed. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan undless indicated otherwise by the DNR or it successor.

The property owner, in order to maintain the integrity of the cover, will maintain a copy of this maintenance plan in the Civil Engineer Squadron, Environmental Section and make it available to all interested parites for viewing.

7. **Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Cover** – The following activities are prohibited on any portion of the property where a covier is required as shown on the attached map, unless written approval has been obtained from the Wisconsin Department of Natural Resources; 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; 6) construction or placement of a building or other structure; or 7) changing the use or occupacncy of the property to residential exposure setting, such as a residence, school, day care, senior center, hospital, or similar residential exposure setting.

If removal, replacement, or other changes to a cover are considered, the property owner will contact the DNR at least 45 days before taking such action, to determine further action may be necessary to protect human health, safety, welfare, or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

8. **Amendment or Withdrawl of Maintenance Plan** – This maintenance plan can be amended or withdrawn by the property owner and it successors with the written approval of Wisconsin Department of Natural Resources.

9. **Contact Information** –

Site Owner and Operator– Wisconsin Air National Guard
1919 East Grange Avenue
Milwaukee, WI 53207
414-944-8277

10. If you have any additional questions, please feel free to contact me at 414-944-8277 or robert,chmieleski@us.af.mil at any time. Thank you in advance for your review of this plan.

Robert M. Chmieleski, Jr., CHMM
Sr. Environmental Enforcement Specialist

Attachment:

1. Buildings 208, 304, Soil Cover Map
2. Building 308 Soil Cover Map

SOILS COVER PLAN

OIL/WATER SERPERATOR PROJECT - BUILDINGS 208 & 304

Legend

- Concrete_Curb&Gutter
- Concrete_Sidewalk
- Grass
- Stone

N

10 5 0 10 Ft

SOILS COVER PLAN

OIL/WATER SERPERATOR PROJECT - BUILDINGS 308

Legend

- Grass
- Stone

N

10 5 0 10 Ft