

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 10/21)

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Notice: Use this form to request a **written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31 - 19.39, Wis. Stats.].

Definitions

"Property" refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.

"Liability Clarification" refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.

"Technical Assistance" refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.

"Post-closure modification" refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

Select the Correct Form

This form should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

Do not use this form if one of the following applies:

- Request for an **off-site liability exemption or clarification** for Property that has been or is perceived to be contaminated by one or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the **Lender Liability Exemption**, s 292.21, Wis. Stats., **if no response or review by DNR is requested**. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an **exemption to develop on a historic fill site** or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- **Request for closure** for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure - GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: dnr.wi.gov/topic/Brownfields/Pubs.html.

Instructions

1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program and the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located. See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

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Section 1. Contact and Recipient Information

Requester Information

This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.

Last Name	First	MI	Organization/ Business Name		
Chambers	Britta		3M		
Mailing Address			City	State	ZIP Code
3M Center, 225-IN-22			St. Paul	MN	55144-1000
Phone # (include area code)	Fax # (include area code)		Email		
(952) 378-0198			bchambers2@mmm.com		

The requester listed above: (select all that apply)

- ☐ Is currently the owner
- ☐ Is considering selling the Property
- ☐ Is renting or leasing the Property
- ☐ Is considering acquiring the Property
- ☐ Is a lender with a mortgagee interest in the Property
- ☒ Other. Explain the status of the Property with respect to the applicant:

Property Owner Representative

Contact Information (to be contacted with questions about this request) ☐ Select if same as requester

Contact Last Name	First	MI	Organization/ Business Name		
Chambers	Britta		3M		
Mailing Address			City	State	ZIP Code
3M Center, 225-IN-22			St. Paul	MN	55144-1000
Phone # (include area code)	Fax # (include area code)		Email		
(952) 378-0198			bchambers2@mmm.com		

Environmental Consultant (if applicable)

Contact Last Name	First	MI	Organization/ Business Name		
Bonniwell	CHris		Tetra Tech		
Mailing Address			City	State	ZIP Code
13555 Bishops Court, SUite 201			Brookfield	WI	53005
Phone # (include area code)	Fax # (include area code)		Email		
(262) 792-1282			chris.bonniwell@tetrattech.com		

Section 2. Property Information

Property Name			FID No. (if known)		
BRRS No. (if known)			Parcel Identification Number		
02-17-590808			1725122812183100003 + 13 other parcels		
Street Address			City	State	ZIP Code
1425 Stokke Parkway			Menomonie	WI	
County	Municipality where the Property is located		Property is composed of:		Property Size Acres
Dunn	☒ City ☐ Town ☐ Village of		☐ Single tax parcel ☒ Multiple tax parcels		490

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1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly.

☒ No ☐ Yes

Date requested by: _____

Reason: _____

2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program?

☒ No. Include the fee that is required for your request in Section 3, 4 or 5.

☐ Yes. Do not include a separate fee. This request will be billed separately through the VPLE Program.

Fill out the information in Section 3, 4 or 5 which corresponds with the type of request:

Section 3. Technical Assistance or Post-Closure Modifications;

Section 4. Liability Clarification; or Section 5. Specialized Agreement.

Section 3. Request for Technical Assistance or Post-Closure Modification

Select the type of technical assistance requested: [Numbers in brackets are for WI DNR Use]

- ☐ No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - Include a fee of \$350. Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
- ☐ Review of Site Investigation Work Plan - NR 716.09, [135] - Include a fee of \$700.
- ☒ Review of Site Investigation Report - NR 716.15, [137] - Include a fee of \$1050.
- ☐ Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - Include a fee of \$1050.
- ☐ Review of a Remedial Action Options Report - NR 722.13, [143] - Include a fee of \$1050.
- ☐ Review of a Remedial Action Design Report - NR 724.09, [148] - Include a fee of \$1050.
- ☐ Review of a Remedial Action Documentation Report - NR 724.15, [152] - Include a fee of \$350
- ☐ Review of a Long-term Monitoring Plan - NR 724.17, [25] - Include a fee of \$425.
- ☐ Review of an Operation and Maintenance Plan - NR 724.13, [192] - Include a fee of \$425.

Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)

- ☐ Schedule a Technical Assistance Meeting - Include a fee of \$700.
- ☐ Hazardous Waste Determination - Include a fee of \$700.
- ☐ Other Technical Assistance - Include a fee of \$700. Explain your request in an attachment.

Post-Closure Modifications - NR 727, [181]

- ☐ Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. Include a fee of \$1050, and:
 - ☐ Include a fee of \$300 for sites with residual soil contamination; and
 - ☐ Include a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations.

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

Section 4. Request for Liability Clarification

Select the type of liability clarification requested. Use the available space given or attach information, explanations, or specific questions that you need answered in DNR's reply. Complete Sections 6 and 7 of this form. [Numbers in brackets are for DNR Use]

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☐ "Lender" liability exemption clarification - s. 292.21, Wis. Stats. [686]

❖ **Include a fee of \$700.**

Provide the following documentation:

- (1) ownership status of the real Property, and/or the personal Property and fixtures;
- (2) an environmental assessment, in accordance with s. 292.21, Wis. Stats.;
- (3) the date the environmental assessment was conducted by the lender;
- (4) the date of the Property acquisition; for foreclosure actions, include a copy of the signed and dated court order confirming the sheriff's sale.
- (5) documentation showing how the Property was acquired and the steps followed under the appropriate state statutes.
- (6) a copy of the Property deed with the correct legal description; and,
- (7) the Lender Liability Exemption Environmental Assessment Tracking Form (Form 4400-196).
- (8) If no sampling was done, please provide reasoning as to why it was not conducted. Include this either in the accompanying environmental assessment or as an attachment to this form, and cite language in s. 292.21(1)(c)2., h.-i., Wis. Stats.:
 - h. The collection and analysis of representative samples of soil or other materials in the ground that are suspected of being contaminated based on observations made during a visual inspection of the real Property or based on aerial photographs, or other information available to the lender, including stained or discolored soil or other materials in the ground and including soil or materials in the ground in areas with dead or distressed vegetation. The collection and analysis shall identify contaminants in the soil or other materials in the ground and shall quantify concentrations.
 - i. The collection and analysis of representative samples of unknown wastes or potentially hazardous substances found on the real Property and the determination of concentrations of hazardous waste and hazardous substances found in tanks, drums or other containers or in piles or lagoons on the real Property.

☐ "Representative" liability exemption clarification (e.g. trustees, receivers, etc.) - s. 292.21, Wis. Stats. [686]

❖ **Include a fee of \$700.**

Provide the following documentation:

- (1) ownership status of the Property;
- (2) the date of Property acquisition by the representative;
- (3) the means by which the Property was acquired;
- (4) documentation that the representative has no beneficial interest in any entity that owns, possesses, or controls the Property;
- (5) documentation that the representative has not caused any discharge of a hazardous substance on the Property; and
- (6) a copy of the Property deed with the correct legal description.

☐ Clarification of local governmental unit (LGU) liability exemption at sites with: (select all that apply)

- ☐ hazardous substances spills - s. 292.11(9)(e), Wis. Stats. [649];
- ☐ Perceived environmental contamination - [649];
- ☐ hazardous waste - s. 292.24 (2), Wis. Stats. [649]; and/or
- ☐ solid waste - s. 292.23 (2), Wis. Stats. [649].

❖ **Include a fee of \$700, a summary of the environmental liability clarification being requested, and the following:**

- (1) clear supporting documentation showing the acquisition method used, and the steps followed under the appropriate state statute(s).
- (2) current and proposed ownership status of the Property;
- (3) date and means by which the Property was acquired by the LGU, where applicable;
- (4) a map and the ¼, ¼ section location of the Property;
- (5) summary of current uses of the Property;
- (6) intended or potential use(s) of the Property;
- (7) descriptions of other investigations that have taken place on the Property; and
- (8) (for solid waste clarifications) a summary of the license history of the facility.

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Section 4. Request for Liability Clarification (cont.)

☐ Lease liability clarification - s. 292.55, Wis. Stats. [646]

❖ Include a fee of \$700 for a single Property, or \$1400 for multiple Properties and the information listed below:

- (1) a copy of the proposed lease;
- (2) the name of the current owner of the Property and the person who will lease the Property;
- (3) a description of the lease holder's association with any persons who have possession, control, or caused a discharge of a hazardous substance on the Property;
- (4) map(s) showing the Property location and any suspected or known sources of contamination detected on the Property;
- (5) a description of the intended use of the Property by the lease holder, with reference to the maps to indicate which areas will be used. Explain how the use will not interfere with any future investigation or cleanup at the Property; and
- (6) all reports or investigations (e.g. Phase I and Phase II Environmental Assessments and/or Site Investigation Reports conducted under s. NR 716, Wis. Adm. Code) that identify areas of the Property where a discharge has occurred.

General or other environmental liability clarification - s. 292.55, Wis. Stats. [682] - Explain your request below.

❖ Include a fee of \$700 and an adequate summary of relevant environmental work to date.

☐ No Action Required (NAR) - NR 716.05, [682]

❖ Include a fee of \$700.

Use where an environmental discharge has or has not occurred, and applicant wants a DNR determination that no further assessment or clean-up work is required. Usually this is requested after a Phase I and Phase II environmental assessment has been conducted; the assessment reports should be submitted with this form. This is not a closure letter.

☐ Clarify the liability associated with a "closed" Property - s. 292.55, Wis. Stats. [682]

❖ Include a fee of \$700.

- Include a copy of any closure documents if a state agency other than DNR approved the closure.

Use this space or attach additional sheets to provide necessary information, explanations or specific questions to be answered by the DNR.

Section 5. Request for a Specialized Agreement

Select the type of agreement needed. Include the appropriate draft agreements and supporting materials. Complete Sections 6 and 7 of this form. More information and model draft agreements are available at: dnr.wi.gov/topic/Brownfields/lgu.html#tabx4.

☐ Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]

❖ Include a fee of \$700, and the information listed below:

- (1) Phase I and II Environmental Site Assessment Reports,
- (2) a copy of the Property deed with the correct legal description.

☐ Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]

❖ Include a fee of \$700, and the information listed below:

- (1) Phase I and II Environmental Site Assessment Reports,
- (2) a copy of the Property deed with the correct legal description.

☐ Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]

❖ Include a fee of \$1400, and the information listed below:

- (1) a draft schedule for remediation; and,
- (2) the name, mailing address, phone and email for each party to the agreement.

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Section 6. Other Information Submitted

Identify all materials that are included with this request.

Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.

Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.

☐ Phase I Environmental Site Assessment Report - Date: _____

☐ Phase II Environmental Site Assessment Report - Date: _____

☐ Legal Description of Property (required for all liability requests and specialized agreements)

☒ Map of the Property (required for all liability requests and specialized agreements)

Analytical results of the following sampled media: Select all that apply and include date of collection.

☒ Groundwater ☐ Soil ☐ Sediment ☒ Other medium - Describe: Surface water

Date of Collection: 05/22/2024

☐ A copy of the closure letter and submittal materials

☐ Draft tax cancellation agreement

☐ Draft agreement for assignment of tax foreclosure judgment

☒ Other report(s) or information - Describe: Groundwater Site Investigation Report

For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?

☐ Yes - Date (if known): _____

☐ No

Note: The Notification for Hazardous Substance Discharge Form - Non-Emergency Only (Form 4400-225) is accessible through the RR Program Submittal Portal application. Directions for using the form and the Submittal Portal application are available on the [Submittal Portal web page](#).

Section 7. Certification by the Person who completed this form

☐ I am the person submitting this request (requester)

☒ I prepared this request for: Britta Chambers
Requester Name

I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.



Signature

10/10/27

Date Signed

Midwest Principal Account Manager

Title

(262) 792-1282

Telephone Number (include area code)

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Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a [DNR regional brownfields specialist](#) with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see:

<http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

DNR NORTHERN REGION

Attn: RR Program Assistant
Department of Natural Resources
223 E Steinfest Rd Antigo, WI 54409

DNR NORTHEAST REGION

Attn: RR Program Assistant
Department of Natural Resources
2984 Shawano Avenue
Green Bay WI 54313

DNR SOUTH CENTRAL REGION

Attn: RR Program Assistant
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg WI 53711

DNR SOUTHEAST REGION

Attn: RR Program Assistant
Milwaukee DNR Office
1027 West St. Paul Ave
Milwaukee WI 53233

DNR WEST CENTRAL REGION

Attn: RR Program Assistant
Department of Natural Resources
1300 Clairemont Ave.
Eau Claire WI 54702



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

DNR Use Only			
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)
DNR Reviewer		Comments	
Fee Enclosed? ☐ Yes ☐ No	Fee Amount \$	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		

Groundwater Site Investigation Report

3M Company

Menomonie, Wisconsin

PREPARED FOR

3M Global Environment, Health & Safety

3M Center, 225-1N-22
St. Paul, MN 55144

PRESENTED BY

Tetra Tech, Inc.

13555 Bishops Court, Suite 201
Brookfield, WI 53005

October 8, 2024

CERTIFICATION

Hydrogeologist:

I hereby certify that I am a hydrogeologist as that term is defined in s. NR712.03(1), 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. NR700 to 726, Wis. Adm. Code.



Chris Bonniwell, Ph.D, P.G.
Midwest Principal Account Manager

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LIST OF ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
3M	3M Company
bgs	below ground surface
BRRTS	Bureau for Remediation and Redevelopment Tracking System
ES	Enforcement Standard
ft	feet
GSIR	Groundwater Site Investigation Report
NAVD88	North American Vertical Datum of 1988
ng/L	nanograms per liter
Pace	PACE Analytical Services, LLC
PAL	Preventative Action Limit
PFAS	per- and polyfluoroalkyl substances
PFBA	perfluorobutanoic acid
PFBS	perfluorobutane sulfonic acid
PFHxS	perfluorohexane sulfonic acid
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonic acid
QA/QC	quality assurance/quality control
Site	3M Menomonie, 1425 Stokke Parkway, Menomonie, Wisconsin
SIWP	Site Investigation Work Plan
Tetra Tech	Tetra Tech, Inc.
WDNR	Wisconsin Department of Natural Resources

1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) has prepared this Groundwater Site Investigation Report (GSIR) on behalf of 3M Company (3M) to report on additional groundwater investigation completed in May 2024 at the 3M Menomonie facility located at 1425 Stokke Parkway in Menomonie, Wisconsin (Site). The investigative work detailed herein generally follows the activities outlined in the Site Investigation Work Plan (SIWP) dated March 26, 2024, that was approved by the Wisconsin Department of Natural Resources (WDNR) on April 30, 2024. The location of the Site is presented in **Figure 1**. The Site is identified in the WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) as site #02-17-590808.

The objective of the groundwater and surface-water investigative activities described in this GSIR are to further refine delineation and characterization of per- and polyfluoroalkyl substances (PFAS) previously identified in groundwater and surface water. Groundwater and surface-water investigation has been prioritized. Previously identified soil investigative activities will be conducted under a separate Soil Investigation Work Plan yet to be prepared.

1.1 SITE DESCRIPTION

The Site is located in Dunn County, in the southeast quarter (SE 1/4), Section 18 (S18) of Township 28 north (T28N) Range 12 west (12W). The 490-acre Site is located south of I-94 and includes a 3M manufacturing facility as well as surrounding undeveloped fields which are also owned by 3M. The manufacturing facility consists of thirteen interconnected buildings that have a total approximate footprint of 750,000 square feet. A small stormwater retention pond is located on the west side of the Site and a larger stormwater retention pond is located on the northwest side of the Site (**Figure 2**). Stormwater is conveyed to these ponds through a series of underground pipes and aboveground swales. Both retention ponds serve as infiltration basins and currently there are no stormwater discharges from the Site. The remainder of the Site consists of asphalt paved parking lots, gravel driving lanes, and landscaped areas. 3M Menomonie is supplied by municipal water.

The Site is used as an active manufacturing facility as well as research and product development for 3M since it was originally constructed in 1974. The Site houses 19 different 3M divisions related to manufacturing of film, tape, coatings, optical, and personal care products. Prior to 1974, the Site and surrounding property were used for agricultural purposes.

1.2 TOPOGRAPHY AND DRAINAGE

The developed portion of the Site is generally flat at an elevation of approximately 890 feet (ft) above North American Vertical Datum of 1988 (NAVD88) according to the United States Geological Survey 2018 topographic map. Topography on the west side of the Site slopes steeply downward to the west, toward an unnamed tributary to Lake Menomin that is at an elevation of approximately 820 ft NAVD88. On December 11, 2023, Tetra Tech staff performed aerial drone reconnaissance of the Site to provide updated base imagery of building structures and to perform photogrammetric analysis for improved characterization of elevations on the western slopes.

Surface water flow across the Site is westward. The nearest surface water body is Lake Menomin which is a reservoir on the Red Cedar River. A previous stormwater management system was replaced between 1992 and 2005 with the current man-made stormwater retention ponds in the west and northwest portions of the Site.

1.3 GEOLOGY & HYDROGEOLOGY

Lithology at the Site consists primarily of sand and silty sand observed from ground surface to approximately 70 ft below ground surface (bgs), the maximum depth of the previous investigation. The sands are fine to coarse grained

and generally vary in color between different shades of brown and gray. Trace amounts of gravel can also be present in the sand depending on depth and location. A clay layer, approximately 3 to 8 inches thick, was observed at a depth of 5 to 7 ft bgs in borings on the southern end of the investigation area. The clay is generally soft with low plasticity and contains varying amounts of silt. The depth to bedrock in the vicinity of the Site is reportedly approximately 100 to 200 ft bgs and is classified as a fine-grained sandstone of the Cambrian-age Eau Claire formation (Brown, 1988).

Groundwater elevation data collected in previous groundwater sampling events in May 2023 and December 2023 have consistently indicated a groundwater flow direction to the west-northwest. The depth to groundwater is typically observed to be between 62 and 70 ft bgs at the facility. The observed groundwater flow direction generally mirrors the site topography, which slopes gently downward towards the west and then steepens towards an adjacent unnamed tributary of Lake Menomin. Based on groundwater and surface elevations it is assumed that the local water table intersects the water surface at the unnamed tributary.

1.4 PREVIOUS GROUNDWATER CHARACTERIZATION

Seven groundwater monitoring wells (MW-1 through MW-7) were installed in May 2023 to depths ranging from 68.49 ft bgs to 76.53 ft bgs, the locations of which are depicted on **Figure 3**. Groundwater samples were collected for analysis of PFAS. An additional round of groundwater monitoring from the established monitoring wells was performed in December 2023 to corroborate the May 2023 sampling results.

The PFAS analytical results from the December 2023 sampling event were generally consistent with those of the initial sampling event in the magnitude and assemblage of detected compounds at each location. The highest concentrations of PFAS compounds in groundwater were generally observed in monitoring wells at and downgradient of a historical fire training area where fire extinguishers containing aqueous film forming foam (AFFF) were used. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are two PFAS compounds of interest as they are most frequently detected at elevated concentrations in site groundwater. The maximum combined PFOA and PFOS concentrations in December 2023 were observed in MW-3 (2,440 nanograms per liter [ng/L]; 1,910 ng/L duplicate) and downgradient well MW-4 (1,590 ng/L), which were consistent with the initial sampling event. Fluctuating PFOA concentrations were noted between the May 2023 and December 2023 groundwater sampling events at MW-4 (75 ng/L to 190 ng/L) and MW-6 (56 ng/L to below detection). Fluctuating PFOS concentrations were noted at MW-2 (200 ng/L to 62 ng/L) and MW-5 (350 ng/L to 94 ng/L). The observed fluctuations may be related to the observed rise (0.8 to 0.3 ft, respectively) in groundwater elevation between sampling events.

1.5 PREVIOUS SURFACE WATER PFAS CHARACTERIZATION

Based upon site groundwater elevations being similar to surface water elevations in the western adjacent unnamed tributary, the surface waters of the tributary were sampled on January 11, 2024. Reconnaissance of the tributary area identified several groundwater seeps visibly contributing to the tributary flow. Tetra Tech staff collected surface water samples from four seep locations in January 2024 (Seep01, Seep03, Seep05, and Seep08). Samples were also collected from three locations within the creek representing the downgradient edge of 3M property (Creek01), the midpoint of the flowing creek (Creek02), and immediately below a beaver dam (Creek03).

PFAS analysis identified detectable concentrations of one or more PFAS analytes in each creek and seep sample. Analytical results were compared to established WDNR surface water standards for PFOA (95 ng/L for non-public use water ways) and PFOS (8 ng/L). No samples exceeded the PFOA surface water criteria. Creek samples exceeded the PFOS criteria at the downgradient most location (Creek01) with a concentration of 33 ng/L. Concentrations of PFOS decreased to 17 ng/L in upgradient location Creek02, and further to nondetectable levels at Creek03. The PFOS surface water criteria was exceeded in three seep locations (Seep03, Seep05, and Seep08), with a maximum concentration of 250 ng/L in Seep03. Seep PFOS concentrations were highest in seep

locations located downgradient of MW4 and MW5 which displayed the highest concentrations of PFOS in groundwater. Similar to the creek, concentrations decreased moving upstream from Seep03 to 140 ng/L at Seep05 and further to 24 ng/L at Seep08. The sample collected from downgradient Seep01 was below detection limits. Seep concentrations generally reflected concentration trends observed in upgradient monitoring wells MW-4, MW-5, and MW-6.

2.0 MONITORING WELL INSTALLATION AND SAMPLING

The objective of the activities described in the WDNR-approved SIWP were to further characterize the horizontal and vertical extent of PFAS groundwater impacts and to perform confirmation sampling of the adjacent surface waters of the creek.

2.1 MONITORING WELL AND PIEZOMETER INSTALLATION

2.1.1 Monitoring Well Installation

Nine monitoring wells were installed May 6 – May 21, 2024, to further delineate horizontal and vertical extent of PFAS in groundwater. Five wells (MW-8 through MW-12) were installed to provide further horizontal delineation of shallow groundwater PFAS concentrations in the uppermost saturated zone that is typically encountered at 60 – 65 ft bgs. The locations of the shallow wells are depicted on **Figure 3**. Four monitoring wells were installed for the vertical delineation of groundwater PFAS concentrations, identification of the groundwater flow direction within the deeper portion of the aquifer, and characterization of the depth to bedrock at the site. The deep well locations are depicted on **Figure 3** as MW-4D, MW-5D, MW-9D, and MW-12D. The SIWP-identified deep well MW-8D was replaced by the MW-9D location due to installation challenges associated with the drilling equipment at the MW-8 location.

The monitoring wells were installed in accordance with the requirements specified in Chapter NR 141, Wisc. Admin. Code. Each monitoring well was constructed of 2-inch diameter polyvinyl chloride well screen and casing installed in 6-inch diameter boreholes. The length of the screened interval was 10 ft. Rotasonic drilling methods and equipment were utilized for well locations MW-4D, MW-5D, MW-9, MW-9D, MW-11, MW-12, and MW-12D. Borings for locations MW-8 and MW-10 were advanced via direct push technology equipment, with monitoring wells subsequently installed via hollow stem augers. The shallow monitoring well screens were installed to intersect the top of the water table, with a targeted interval of 3 ft above the water table to 7 ft below the water table. The five shallow wells were installed to depths of approximately 71 - 78 ft bgs (**Table 1**).

The four deeper well location borings were advanced until bedrock or weathered bedrock was encountered. The recovered soils were characterized and logged by a qualified geologist. The lower portion of the boring was then abandoned with bentonite and the monitoring wells were established at a depth of approximately 100 ft bgs (**Table 1**). The dual intent of the deep borings/monitoring wells was to establish the depth to bedrock and to provide vertical delineation of groundwater impacts at a depth proximally underlying the depth of shallow wells. Boring logs for each location are compiled in **Appendix A**.

The monitoring wells were developed in accordance with the monitoring well development procedures described in Chapter NR 141.21, Wisc. Admin. Code. The monitoring wells were constructed with an above-ground, steel well vault and protected by the installation of three protective bollards. Forms documenting the monitoring well construction and development (WDNR Forms 4400-113A and 44000113B) were completed for each well; copies of the forms are included in **Appendix B**. The installed monitoring wells were surveyed by a Wisconsin licensed professional surveyor to establish the location, ground elevation, and top of casing elevation.

2.1.2 Installation of Shallow Groundwater Sampling Points near Seeps

Previous sampling at seep locations was performed utilizing disposable, PFAS-free dipper cups. Due to anticipated vegetative growth during the spring and summer months that would likely inhibit locating and/or sampling of groundwater seeps, durable sampling locations were established. The WDNR-approved SIWP originally detailed a total of nine piezometer locations, but due to difficulties in positioning the locations at proposed locations, two additional locations were installed on the east bank to assure complete coverage. The piezometer locations consisted of nine point (PZ-0 through PZ-7, and PZ-10) located immediately upslope from observed seeps on the east bank of the tributary to Lake Menomin, and two points located on the western bank of the tributary (PZ-8 and PZ-9). The piezometers were installed May 15 - May 21, 2024. The locations of these sampling points are depicted in **Figure 3**. Each sampling point consisted of an Eco-Flo brand 1 1/4" X 3-ft galvanized pipe well point equipped with 80 mesh stainless steel mesh screen (or equivalent). The sand points were hand driven to approximately 8 to 12 ft bgs to intersect the underlying water table, with a galvanized pipe extension to extend the pipe to approximately 3 ft above ground surface. The extended casings were capped with PVC-threaded caps. Depths of each piezometer location are compiled in **Table 1**. Each piezometer location was surveyed by a Wisconsin licensed professional surveyor to establish the location, ground elevation, and top of casing elevation.

2.2 GROUNDWATER AND SURFACE WATER SAMPLING

2.2.1 Groundwater Sampling

Groundwater sampling activities followed a minimum 24-hour equilibration period following the installation and development of the wells and piezometers. Groundwater sampling was initiated by a synoptic groundwater level measurement event conducted prior to pre-sample purging activities for monitoring wells. Water levels at all existing and new monitoring wells were collected on May 22, 2024, for this event.

The new monitoring wells and two existing wells – MW-3 and MW-5 – were purged and sampled using low-flow techniques in accordance with the low-flow sampling procedures included in the SIWP. A portable pneumatic bladder pump and dedicated tubing was used to purge and sample the monitoring wells. New bladders were used to purge and sample each monitoring well. Throughout the purging process field parameters, including temperature, pH, specific conductivity, dissolved oxygen, oxidation-reduction (redox) potential, and turbidity were measured. Readings were recorded at set intervals (every 2 to 10 minutes). The groundwater samples submitted for laboratory analyses were collected in laboratory-provided containers once the field parameters met the appropriate stabilization criteria (three consecutive readings differing by less than 10 percent and +/-0.3 units for pH). Samples were submitted to the PACE Analytical Services, LLC (Pace) laboratory in Minneapolis, Minnesota for PFAS analysis using EPA Method 537.1 by isotope dilution for the 33 PFAS analytes required by the State of Wisconsin. Tetra Tech standard groundwater sampling logs were completed for each monitoring well sampled (**Appendix C**).

The eleven new seep-area groundwater sampling points were sampled utilizing either a peristaltic pump equipped with disposable tubing or via disposable bailers.

The portable pneumatic bladder pump was decontaminated after the groundwater samples were collected from each monitoring well by rinsing the inside and outside of the pump with a solution of Liquinox (or equivalent) and distilled water followed by a double rinse with distilled water. The pump was dried with paper towels and allowed to air dry between samples. The fluid used to decontaminate the portable pneumatic bladder pump was collected along with purge water from sampling. Dedicated tubing and new bladders were used to purge and sample each monitoring well.

2.2.2 Surface Water Sampling

Surface water sampling consisted of the collection of samples from the creek channel. Previous creek sampling consisted of three sampling locations (Creek01 through Creek03) as depicted in **Figure 3**. These locations were

again sampled during this sampling event, with an additional sample (Creek04) near the Seep08 location, equidistant between Creek02 and Creek01. Samples were collected utilizing disposable, PFAS-free dipper cups, and transferred into laboratory supplied containers. Samples were submitted to Pace in Minneapolis, Minnesota for PFAS analysis using EPA Method 537.1 by isotope dilution for the 33 PFAS analytes required by the State of Wisconsin.

Marker posts were installed at each previously identified location. A stream stage gauge was installed at the Creek01 location to establish the relative elevation at the time of sampling and future sampling events (if needed). Quantitative methods of establishing a discharge rating curve for the creek may be explored for future evaluations.

2.2.3 Quality Control Samples

Quality assurance/quality control (QA/QC) samples for the groundwater samples were collected at a frequency of one duplicate sample per 10 samples for PFAS. QA/QC samples for the surface water samples were collected at a frequency of one duplicate sample per 10 samples for PFAS. Duplicate samples were collected from MW-3, PZ-3, and Creek03. In addition, one trip blank using laboratory supplied container and liquids was analyzed for PFAS.

Field blanks were collected by pouring laboratory-supplied PFAS-free water directly into the laboratory supplied sample containers and equipment blanks were collected by pouring laboratory-supplied PFAS-free water over the non-disposable field equipment (such as flow cell or portable pneumatic bladder pump) directly into the laboratory supplied sample container. One field blank and one equipment blanks were collected.

2.3 SLUG TESTS

Hydraulic slug testing was performed on May 24, 2024 at monitoring wells MW-3, MW-4, and MW-4D. Testing consisted of rising and falling head tests utilizing a 131-cubic-inch plastic slug and a data-logging pressure transducer.

3.0 INVESTIGATION RESULTS

3.1.1 Geology

The site investigation included four borings (MW-4D, MW-5D, MW-9D, and MW-12D) that were advanced until bedrock or indications of the bedrock interface were encountered. The deepest bedrock interface was encountered towards the west MW-4D and MW-5D at a depth of approximately 190 ft bgs, with bedrock rising to the south in MW-9D (168 ft bgs) and further in MW-12D (118 ft bgs). This trend is consistent with bedrock depth data compiled by the Wisconsin Geological and Natural History Survey (Lippelt and Fikkete, 1988). The depth to bedrock contours in the immediate vicinity of the Site are depicted in **Figure 4** with off Site measured bedrock depths denoted as black circles, along with the depth to bedrock identified in the recently advanced deep borings.

The geology overlying the bedrock at the Site is largely consistent as varying combinations of sand sizes and degrees of sorting. **Figure 5** depicts a cross section traversing from south to north along the western boundary of the Site. The approximate area of groundwater impacts represented by onsite borings MW-4D and MW-5D do not identify any significant or continuous confining geology within the vadose or shallow (<100 ft bgs) saturated zones.

3.1.2 Hydrogeology

Groundwater elevations measured from all monitoring wells during the investigation are compiled in **Table 1**. The resulting potentiometric surface maps for shallow and deep monitoring wells are depicted in **Figure 6** and **7**, respectively. The shallow groundwater flow direction to the west-northwest is consistent with previous assessments and the general topography of the area. The deep well groundwater flow direction is also to the west-northwest, which reflects the generally homogenous nature of the saturated zone above the bedrock. The shallow flow

gradient, as determined by MW-3 and MW-4, is 0.0083. The deep flow gradient, as determined by MW-9D and MW-4D, is 0.0079. A comparison of groundwater elevations in shallow/deep well pairs indicate minimal or no gradient in MW-4/MW4D, a downward gradient in MW5/MW-5D (2.63 ft head difference) and an upward gradient in MW-12-MW-12D (2.7 ft head difference)

The eleven piezometers were hand driven to depths ranging from 7.75 ft bgs (PZ-0) to 12.35 ft bgs (PZ-8), with measured depths to water ranging from 3.32 ft bgs (PZ-10) to 5.00 ft bgs (PZ-2) (**Table 1**).

Hydraulic slug testing results for monitoring wells MW-3, MW-4, and MW-4D are compiled in **Table 2**, with raw data files compiled in **Appendix D**. For MW-3 and MW-4, the average hydraulic conductivities were 0.046 cm/s and 0.032 cm/s, respectively, with the hydraulic conductivity of MW-4D (0.0036 cm/s) being approximately an order of magnitude less. The conductivity ranges are generally consistent with fine to medium sands observed in soil borings.

3.1.3 Groundwater Analytical Results

The cumulative analytical results for shallow wells, deep wells, and piezometers are compiled in **Table 3**. Recent groundwater analytical results are depicted on **Figure 8** along with December 2023 groundwater analytical results for those wells not sampled during the recent investigation. The laboratory analytical report for May 2024 sampling is included as **Appendix E**.

SHALLOW MONITORING WELLS

Groundwater analysis of the two existing shallow wells (MW-3 and MW-5) indicated reductions in PFAS concentrations from the previous (December 2023) sampling event. The combined PFOA+PFOS concentration in MW-3 was 2,230 ng/L in May 2023 and 2,440 ng/L in December 2023, but only 145.5 ng/L in the recent event. The initial sampling of MW-5 in May 2023 yielded a PFOA+PFOS concentration of 350 ng/L that reduced to 94 ng/L in December 2023, and to 41.1 ng/L in the recent event.

The additional shallow wells (MW-8, MW-9, MW-10, and MW-11) were installed to further delineate the extent of shallow groundwater PFAS impacts, all of which exhibited markedly lower or non-detectable concentrations of PFAS relative to adjacent wells in the interior of the Site.

DEEP MONITORING WELLS

Deep monitoring wells were installed and sampled to provide vertical delineation of shallow groundwater impacts. MW-4D contained detectable concentrations of Perfluorobutanoic Acid (PFBA) and Perfluorohexane sulfonic acid (PFHxS). Compared to MW-4, the former was below the detection limit of the MW-4 sample and the latter was over 500 times less. MW-5D contained no detectable concentrations of PFAS, compared to detectable concentrations of PFOA, PFHxS, and PFOS approximately 2 – 10 times the detection limit concentrations of the MW-5D sample. MW-9D contained detectable concentrations of PFBA, Perfluorobutane sulfonic acid (PFBS), and PFHxS that were similar in concentrations to detections in the overlying MW-9 sample. MW-12D contained a single detectable PFAS analyte (PFBA) that was similar in concentration to the overlying MW-12 sample.

PIEZOMETERS

Groundwater samples collected from each of the piezometer all contained one or more PFAS analyte in detectable concentrations, with the exception of PZ-8. The highest concentrations were typically PFHxS, PFOS, and PFOA.

In **Figure 9** the relative concentrations of PFOA, PFHxS, and PFOS, calculated as the percentage of the maximum concentration in piezometer samples, are plotted as a function of the distance of each location from PZ-0 (for piezometers east of the unnamed tributary). Assuming that groundwater flow is consistent amongst piezometer locations, the plotted distribution illustrates that the bulk of the contaminant mass flux occurs over an approximately 750-foot span between PZ-0 and PZ-5. This distribution is consistent with the upgradient groundwater concentrations in MW-4 and MW-5.

Analytical results from the piezometers installed on the west side of the creek (PZ-8 and PZ-9) did not contain any detectable concentrations of PFOA, PFHxS, or PFOS.

3.1.4 Surface Water Analytical Results

The cumulative surface water analytical results are compiled in **Table 4**. Recent surface water analytical results are depicted on **Figure 8** along with December 2023 groundwater analytical results for those wells not sampled during the recent investigation. The laboratory analytical report is included as **Appendix E**.

Surface water sampling at the four creek locations were generally consistent with the previous January 2023 sampling event. Detectable concentrations of multiple PFAS analytes were identified in each sample, while only PFOS concentrations exceeded applicable surface water enforcement standards. The PFOS concentration in Creek01 (34.8 ng/L) closely correlated with the previous sampling event (33 ng/L). Creek02 analytical results were similarly consistent (12.8 ng/L vs 17 ng/L). The previous sampling event identified no detectable concentration of PFOS in Creek03, while recent sampling identified a PFOS concentration of 37.1 ng/L. The recently established Creek04 sampling location, downstream of Creek03 and upstream of Creek02 contained a PFOS concentration of 9.2 ng/L.

3.1.5 QA/QC Analytical Results

Duplicate samples were collected and analyzed from MW-3, PZ-3, and Creek03 for QA/QC purposes. The relative percent difference (RPD) was calculated for each detected PFAS compound (**Appendix F**). The calculated RPDs for the MW-3 and Creek03 compared well, with all RPDs less than 10%. Several compound RPDs from the PZ-3 duplicate sample analysis exceeded 25%. Overall duplicate analyses compared well. The analytical results of field blank, equipment blank, and trip blank samples contained no detectable concentrations of PFAS. The laboratory analytical report is included as **Appendix E**.

4.0 CONCEPTUAL SITE MODEL

The site investigation activities to date and the groundwater receptor survey results combine to update the generalized cross section (**Figure 10**) along the approximate direction of groundwater flow that was previously included in the SIWP. The figure illustrates the vadose zone soil impacts in the suspected release area, underlying groundwater impacts, westward migration of groundwater impacts, communication of groundwater with the unnamed tributary creek, and the observed surface water impacts. Key observations from this conceptual site model include:

- On-site groundwater elevation measurements and recent surface water sampling events indicate groundwater, and any associated dissolved constituents, beneath the site is in communication with surface waters of the unnamed tributary creek.
- Shallow groundwater west of the creek does not appear to be impacted.
- The vertical extent of detectable PFAS in groundwater is limited to the upper saturated zone represented by shallow monitoring wells.
- The depth of bedrock in the primary area of impacted groundwater is approximately 190 ft BGS.

5.0 CONCLUSIONS & RECOMMENDATIONS

5.1.1 Conclusions

The additional investigation activities further refined the delineation of groundwater impacts, with the following conclusions being made from the results:

- Shallow monitoring wells MW-8 and MW-9 complete delineation to the north and south, respectively, of impacts identified at MW-2 and MW-3.
- Shallow monitoring wells MW-11 and MW-12 provide southern delineation of impacts identified in MW-4.
- Shallow monitoring well MW-10 provides upgradient delineation to the east of MW-7.
- Deep monitoring wells MW-4D, MW-5D, MW-9D, and MW-12D provide vertical delineation of groundwater impacts.
- Bedrock depths have been established at the site and are substantially deeper than the installed deep monitoring wells that are not impacted. The potential risk to supply wells in the area that are established in bedrock is not a concern.
- Shallow groundwater impacts are migrating into the surface waters of the adjacent creek.

5.1.2 Recommendations

Based upon the conclusions above, the following recommendations for additional investigation are as follows:

- No additional shallow groundwater delineation efforts are needed at this time.
- Additional groundwater and surface water monitoring events are recommended to assess variability in concentrations and distributions. A limited quarterly groundwater and surface water monitoring program was initiated in August 2023, the schedule for which is presented in **Table 5**.

Following the performance of the planned quarterly groundwater and surface water monitoring program, the distribution and delineation of groundwater impacts will be further evaluated, and the cumulative analytical results will be reviewed for the consideration of potential remedial technologies to address groundwater impacts at the Site.

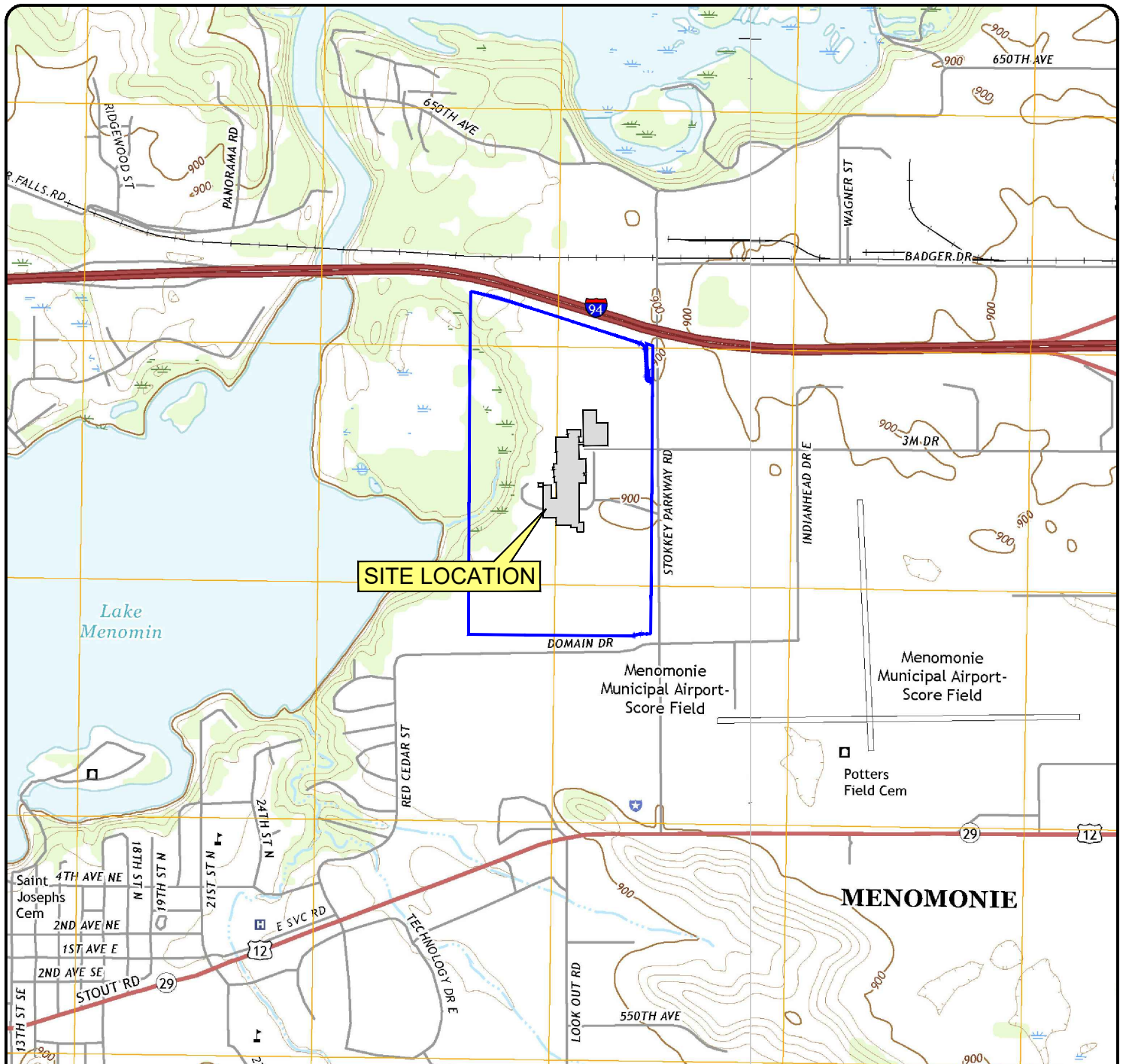
6.0 REFERENCES

Brown, B.A. 1988, Bedrock Geology of Wisconsin, West-Central Sheet, Wisconsin Geological and Natural History Survey.

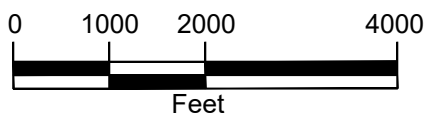
Lippelt and Fikkete, 1988, Depth to Bedrock of Dunn County, Wisconsin. Wisconsin Geological and Natural History Survey.

Wisconsin Administrative Code, NR716.07 and NR716.09 , Modified February 1997, No. 494. Wisconsin codes established to provide uniform standards related to identification and investigation of sites and facilities that are subject to regulation under Wisconsin Statutes 289 and 292.

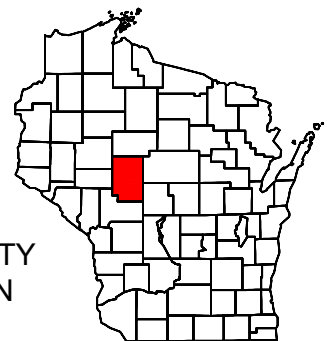
Figures



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLES MENOMONIE NORTH AND RUSK, WI (2015)



DUNN COUNTY
WISCONSIN



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3M MENOMONIE SOIL AND GROUNDWATER INVESTIGATION

1425 STOKKE PARKWAY
MENOMONIE, WISCONSIN 54751

SITE LOCATION MAP

Project No: 117-03063-24001

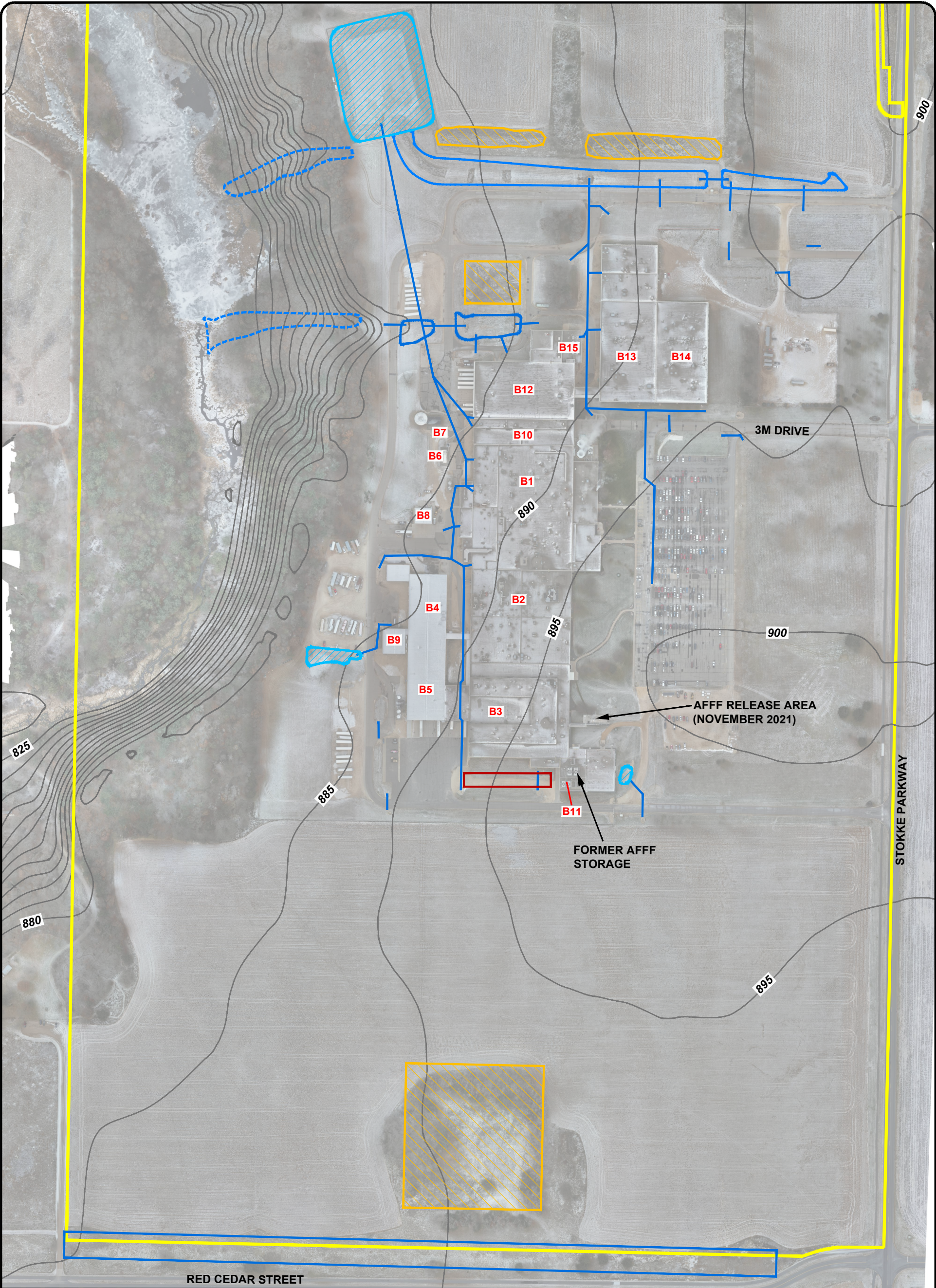
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Checked by: CB

FIGURE

1

Bar Measures 1 inch



LEGEND

Site Boundary

B7

Building Number

Berm / Fill Area

Historical Fire Training Area

Stormwater Infiltration Pond

Stormwater Drainage Feature

Former Stormwater Drainage Ditch

Stormwater Conveyance

— 900 —

5-Foot Contour (USGS, 2018)

N

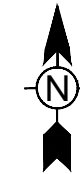
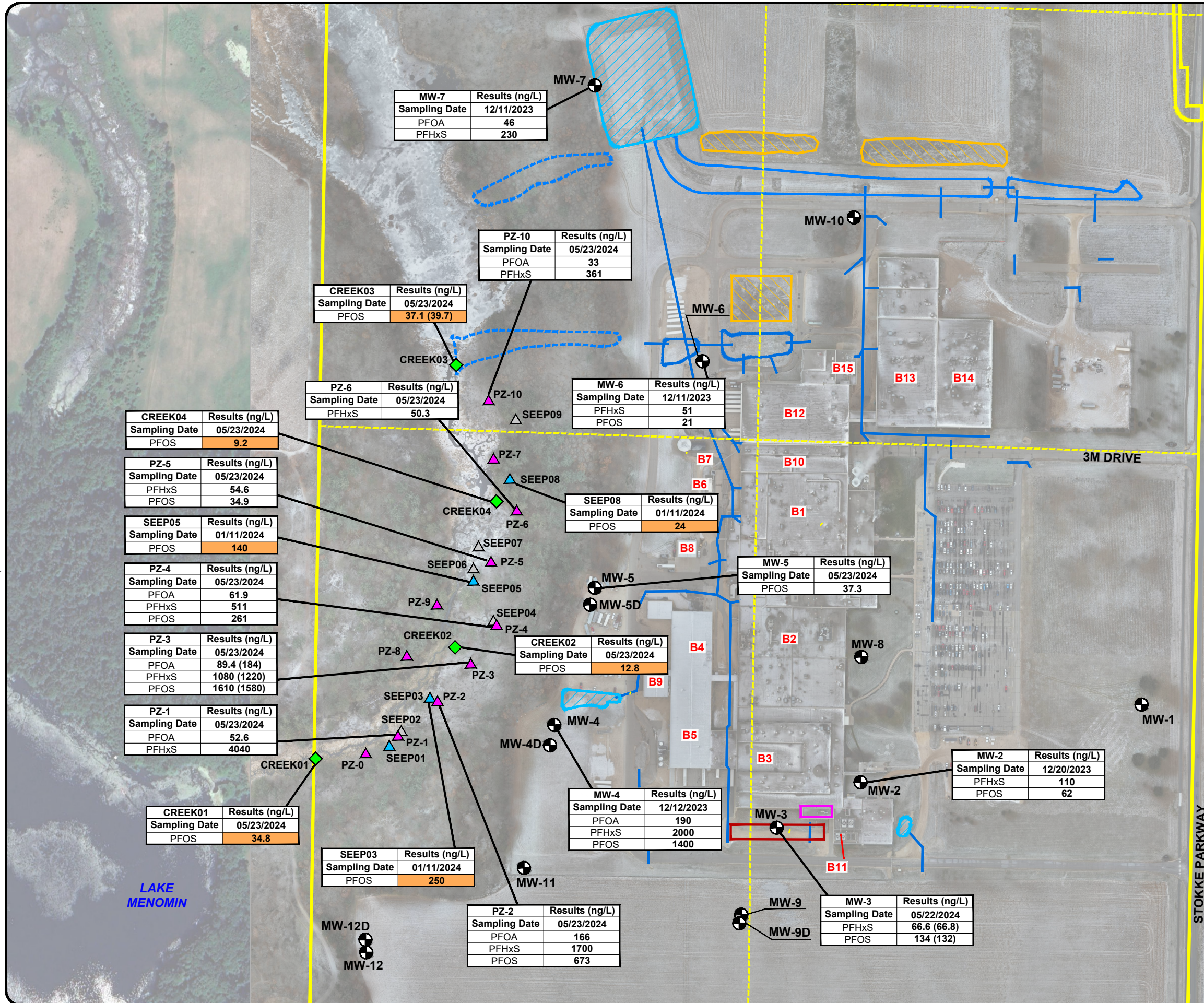
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Feet

Tt TETRA TECH www.tetrattech.com 13555 BISHOPS COURT, SUITE 201 BROOKFIELD, WI 53005 PHONE: 262.792.1282	3M MENOMONIE SOIL AND GROUNDWATER INVESTIGATION		Project No: 117-03063-24002
	1425 STOKKE PARKWAY MENOMONIE, WISCONSIN 54751		Designed by: CP
			Checked by: CB
	SITE DETAILS		FIGURE 2

Bar Measures 1 inch

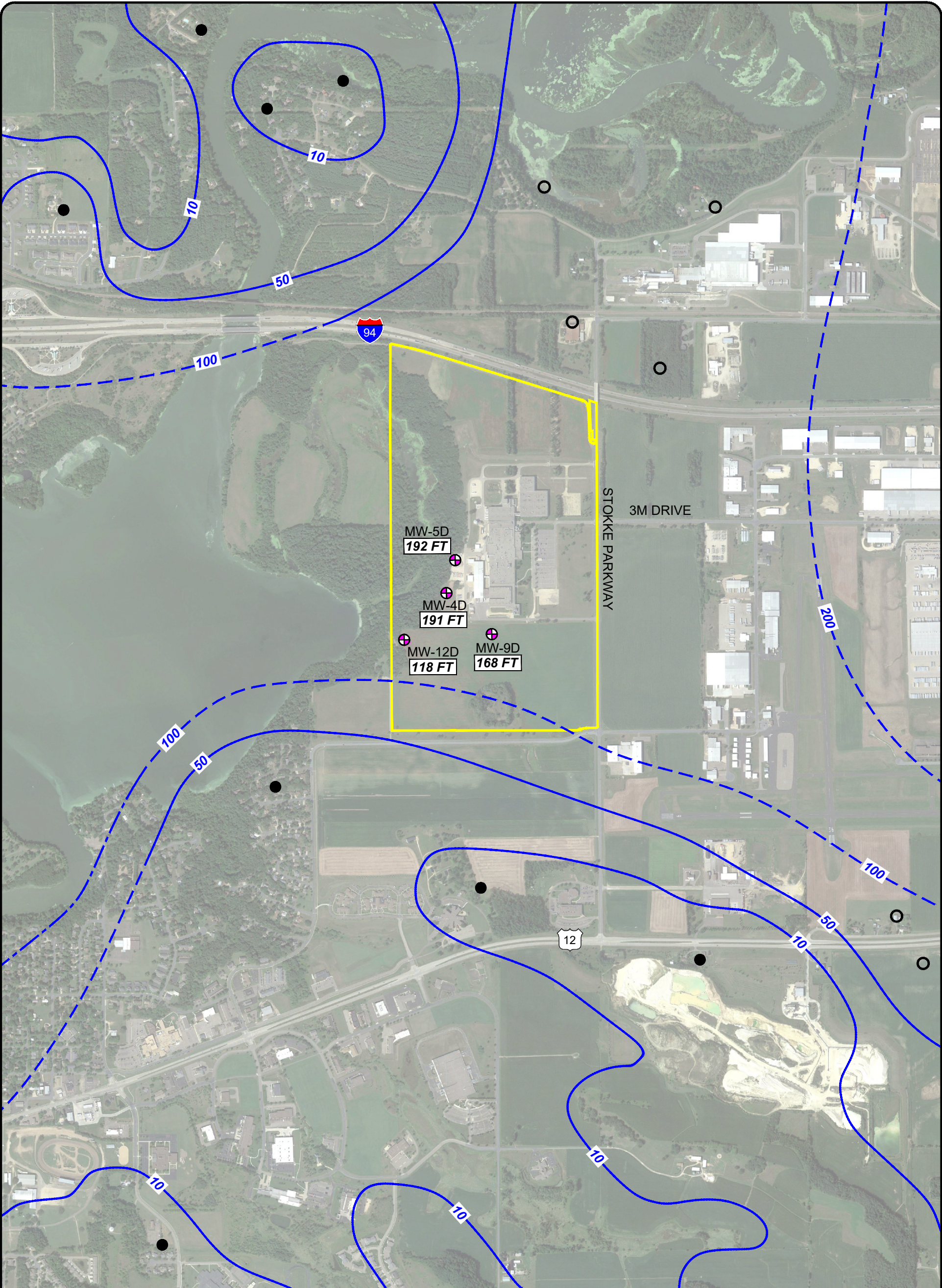
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LEGEND

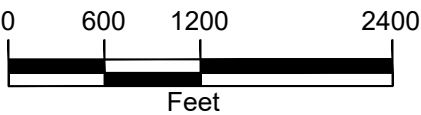
- Site Boundary
- B7 Building Number
- Berm / Fill Area
- Historical Fire Training Area
- Stormwater Infiltration Pond
- Stormwater Drainage Feature
- Former Stormwater Drainage Ditch
- Stormwater Conveyance
- MW-1 Monitoring Well
- SEEP08 Sampled Seep Location
- SEEP04 Identified Seep Location
- CREEK01 Creek
- PZ-4 Piezometer
- 140 INDICATES CONCENTRATION EXCEEDS WDNr SURFACE WATER CRITERIA
- () DUPLICATE RESULT
- ng/L NANOGRAMS PER LITER





SOURCES: AERIAL PHOTOGRAPH FROM GOOGLE
EARTH PRO DATED AUGUST 2021

DEPTH TO BEDROCK CONTOURS FROM
MISCELLANEOUS MAP SERIES, DEPTH
TO BEDROCK OF DUNN COUNTY,
WISCONSIN (1988)



LEGEND

- Site Boundary
- Deep Well
- Well That Reaches Bedrock

- Well That Does Not Reach Bedrock
- 10 — Depth to Bedrock

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3M MENOMONIE SOIL AND GROUNDWATER INVESTIGATION

1425 STOKKE PARKWAY
MENOMONIE, WISCONSIN 54751

DEPTH TO BEDROCK

Project No: 117-001312-24002

Designed by: CP

Checked by: CB

FIGURE

#

The diagram is a geological cross-section oriented North-South. The vertical axis on both sides represents elevation in feet, from 690 to 900. The horizontal axis represents stationing from 0+00 to 30+00. A blue line with downward-pointing triangles shows the water table profile, which is relatively flat, ranging from approximately 825 to 830 feet. The borehole logs are as follows:

- MW-7 (Station 0+00):** Shows a thick section of sandstone (stippled pattern) from 820 to 855 feet, with a thin layer of siltstone (horizontal lines) at 855 feet and a thin layer of claystone (dotted pattern) at 885 feet.
- MW-6 (Station 9+00):** Shows a thick section of sandstone (stippled pattern) from 825 to 845 feet, with a thin layer of siltstone (horizontal lines) at 845 feet and a thin layer of claystone (dotted pattern) at 885 feet.
- MW-5D (Station 17+00):** Shows a thick section of sandstone (stippled pattern) from 695 to 855 feet, with a thin layer of siltstone (horizontal lines) at 855 feet and a thin layer of claystone (dotted pattern) at 885 feet.
- MW-4D (Station 21+00):** Shows a thick section of sandstone (stippled pattern) from 695 to 835 feet, with a thin layer of siltstone (horizontal lines) at 835 feet and a thin layer of claystone (dotted pattern) at 885 feet.
- MW-11 (Station 25+00):** Shows a thick section of sandstone (stippled pattern) from 820 to 855 feet, with a thin layer of siltstone (horizontal lines) at 855 feet and a thin layer of claystone (dotted pattern) at 885 feet.
- MW-12D (Station 30+00):** Shows a thick section of sandstone (stippled pattern) from 740 to 890 feet, with a thin layer of siltstone (horizontal lines) at 890 feet and a thin layer of claystone (dotted pattern) at 885 feet.

A curved line at the bottom of the diagram indicates the ground surface profile, which is relatively flat, ranging from approximately 700 to 710 feet.

	TOPSOIL		POORLY GRADED SAND WITH CLAY (SP-SC)
	WELL GRADED SAND (SW)		SILT (ML)
	SILTY SAND (SM)		SANDSTONE
	POORLY GRADED SAND (SP)		SANDY SILT (MLS)
	LEAN CLAY (CL)		
	POORLY GRADED SAND WITH SILT (SP-SM)		

The map displays the study area with various monitoring points and geological features. A thick black line connects monitoring wells MW-12, MW-11, MW-4D, MW-4, MW-5D, MW-5, MW-7, and MW-9D. Other monitoring wells shown include MW-2, MW-3, MW-6, MW-8, and MW-10. Buildings are labeled B1 through B15. A creek is labeled CREEK01, and several seepage points (SEEP01 to SEEP10) and piezometer locations (PZ-1 to PZ-10) are marked. A yellow dashed line runs horizontally across the map, and a yellow solid line runs vertically on the left. A blue hatched area is located near MW-7, and a blue dashed line outlines a specific region. A north arrow (N) and a south arrow (S) are present.

3M MENOMONIE SOIL AND GROUNDWATER INVESTIGATION

1425 STOKKE PARKWAY
MENOMONIE, WISCONSIN 54751

GEOLOGIC CROSS SECTION NORTH-SOUTH

Project No.: 117-031669-24002	
Date:	10/11/24
Drawn By:	CP
Checked By:	CB

FIGURE
5

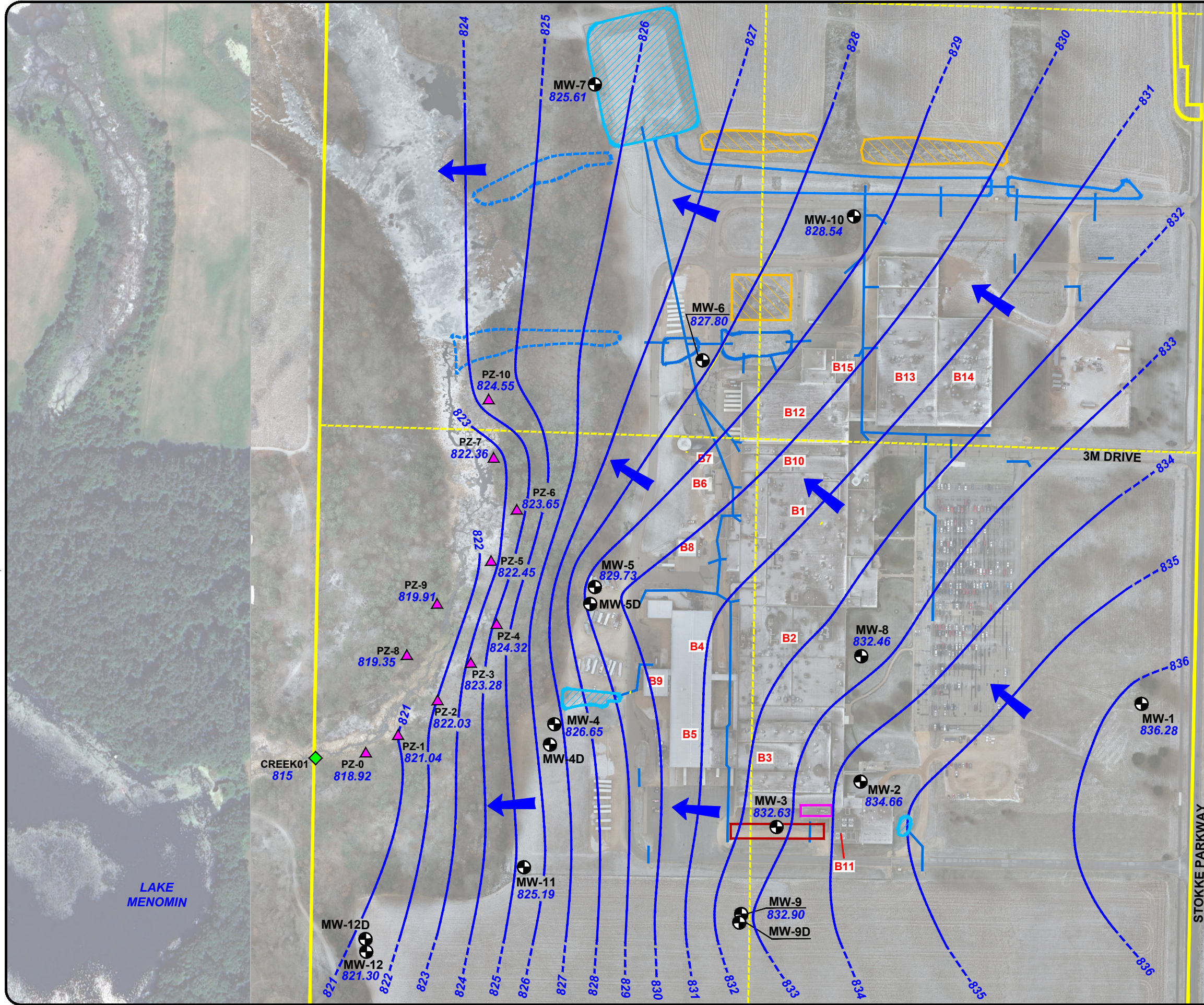
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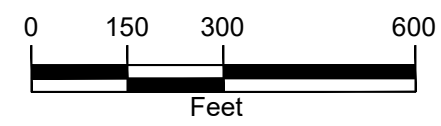
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LEGEND

- Site Boundary
- B7 Building Number
- Berm / Fill Area
- Historical Fire Training Area
- Stormwater Infiltration Pond
- Stormwater Drainage Feature
- Former Stormwater Drainage Ditch
- Stormwater Conveyance
- MW-1 Monitoring Well
- CREEK01 Creek
- PZ-4 Piezometer
- Groundwater Elevation
- 836 Contour (Ft MSL) (Dashed Where Inferred)
- 835.47 Groundwater Elevation (Ft)
- Groundwater Flow Direction





TETRA TECH
www.tetrattech.com
13555 BISHOPS COURT, SUITE 201
BROOKFIELD, WI 53005
PHONE: 262.792.1282

3M MENOMONIE SOIL AND GROUNDWATER INVESTIGATION

1425 STOKKE PARKWAY
MENOMONIE, WISCONSIN 54751

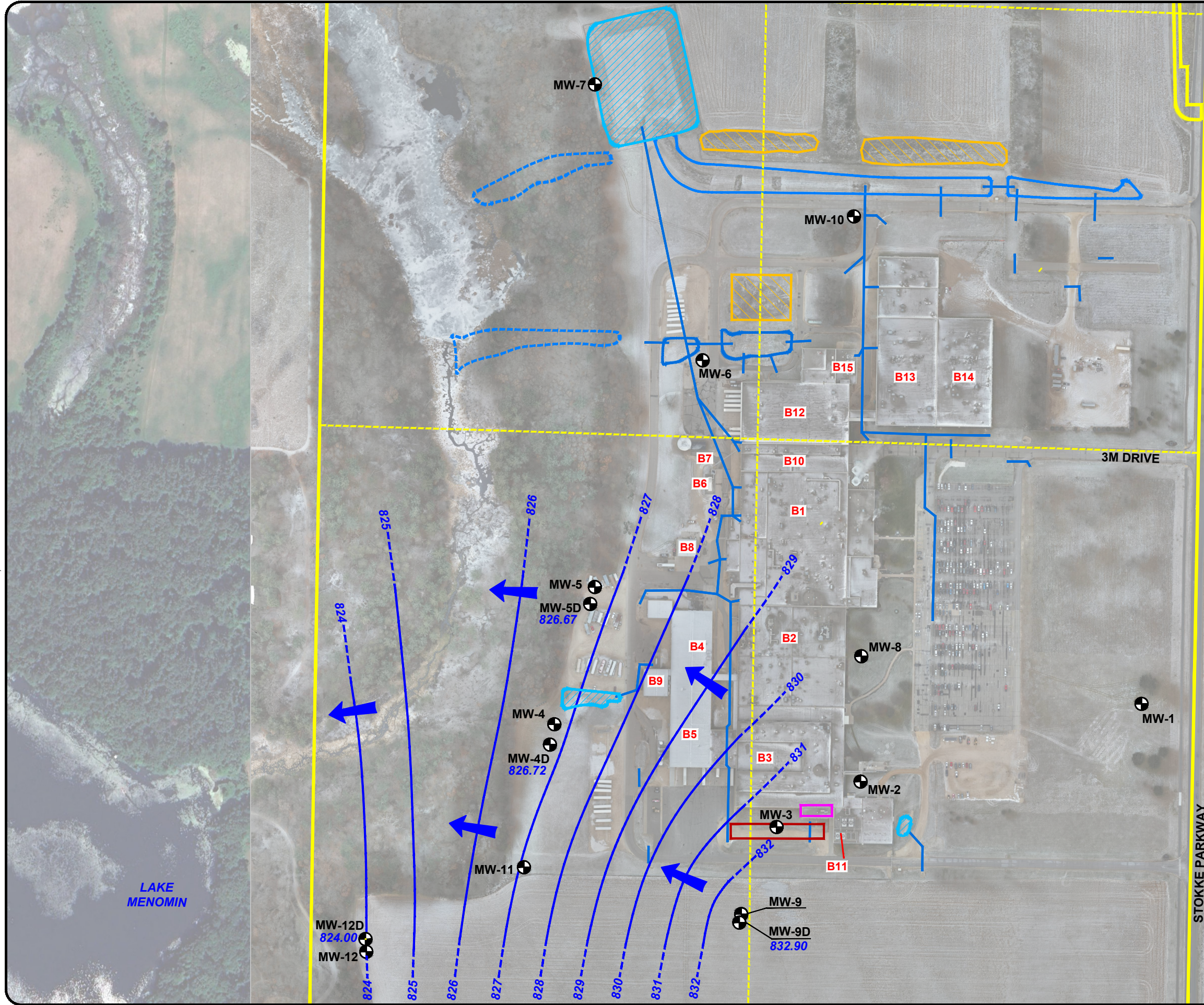
SHALLOW POTENTIOMETRIC SURFACE MAP (MAY 22, 2024)

Project No.: 117-03063-24001
Date: 10/11/24
Drawn By: CP
Checked By: CB

FIGURE
6

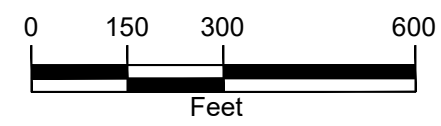
Bar Measures 1 inch

10/11/2024 10:32:11 AM - P:\ACAD\001312-24002-MENO\001312-24002-004A.DWG - PAUGH, CHRISTINA



LEGEND

- Site Boundary
- B7 Building Number
- Berm / Fill Area
- Historical Fire Training Area
- Stormwater Infiltration Pond
- Stormwater Drainage Feature
- Former Stormwater Drainage Ditch
- Stormwater Conveyance
- MW-1 Monitoring Well
- SEEP08 Sampled Seep Location
- SEEP04 Identified Seep Location
- CREEK01 Creek
- PZ-4 Piezometer
- Groundwater Elevation Contour (Ft MSL) (Dashed Where Inferred)
- 826.72 Groundwater Elevation (Ft)
- Groundwater Flow Direction





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PHONE: 262.792.1282

3M MENOMONIE SOIL AND GROUNDWATER INVESTIGATION

1425 STOKKE PARKWAY
MENOMONIE, WISCONSIN 54751

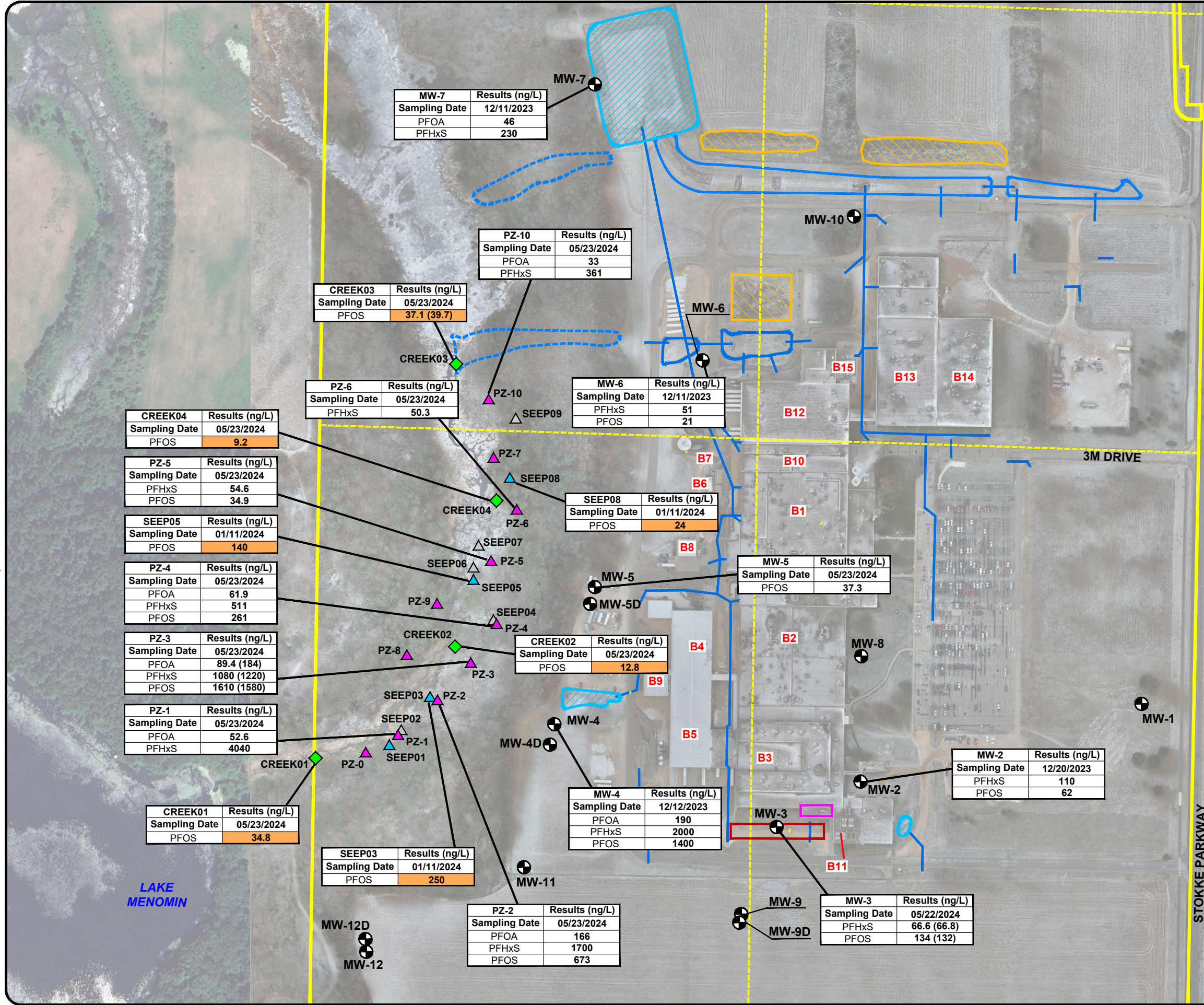
DEEP POTENTIOMETRIC SURFACE MAP (MAY 22, 2024)

Project No.: 117-03063-24001
Date: 10/11/24
Drawn By: CP
Checked By: CB

FIGURE
7

Bar Measures 1 inch

10/11/2024 10:51:30 AM - P:\ACAD\001312-24002-MENOMONIE\01312-24002-012A.DWG - PAUGH, CHRISTINA



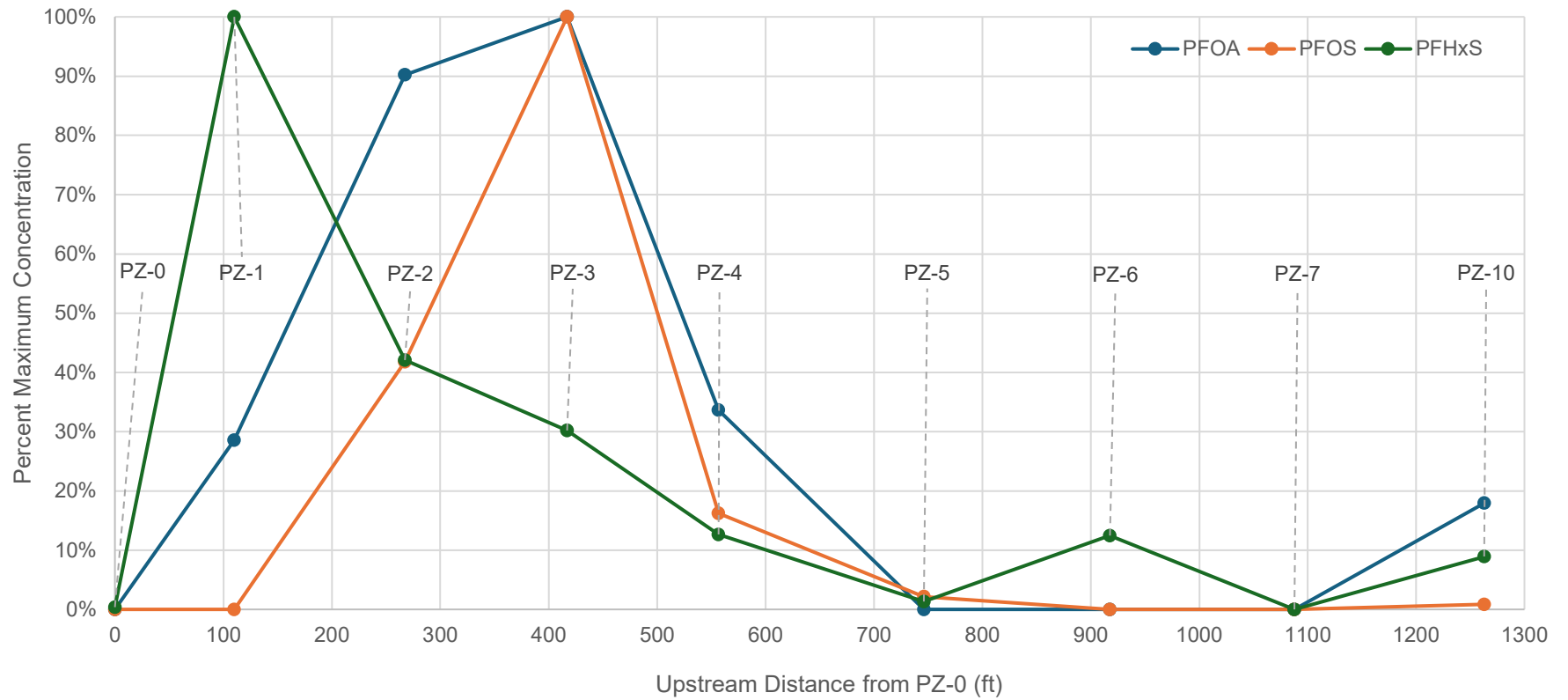
LEGEND

- Site Boundary
- B7 Building Number
- Berm / Fill Area
- Historical Fire Training Area
- Stormwater Infiltration Pond
- Stormwater Drainage Feature
- Former Stormwater Drainage Ditch
- Stormwater Conveyance
- MW-1 Monitoring Well
- SEEP08 Sampled Seep Location
- SEEP04 Identified Seep Location
- CREEK01 Creek
- PZ-4 Piezometer
- 140 INDICATES CONCENTRATION EXCEEDS WDNR SURFACE WATER CRITERIA
- () DUPLICATE RESULT
- ng/L NANOGRAMS PER LITER

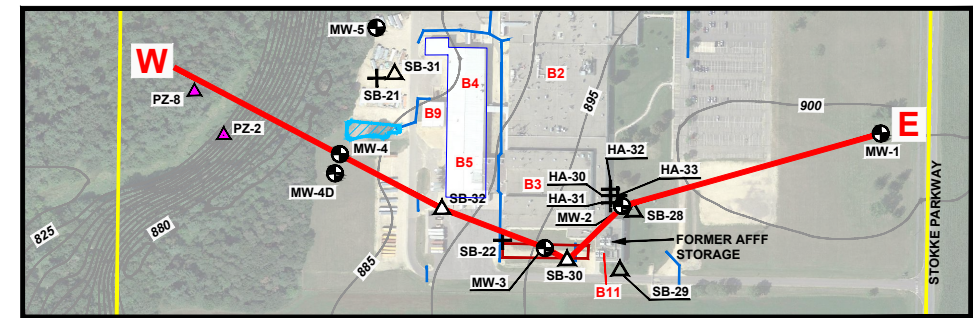
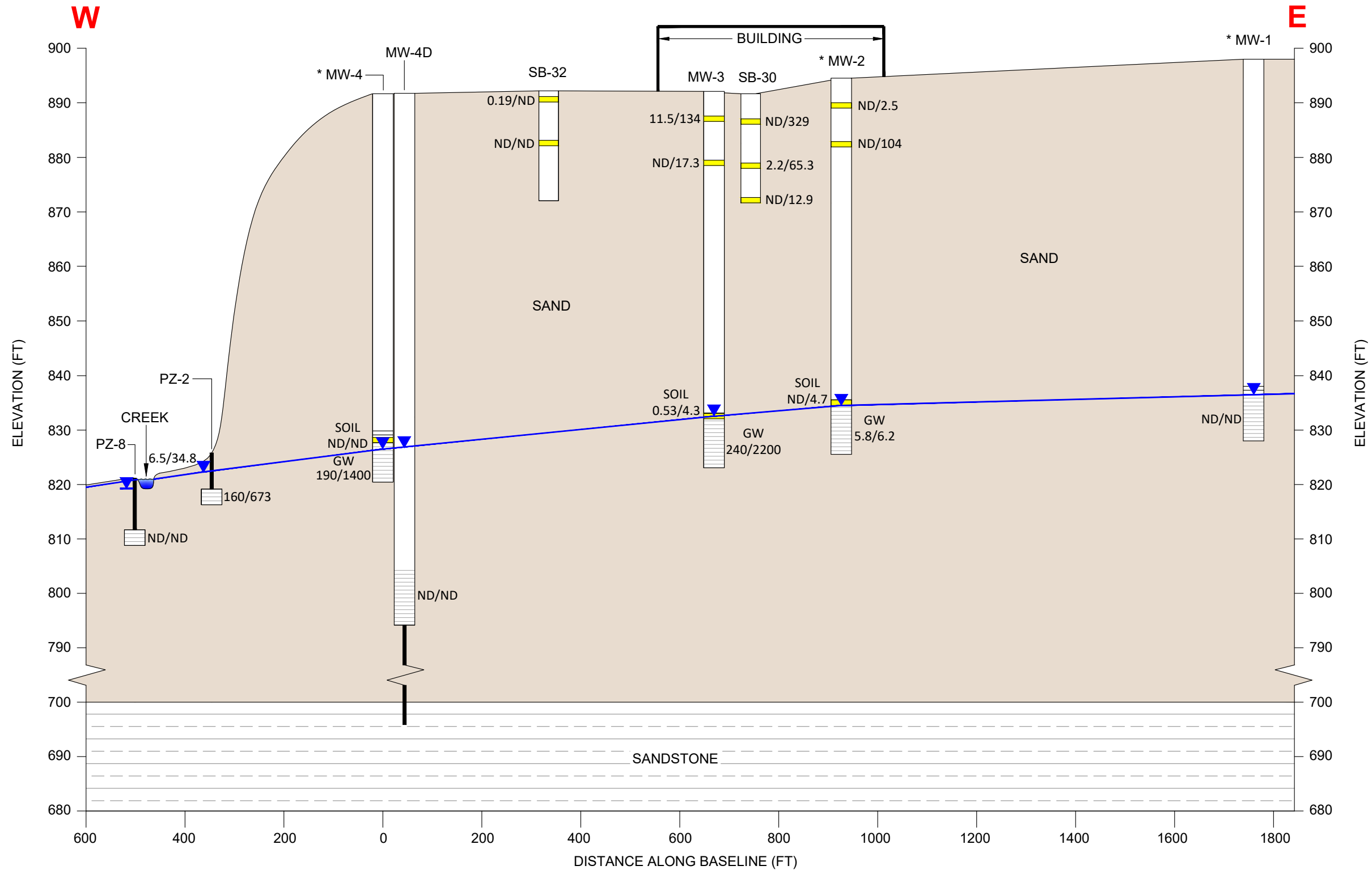
0 150 300 600

Feet

Figure 9 - Piezometer Distribution of Select PFAS Compounds
3M Facility
Menomonie, WI



9/17/2024 1:08:00 PM - P:\ACAD\001312-24002-MEN\001312-24002-007A.DWG - PAUGH, CHRISTINA



Tables

Table 1 - Groundwater Elevations and Sampling Parameters
3M Menomonie Groundwater Investigation Report
Menomonie, Wisconsin

Sample Location	Latitude	Longitude	Sampling Date	Temp (°C)	Specific Conductance	DO (mg/L)	pH (S.U.)	ORP (mV)	Turb (NTU)	Approx Pump Rate (mL/min)	Depth to Water (ft. below TOC)	Reference Elevation TOC (ft AMSL)	Total Well Depth (ft. BGS) 5/9/2023	Groundwater Elevation (ft. AMSL)	Sampling Method
				Low-Flow Parameter Stabilization Criteria											
				3%	3%	10%	0.1	10 mV	10%						
MW-1	44° 53' 56.65634"	91° 52' 50.17370"	5/8/2023	11.52	310.00	6.60	5.97	179	NM	100	64.56	900.63	70.27	836.07	Low-Flow
			12/11/2023	10.8	261.3	9.18	6.45	28.5	6.51	100	63.70	900.63	70.27	836.93	Low-Flow
			5/22/2024	Not Measured								64.35	900.63	70.27	836.28
MW-2	44° 53' 53.87831"	91° 53' 01.68455"	5/9/2023	11.58	330.0	4.11	7.04	192	NM	100	63.43	896.90	70.23	833.47	Low-Flow
			12/20/2023	11.2	310.0	3.57	6.15	190.9	5.60	100	62.63	896.90	70.23	834.27	Low-Flow
			5/22/2024	Not Measured								62.24	896.90	70.23	834.66
MW-3	44° 53' 52.70892"	91° 53' 05.21680"	5/8/2023	11.92	402.0	4.45	6.40	242	NM	100	61.68	894.20	76.53	832.52	Low-Flow
			12/20/2023	10.8	561.0	3.17	5.78	222.9	1.80	100	60.90	894.20	76.53	833.30	Low-Flow
			5/22/2024	17.77	294.1	9.48	6.07	171.7	4.11	150	61.57	894.20	76.53	832.63	Low-Flow
MW-4	44° 53' 55.53925"	91° 53' 14.58319"	5/8/2023	12.56	362.0	5.48	6.42	220	NM	100	67.50	894.13	76.20	826.63	Low-Flow
			12/12/2023	11.3	599.2	11.76	6.20	144.5	4.18	100	67.10	894.13	76.20	827.03	Low-Flow
			5/22/2024	Not Measured								67.48	894.13	76.20	826.65
MW-4D	44° 53' 55.55337"	91° 53' 14.68370"	5/22/2024	13.41	773.7	2.14	6.95	56.1	173.73	150	67.57	894.29	102.74	826.72	Low-Flow
MW-5	44° 53' 59.59650"	91° 53' 13.08867"	5/8/2023	11.98	972.0	7.06	6.71	194	NM	100	68.06	894.87	75.06	826.81	Low-Flow
			12/12/2023	11.6	922.0	12.08	6.23	122.4	0.62	100	67.76	894.87	75.06	827.11	Low-Flow
			5/22/2024	11.9	750.0	10.75	6.32	128.9	51.17	150	68.14	897.87	75.06	829.73	Low-Flow
MW-5D	44° 53' 59.54400"	91° 53' 13.11818"	5/22/2024	12.33	1440.4	7.69	7.36	33.4	572.14	150	68.00	894.67	103.73	826.67	Low-Flow
MW-6	44° 54' 06.37817"	91° 53' 08.85485"	5/8/2023	11.78	799.0	7.26	6.50	205	NM	100	64.36	892.28	68.49	827.92	Low-Flow
			12/11/2023	11.4	753.0	11.97	6.26	109.4	6.12	100	64.04	892.28	68.49	828.24	Low-Flow
			5/22/2024	Not Measured								64.48	892.28	68.49	827.80
MW-7	44° 54' 14.42622"	91° 53' 13.69179"	5/8/2023	15.48	415.0	7.17	6.04	234	NM	100	62.03	887.84	69.07	825.81	Low-Flow
			12/11/2023	14.9	75.8	9.77	6.55	92.0	8.93	100	62.15	887.84	69.07	825.69	Low-Flow
			5/22/2024	Not Measured								62.23	887.84	69.07	825.61
MW-8	44° 53' 57.36856"	91° 53' 02.02635"	5/22/2024	16.15	599.6	10.43	6.52	131.8	126.42	150	65.22	897.68	73.00	832.46	Low-Flow
MW-9	44° 53' 50.45217"	91° 53' 06.87475"	5/22/2024	12.64	280.0	9.72	6.22	117.9	143.92	150	58.58	891.48	72.86	832.90	Low-Flow
MW-9D	44° 53' 50.39581"	91° 53' 06.86192"	5/22/2024	13.2	537.4	3.16	6.91	147.7	149.74	150	58.6	891.5	97.95	832.90	Low-Flow
MW-10	44° 54' 10.69046"	91° 53' 03.14402"	5/22/2024	13.54	482.5	6.73	6.45	130.7	112.27	150	65.31	893.85	72.81	828.54	Low-Flow
MW-11	44° 53' 51.47733"	91° 53' 15.57844"	5/23/2024	16.27	371.6	9.11	6.41	145.4	90.80	150	65.70	890.89	71.48	825.19	Low-Flow

Table 1 - Groundwater Elevations and Sampling Parameters
3M Menomonie Groundwater Investigation Report
Menomonie, Wisconsin

Sample Location	Latitude	Longitude	Sampling Date	Temp (°C)	Specific Conductance	DO (mg/L)	pH (S.U.)	ORP (mV)	Turb (NTU)	Approx Pump Rate (mL/min)	Depth to Water (ft. below TOC)	Reference Elevation TOC (ft AMSL)	Total Well Depth (ft. BGS) 5/9/2023	Groundwater Elevation (ft. AMSL)	Sampling Method
				Low-Flow Parameter Stabilization Criteria											
				3%	3%	10%	0.1	10 mV	10%						
MW-12	44° 53' 48.92098"	91° 53' 22.33292"	5/22/2024	13.08	654.0	7.89	6.34	146.3	2.76	150	70.66	891.96	77.72	821.30	Low-Flow
MW-12D	44° 53' 48.98936"	91° 53' 22.34337"	5/22/2024	11.98	690.0	5.29	6.90	104.8	55.62	150	68.04	892.04	102.83	824.00	Low-Flow
PZ-0	44° 53' 54.50217"	91° 53' 22.28887"	5/22/2024	Not Measured						N/A	4.02	822.94	7.75	818.92	Grab
PZ-1	44° 53' 55.03371"	91° 53' 20.96502"	5/22/2024	Not Measured						N/A	4.83	825.87	9.28	821.04	Grab
PZ-2	44° 53' 56.08548"	91° 53' 19.34489"	5/22/2024	Not Measured						N/A	5.00	827.03	9.25	822.03	Grab
PZ-3	44° 53' 57.20602"	91° 53' 18.03693"	5/22/2024	Not Measured						N/A	4.12	827.40	8.50	823.28	Grab
PZ-4	44° 53' 58.38817"	91° 53' 16.96225"	5/23/2024	Not Measured						N/A	4.31	828.63	9.20	824.32	Grab
PZ-5	44° 54' 00.23451"	91° 53' 17.27375"	5/22/2024	Not Measured						N/A	4.36	826.81	9.30	822.45	Grab
PZ-6	44° 54' 01.77612"	91° 53' 16.22558"	5/22/2024	Not Measured						N/A	4.18	827.83	9.30	823.65	Grab
PZ-7	44° 54' 03.30087"	91° 53' 17.24337"	5/22/2024	Not Measured						N/A	3.97	826.33	9.32	822.36	Grab
PZ-8	44° 53' 57.41621"	91° 53' 20.66017"	5/22/2024	Not Measured						N/A	3.71	823.06	12.35	819.35	Grab
PZ-9	44° 53' 58.93572"	91° 53' 19.45401"	5/22/2024	Not Measured						N/A	3.92	823.83	12.27	819.91	Grab
PZ-10	44° 54' 05.01686"	91° 53' 17.51599"	5/22/2024	Not Measured						N/A	3.32	827.87	9.33	824.55	Grab

Notes:

1. Temp (°C) = Temperature in degrees Celsius
2. pH (S.U.) = pH represented in pH units
3. Specific Conductance (mS/cm) = Conductivity represented in microsiemens per centimeter
4. ORP (mV) = Oxidation reduction potential represented in millivolts
5. DO (mg/L) = Dissolved oxygen represented in milligrams per liter
6. Turb (NTU) = Turbidity represented in nephelometric turbidity units

7. mL/min = milliliters per minute

8. N/A = not applicable

9. NM = not measured

10. ft. AMSL = feet above mean sea level

11. ft. below TOC = feet below the top of well casing

12. ft. BGS = feet below ground surface

13. NS = Not Sampled

Table 2 - Aquifer Properties
3M Facility
Menomonie, Wisconsin

Sample ID	Depth to Water (ft. below TOC) 5/24/24	Total Well Depth (ft. below TOC) 5/24/24	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation (ft. AMSL)	Geology of Screened Interval	Hydraulic Conductivity (cm/sec)		
						Falling-Head	Rising-Head	Average
MW-3	61.34	72.00	894.20	832.86	Fine to medium grained sand	0.041	0.052	0.047
MW-4	67.39	74.01	894.13	826.74	Fine to medium grained sand	0.013	0.050	0.032
MW-4D	67.53	102.74	894.29	826.76	Very fine to fine grained sand	0.0042	0.0033	0.0038

Notes:

1. TOC = top of casing
2. AMSL = average mean sea level
3. Hydraulic conductivity determined using the Bouwer-Rice method

3M Facility
Menomonee, WI

Notes:

1. PFAS laboratory analysis was completed utilizing EPA Method 537.1 Modified
2. ng/L = nanogram per liter
3. -- = Criteria Not Established
4. **Bold** values signify a detection
5. U = Not detected above laboratory reporting limit

3M Facility
Menomonee, WI

[illegible]

Notes:

1. PFAS laboratory analysis was completed utilizing EPA Method 537.1 Modified
2. ng/L = nanogram per liter
3. -- = Criteria Not Established
4. **Bold** values signify a detection
5. **U** = Not detected above reporting limit
6. **Shading indicates** concentration exceeds the WDNR surface water standard

Table 5 - Groundwater Surface Water Sampling Schedule -Locations

3M Facility
Menomonie, WI

	Installed	Depth	Previous Events			Scheduled Events		
			23Q2	23Q4	24Q2	24Q3	24Q4	25Q1
MW-1	5/4/2023	70.27	X	X		X		X
MW-2	5/4/2023	70.23	X	X		X	X	X
MW-3	5/3/2023	76.53	X	X	X	X	X	X
MW-4	5/2/2023	76.2	X	X		X	X	X
MW-4D	5/20/2024	102.74			X	X		X
MW-5	5/1/2023	75.06	X	X	X	X	X	X
MW-5D	5/16/2024	103.73			X	X		X
MW-6	5/3/2023	68.49	X	X		X		X
MW-7	5/2/2023	69.07	X	X		X		X
MW-8	5/13/2024	73			X	X	X	X
MW-9	5/14/2024	72.86			X	X	X	X
MW-9D	5/14/2024	97.95			X	X		X
MW-10	5/14/2024	72.81			X	X		X
MW-11	5/21/2024	71.48			X	X	X	X
MW-12	5/9/2024	77.72			X	X		X
MW-12D	5/8/2024	102.83			X	X		X
PZ-0	5/10/2024	7.75			X	X		
PZ-1	5/22/2024	9.28			X	X		
PZ-2	5/22/2024	9.25			X	X	X	X
PZ-3	5/22/2024	8.50			X	X	X	X
PZ-4	5/22/2024	9.20			X	X	X	X
PZ-5	5/22/2024	9.30			X	X	X	X
PZ-6	5/23/2024	9.30			X	X	X	X
PZ-7	5/23/2024	9.32			X	X	X	X
PZ-8	5/23/2024	12.35			X	X	X	X
PZ-9	5/23/2024	12.27			X	X	X	X
PZ-10	5/23/2024	9.33			X	X		
Creek01	-	-		X	X	X	X	X
Creek02	-	-		X	X	X	X	X
Creek04	-	-			X	X	X	X
Creek03	-	-		X	X	X	X	X

Appendix A

Boring Logs

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-4D						
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental			Date Drilling Started 05/17/2024		Date Drilling Completed 05/20/2024		Drilling Method vibratory				
Unique Well No. VR311		DNR Well ID No.		Common Well Name		Final Static Water Level 67.57		Surface Elevation 892.0 Feet MSL		Borehole Diameter 6 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒		State Plane		1/4 of		1/4 of Section		T		N,R E	
Lat 44.898765		Long 91.887412		Local Grid Location		☐ N ☐ E		☐ S ☐ W			

Facility ID 1		County		County Code		Civil Town/City/ or Village	
------------------	--	--------	--	-------------	--	-----------------------------	--

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments								
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200									
SC 1	180 126		1	Reddish brown, moist, medium to coarse, Well-graded SAND trace gravel	SM																	
			2	Dark brown, dry, fine to medium SAND some organics and clay	SW																	
			3																			
			4																			
			5																			
			6																			
			7																			
			8																			
			9																			
			10																			
			11																			
			12	Brown gray mottled, dry to moist, soft Lean CLAY with sand and gravel	CL																	
SC 2	120 66		13	Reddish brown,dry, fine to coarse Poorly-graded SAND with gravel	SP																	
			14		CL																	
			15	Dark gray-brown, dry, soft Lean CLAY with sand																		
			16	Reddish brown, Dry to moist, medium to coarse Well-graded SAND trace gravel	SW																	
			17																			
			18																			
			19																			
			20																			

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

Signature <i>Zach Frye</i>	Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005	Tel: (262) 792-1282
-------------------------------	--	---------------------

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number

MW-4D

Use only as an attachment to Form 4400-122.

Page 2 of 7

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 3	120 66		22	Reddish brown, Dry to moist, medium to coarse Well-graded SAND trace gravel										
			23											
			24											
					25	Dark brownish red, dry, medium to coarse Well-graded SAND	SW							
			26											
			27											
			28											
			29											
			30											
					31	Light reddish brown, dry fine to medium Well-graded SAND								
			32											
			33											
	34													
	35													
	36													
	37													
	38													
	39													
	40													
	41													
	42													
			43		SW									
	44													
	45													
	46													
	47													
	48													
	49													
	50													
	51													
	52													
	53													
	54													
SC 4	240 186		55	Reddish brown, dry to moist, very soft SILT with sand fine										

Boring Number

MW-4D

Use only as an attachment to Form 4400-122.

Page 3 of 7

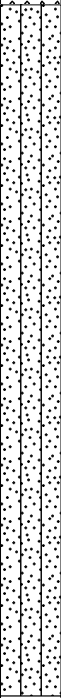
Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 5	120 97		56	Reddish brown, dry to moist, very soft SILT with sand fine	SM									
		57												
		58												
				59	Reddish brown, moist to wet, very soft SILT with sand	SM								
		60												
		61												
62														
		63	Reddish brown, dry to moist, fine to coarse Poorly-graded SAND with gravel	SP										
64														
65														
66														
67														
68														
SC 6	120 107		69	Reddish brown, dry to moist, fine to coarse Poorly-graded SAND with gravel	SP									
		70												
		71												
		72												
		73												
		74												
		75	Light brownish red, moist, fine to coarse Poorly-graded SAND											
76														
77														
78														
79														
80														
SC 7	240 187		81	Light brownish red, moist, fine to coarse Poorly-graded SAND	SP									
		82												
		83												
		84												
		85												
		86												
		87	Reddish brown, wet, medium dense, fine Well-graded SAND with silt											
88														
89														
90														

Boring Number

MW-4D

Use only as an attachment to Form 4400-122.

Page 4 of 7

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
			91	Reddish brown, wet, medium dense, fine Well-graded SAND with silt	SW									
			92											
			93											
			94											
			95											
			96											
			97											
			98											
			99											
			100	Grayish brown, wet, very stiff, SILT with sand	SM									
			101											
			102											
			103											
			104											
			105											
			106											
			107											
			108											
			109											
			110											
			111											
			112											
			113											
			114											
115	Light brown, wet, fine Well-graded SAND	SW												
116														
117														
118														
119														
120														
121														
122														
123														
124														

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-5D	
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental			Date Drilling Started 05/15/2024		Date Drilling Completed 05/16/2024	
Drilling Method vibratory						
Unique Well No. VR312		DNR Well ID No.		Common Well Name		Final Static Water Level 68.0
Surface Elevation 892.0 Feet MSL		Borehole Diameter 6 inches				
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒		Lat 44.899873		Local Grid Location		
State Plane 1/4 of 1/4 of Section T N,R E		Long 91.886977		Feet ☐ N ☐ E Feet ☐ S ☐ W		

Facility ID 1		County Dunn		County Code 17		Civil Town/City/ or Village Menomonie	
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Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
			1	Topsoil	-									
			2	Reddish brown, moist, fine to medium SAND	SW									
			3	Brown-gray mottled, dry, very stiff CLAY with sand	CL									
			4	Reddish brown, damp, fine to coarse poorly sorted SAND										
SC 1	180 134		5		SP									
			6											
			7											
			8											
			9											
			10											
			11											
			12											
			13											
			14											
			15											
			16											
			17											
			18											
			19											
SC 2	120 68		20											
				Dark brownish red, damp, fine to coarse SAND trace gravel										

I hereby certify that the information on this form is true and correct to the best of my knowledge.		
Signature <i>Zach Frye</i>		Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005
		Tel: (262) 792-1282

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number

MW-5D

Use only as an attachment to Form 4400-122.

Page 2 of 7

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 3	120 61		22	Dark brownish red, damp, fine to coarse SAND trace gravel	SP									
		23												
		24												
		25												
		26												
		27												
		28												
		29												
		30												
		31												
		32												
		33												
SC 4	120 76		34	Brownish red, damp, medium to coarse, Well sorted SAND some gravel	SW									
		35												
		36												
		37												
		38												
		39												
		40												
		41												
		42												
		43												
		44												
		45												
SC 5	120 120		46	Light brown, moist, fine to medium SAND										
		47												
		48												
		49												
		50												
		51												
		52												
		53												
		54												
		55												

Boring Number

MW-5D

Use only as an attachment to Form 4400-122.

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Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 8	240 240		91	Grayish brown, moist, fine SAND	SW									
			92											
			93											
			94											
			95											
			96											
			97											
			98											
			99											
			100											
			101											
			102											
			103											
			104	Grayish brown, wet, very fine SAND, some silt	SW									
			105											
			106											
			107											
			108											
			109											
			110											
			111											
			112											
			113											
			114											
			115											
	116													
	117													
	118													
	119													
	120	Gray, wet, very fine SAND, some silt												
	121													
	122													
	123													
	124													

Boring Number

MW-5D

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Page 5 of 7

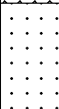
Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 9	240 226		126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144	Gray, wet, very fine SAND, some silt	SW									
SC 10	240 197		145 146 147 148 149 150 151 152 153 154 155 156 157 158 159											

Boring Number

MW-5D

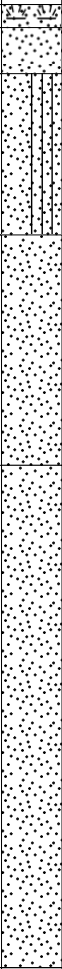
Use only as an attachment to Form 4400-122.

Page 6 of 7

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 11	240 188		160	Gray, wet, very fine SAND, some silt										
		161												
		162												
		163												
		164												
		165												
		166												
		167												
		168												
		169												
SC 12	240 154		170	Gray, wet, fine to medium SAND, trace gravel	SW									
		171												
		172												
		173												
		174												
		175												
		176												
		177												
		178												
		179												
SC 12	240 154		180	Light brown, wet, fine to medium SAND, some silt	SW									
		181												
		182												
		183												
		184												
		185												
		186												
		187												
		188												
		189												
SC 12	240 154		190	Gray, wet, very fine SAND, some silt	SW									
		191												
		192												
		193												
		194												
			Light brown heavily weathered SANDSTONE											

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-8						
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi Onsite Environmental			Date Drilling Started 05/13/2024		Date Drilling Completed 05/13/2024		Drilling Method direct push				
Unique Well No.		DNR Well ID No.		Common Well Name		Final Static Water Level 65.22		Surface Elevation 895.3 Feet MSL		Borehole Diameter 6 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒		State Plane		1/4 of		1/4 of Section		T		N,R E	
Lat 44.899269		Long 91.883896		Local Grid Location		☐ N ☐ E		☐ S ☐ W			
Facility ID 1		County Dunn		County Code 17		Civil Town/City/ or Village Menomonie					

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments			
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200				
ES 1	60 41		1	Dark Brown, moist, SAND with silt, organics (Topsoil)	SM												
			2	Reddish brown, moist, fine to medium Poorly sorted SILTY SAND	SP												
			3	Light brownish yellow, moist, fine to medium SAND with silt	SP-SM												
			4														
ES 2	60 38		5	Light brownish yellow, moist, fine to medium Poorly sorted SAND	SP												
			6														
			7														
			8														
ES 3	60 39		9	Light brown to brown, moist, fine to medium Poorly sorted SAND	SP												
			10														
			11														
			12														
ES 4	60 40		13											Light brown to brown, moist, fine to medium Poorly sorted SAND	SP		
			14														
			15														
			16														
			17													Light brown to brown, moist, fine to medium Poorly sorted SAND	SP
			18														
			19														
			20														

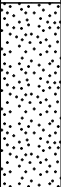
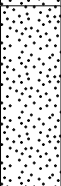
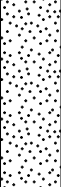
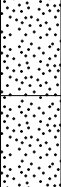
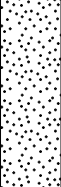
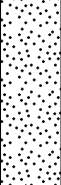
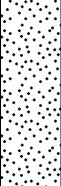
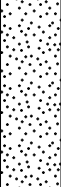
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Zach Frye</i>	Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005	Tel: (262) 792-1282
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Boring Number MW-8 Use only as an attachment to Form 4400-122.

Page 2 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
ES 5	60 20		22	Light brown to brown, moist, fine to medium Poorly sorted SAND										Low recovery, second sample attempted
			23											
			24											
ES 6	60 42		25	Light brown to brown, moist, fine to medium Poorly sorted SAND, trace gravel	SP									
			26											
			27											
			28											
			29											
			30											
ES 7	60 10		31											
			32											
			33											
ES 8	60 34		34	Light brown, moist, fine to medium Poorly sorted SAND, trace fine gravel										
			35											
			36											
			37											
			38											
			39											
ES 9	60 45		40		SP									
			41											
			42											
			43											
			44											
			45											
ES 10	60 30		46											
			47											
			48											
ES 11	60 50		49											
			50											
			51											
			52											
			53											
			54											
			55	Light brown, moist, fine to medium Well sorted SAND										

Boring Number

MW-8

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Page 3 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
ES 12	60 40		56	Light brown, moist, fine to medium Well sorted SAND	SW									
			57											
			58											
			59											
ES 13	60 40		60											
			61											
			62											
			63											
ES 14	60 30		64											
			65											
			66											
			67											
			68											End of boring @ 70 feet bgs
			69											
			70											
			71											
			72											
			73											
			74											
			75											
			76											
			77											
			78											
			79											
			80											
			81											
			82											
			83											
			84											
			85											
			86											
			87											
			88											
			89											
			90											

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-9						
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental			Date Drilling Started 05/14/2024		Date Drilling Completed 05/14/2024		Drilling Method vibratory				
Unique Well No. VR314		DNR Well ID No.		Common Well Name		Final Static Water Level 58.58		Surface Elevation 889.0 Feet MSL		Borehole Diameter 6.0 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒ State Plane 1/4 of 1/4 of Section T N,R E		Lat 44.897348 Long 91.885243		Local Grid Location ☐ N ☐ E ☐ S ☐ W							

Facility ID 1		County Dunn		County Code		Civil Town/City/ or Village Menomonie					
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Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 1	60 60		1	Dark Brown, dry, SAND with silt and organics (TOPSOIL)	-									
			2	Light brown, moist, fine to coarse Poorly sorted SAND, some gravel	SP									
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
SC 2	120 108		16			Reddish brown, damp, fine to medium Poorly sorted SAND, trace gravel								
			17											
			18											
			19											
SC 3	120 91		20											

I hereby certify that the information on this form is true and correct to the best of my knowledge.			
Signature <i>Zach Frye</i>		Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005	Tel: (262) 792-1282

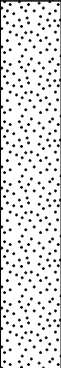
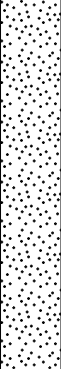
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Boring Number

MW-9

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Page 2 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 4	120 102		22	Reddish brown, damp, fine to medium Poorly sorted SAND, trace gravel	SP									
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
SC 5	120 67		32	Dark brown, CLAYEY SAND, trace organics (Buried Topsoil)	SC									
			33											
			34											
			35											
			36											
			37											
			38											
			39											
			40											
			41											
SC 6	180 106		42	Reddish brown, moist fine to medium Poorly sorted SAND, some gravel	SP									
			43											
			44											
			45											
			46											
			47											
			48											
			49											
			50											
			51											
	52													
	53													
	54													
	55													

Boring Number

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Use only as an attachment to Form 4400-122.

Page 3 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 7	120 104		56	Reddish brown, moist fine to medium Poorly sorted SAND, some gravel	SW									
			57	Light brown, moist, very fine to fine Well sorted SAND										
			58											
			59	SW										
			60			Reddish brown, moist, fine to medium Well sorted SAND, trace gravel								
			61											
			62	SW										
			63											
			64											
			65											
			66											
			67											
			68											
	69	End of boring @ 70 feet bgs												
	70													
	71													
	72													
	73													
	74													
	75													
	76													
	77													
	78													
	79													
	80													
	81													
	82													
	83													
	84													
	85													
	86													
	87													
	88													
	89													
	90													

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-9D						
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental			Date Drilling Started 05/10/2024		Date Drilling Completed 05/14/2024		Drilling Method vibratory				
Unique Well No. VR313		DNR Well ID No.		Common Well Name		Final Static Water Level 58.60		Surface Elevation 889.0 Feet MSL		Borehole Diameter 6 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒		State Plane		1/4 of		1/4 of Section		T		N,R E	
Lat 44.897332		Long 91.885239		Local Grid Location		☐ N ☐ E		☐ S ☐ W			

Facility ID 1		County Dunn		County Code 17		Civil Town/City/ or Village Menomonie	
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Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200		
SC 1	180 180		1	Dark brown, damp, SILTY SAND with organics (TOPSOIL)	-										
		2	Brown, damp, medium soft CLAY with sand	CL											
		3	Reddish brown, damp, fine to medium Poorly sorted SAND, trace gravel	SP											
		4													
		5													
		6	Brown, damp, stiff CLAY with gravel and sand	CL											
		7	Reddish brown, damp medium to coarse Poorly sorted SAND, trace gravel	SP											
		8													
		9													
		10													
		11													
		12													
		13													
		14													
		15													
		16	Reddish brown, moist Poorly sorted fine to medium SAND, trace gravel												
SC 2	120 89	17													
		18													
		19													
		20													

I hereby certify that the information on this form is true and correct to the best of my knowledge.			
Signature <i>Zach Frye</i>		Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005	Tel: (262) 792-1282

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Boring Number

MW-9D

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Page 4 of 6

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 8	240 216		91	Reddish brown, wet, fine to medium Poorly sorted SAND, trace gravel	SW- SM									
		92	Grayish brown, wet Well sorted SAND with silt											
		93												
		94												
		95												
		96												
		97												
		98												
		99												
		100												
		101												
		102												
		103												
		104												
		105												
		106												
SC 9	240 216		107											
		108												
		109												
		110												
		111												
		112												
		113												
		114												
		115	Grayish brown, wet, fine to medium Poorly sorted SAND, trace gravel											
		116												
		117												
		118												
		119												
		120												
		121												
		122												
123														
124														

Boring Number

MW-9D

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Page 5 of 6

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments													
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200														
SC 10	360 156		126	Grayish brown, wet, fine to medium Poorly sorted SAND, trace gravel	SP																						
			127																								
			128																								
			129																								
			130																								
			131																								
			132																								
			133																								
			134																								
			135																								
			136																								
			137																								
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	155																										
	156																										
	157																										
	158																										
	159																										

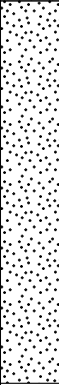
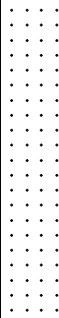
05/10/2024-14:30; Hole dropout

Boring Number

MW-9D

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Page 6 of 6

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments									
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200										
SC 11	240 180		160	Grayish brown, wet, fine to medium Poorly sorted SAND, trace gravel																			
			161																				
			162																				
			163																				
			164																				
			165																				
			166																				
			167																				
			168	Gray, wet, very fine to fine well sorted SAND, trace silt, with sandstone gravel chunks (Weathered Sandstone)																			
			169																				
			170																				
			171																				
			172																				
			173																				
			174																				
			175											End of boring @ 175 feet bgs									
			176																				
			177																				
			178																				
179																							
180																							
181																							
182																							
183																							
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192																							
193																							
194																							

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-10	
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi Onsite Environmental			Date Drilling Started 05/14/2024		Date Drilling Completed 05/14/2024	
Drilling Method hollow-stem auger						
Unique Well No.		DNR Well ID No.		Common Well Name		Final Static Water Level 65.31
Surface Elevation 891.2 Feet MSL		Borehole Diameter 6 inches				
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒		Lat 44.902970		Local Grid Location		
State Plane 1/4 of 1/4 of Section T N,R E		Long 91.884207		Feet ☐ N ☐ E Feet ☐ S ☐ W		

Facility ID 1		County Dunn		County Code 17		Civil Town/City/ or Village Menomonie	
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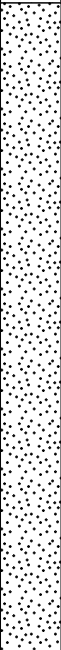
Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
ES 1	60 28		1	Dark brown, moist fine to medium gravely SAND with silt (TOPSOIL)	SM									
			2	Dark reddish brown, medium SILTY SAND	SP-SM									
			3	Light brown, moist fine to medium Poorly sorted SAND some gravel										
			4		SP									
ES 2	60 30		5											
			6											
			7											
			8	Yellowish brown, moist, stiff CLAY with silt	CL-ML									
ES 3	60 39		9	Yellow brown, moist, dense SILTY SAND	SM									
			10	Yellowish brown, moist, dense, fine to coarse Poorly sorted SAND, trace medium gravel	SP									
			11	Light brown, moist, medium to coarse Well sorted SAND, trace gravel										
			12		SW									
ES 4	60 38		13											
			14											
			15											
			16											
			17											
			18	Light reddish brown, moist, fine to medium Poorly sorted SAND, trace gravel										
			19											
			20											

I hereby certify that the information on this form is true and correct to the best of my knowledge.		
Signature <i>Zack Frye</i>		Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005
		Tel: (262) 792-1282

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number MW-10 Use only as an attachment to Form 4400-122.

Page 2 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
ES 5	60 36		22 23 24 25 26 27	Light reddish brown, moist, fine to medium Poorly sorted SAND, trace gravel	SP									
ES 6	60 36		28 29 30 31											
ES 7	60 36		32 33 34											
			35											
ES 8	60 30		36 37 38 39 40 41	Light brown, moist, fine to medium Well sorted SAND	SW									
ES 9	60 39		42 43 44 45 46											
ES 10	60 36		47 48 49 50 51											
			52 53											
ES 11	60 29		54											
			55											
				Dark brown with red streaks, moist, fine to medium Poorly sorted SAND										

Boring Number

MW-10

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Page 3 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
ES 12	120 40		56	Dark brown with red streaks, moist, fine to medium Poorly sorted SAND	SP									
			57											
			58											
			59											
			60											
			61											
			62											
			63											
			64											
			65											
ES 13	60 40		66	Light brown, with red streaks, wet, fine Well sorted SAND	SW									
			67											
			68											
			69											
			70											
			70	End of boring @ 70 feet bgs										
			71											
			72											
			73											
			74											
			75											
			76											
			77											
			78											
			79											
			80											
			81											
			82											
			83											
			84											
			85											
			86											
			87											
			88											
			89											
90														

Route To : Watershed/Wastewater ☐
Remediation/Redevelopment ☐

Waste Management ☐

Other ☐

Page 1 of 3

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling				License/Permit/Monitoring Number		Boring Number MW-11	
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental				Date Drilling Started 05/21/2024		Date Drilling Completed 05/21/2024	
						Drilling Method vibratory	
Unique Well No. VR310		DNR Well ID No.		Common Well Name		Final Static Water Level 65.70	
						Surface Elevation 890.9 Feet MSL	
						Borehole Diameter 6.0 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒ State Plane ☐ -15125904.5 ft. E ☐ 33700568.0 ft. N 1/4 of 1/4 of Section T N,R E				Lat 44.897633 Long 91.889537		Local Grid Location ☐ N ☐ E Feet ☐ S ☐ W	

Facility ID 1	County Dunn	County Code 17	Civil Town/City/ or Village Menomonic
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[illegible]

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

Signature Zach Frye

Firm	Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005
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Tel: (262) 792-1282

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-12						
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental			Date Drilling Started 05/09/2024		Date Drilling Completed 05/10/2024		Drilling Method vibratory				
Unique Well No. VR316		DNR Well ID No.		Common Well Name		Final Static Water Level 70.66		Surface Elevation 889.6 Feet MSL		Borehole Diameter 6.0 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒ State Plane -15126114.8 ft. E 33700719.0 ft. N 1/4 of 1/4 of Section T N,R E		Lat 44.896922 Long 91.889537				Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W					
Facility ID 1			County Dunn			County Code		Civil Town/City/ or Village Menomonie			

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 1	72 66		1	Dark brown to black, moist, soft SILTY SAND, with organics (TOPSOIL)	SP-SM									
			2	Dark brown, damp, medium to fine Poorly sorted SAND	SP									
			3		SP									
			4											
			5	Brown and red mottled, damp, medium stiff CLAY, some sand	CL									
SC 2	120 120		6	Reddish brown, moist, medium to coarse Poorly sorted SAND	SP									
			7											
			8	Reddish brown, moist, medium to coarse Poorly sorted SAND, some gravel, trace silt	SP									
			9											
			10											
SC 3	120 88		11		SP									
			12											
			13											
			14											
			15	Reddish brown, moist, medium to coarse Poorly sorted SAND, trace clay and gravel	SP									
			16	Reddish brown, moist, medium to coarse, SAND, trace gravel										
			17											
			18											
			19											
			20											

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

Signature <i>Zach Frye</i>	Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005	Tel: (262) 792-1282
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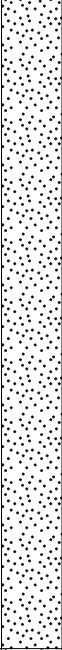
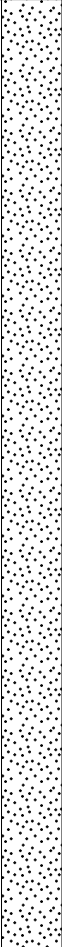
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Boring Number

MW-12

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Page 2 of 3

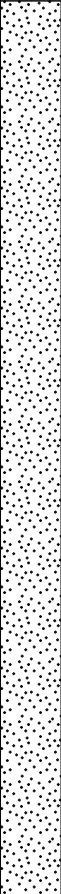
Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 4	120 54		22	Reddish brown, moist, medium to coarse, SAND, trace gravel	SP									
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32											
			33											
			34											
			35											
SC 5	240 118		36	Reddish brown, moist, fine to medium Poorly sorted SAND, trace gravel	SP									
			37											
			38											
			39											
			40											
			41											
			42											
			43											
			44											
			45											
			46											
			47											
			48											
			49											
	50													
	51													
	52													
	53													
	54													
	55													

Boring Number

MW-12

Use only as an attachment to Form 4400-122.

Page 3 of 3

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 6	120 84		56	Reddish brown, moist, fine to medium Poorly sorted SAND, trace gravel										
			57											
			58											
			59											
			60											
			61											
			62											
			63											
			64											
			65											
SC 7	120 120		66											
			67											
			68											
			69											
			70											
			71											
			72											
			73											
			74											
			75											
	76	End of boring @ 75 feet bgs										67' Groundwater encountered		
	77													
	78													
	79													
	80													
	81													
	82													
	83													
	84													
	85													
	86													
	87													
	88													
	89													
	90													

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

Facility/Project Name 3M Menomonie Spring 2024 Sonic Drilling			License/Permit/Monitoring Number		Boring Number MW-12D						
Boring Drilled By: Name of crew chief (first, last) and Firm Mark Beirmaier Cascade Environmental			Date Drilling Started 05/07/2024		Date Drilling Completed 05/09/2024		Drilling Method vibratory				
Unique Well No. VR315		DNR Well ID No.		Common Well Name		Final Static Water Level 68.04		Surface Elevation 889.6 Feet MSL		Borehole Diameter 6.0 inches	
Local Grid Origin ☐ estimated: ☐ or Boring Location ☒ State Plane -15126109.6 ft. E 33700714.3 ft. N 1/4 of 1/4 of Section T N,R E		Lat 44.896941 Long 91.889540				Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W					
Facility ID 1			County Dunn			County Code 17		Civil Town/City/ or Village Menomonie			

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 1	60 56		1	Dark brown to black, moist, soft SILTY SAND with organics (TOPSOIL)	SP-SM									
		2	Dark brown, moist, fine to medium Poorly sorted SAND	SP										
		3												
		4												
		5												
		6	Brown, moist, soft to medium stiff CLAY, some silt	CL										
SC 2	60 54		7	Light reddish brown, damp, fine to medium Well sorted SAND, little silt	SW									
		8	Reddish brown, damp, fine to coarse Poorly sorted SAND, trace gravel											
		9												
		10												
		11												
SC 3	60 56		12											
		13												
		14												
		15												
				16	Brown, moist, fine to medium Poorly sorted SAND with soft clay	SP-SC								
SC 4	60 39		17	Brown, moist, fine to coarse Poorly sorted SAND, trace gravel										
		18												
		19												
		20												

I hereby certify that the information on this form is true and correct to the best of my knowledge.			
Signature <i>Zack Frye</i>		Firm Tetra Tech 13555 Bishops Ct Ste 201, Brookfield, WI 53005	Tel: (262) 792-1282

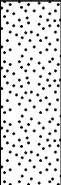
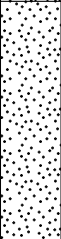
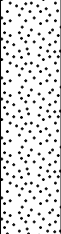
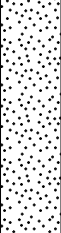
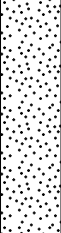
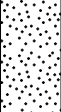
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Boring Number

MW-12D

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Page 2 of 5

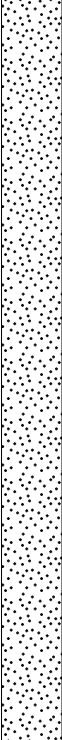
Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 5	60 24		22	Brown, moist, fine to coarse Poorly sorted SAND, trace gravel	SP									
			23											
			24											
			25											
SC 6	60 48		26	Brown, damp, medium to coarse Poorly sorted SAND with clay	SP-SC									
			27											
			28											
			29											
SC 7	60 29		30	Reddish brown, moist, fine to coarse Poorly sorted SAND, trace gravel										
			31											
			32											
			33											
SC 8	60 29		34											
			35											
			36											
			37											
SC 9	60 41		38											
			39											
			40											
			41											
SC 10	60 42		42											
			43											
			44											
			45											
			46											
			47											
			48											
			49											
			50											
			51											
			52											
			53											
			54											
			55	Reddish brown, moist, fine to medium Poorly sorted SAND, trace gravel										

Boring Number

MW-12D

Use only as an attachment to Form 4400-122.

Page 3 of 5

Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments															
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200																
SC 11	240 102		56	Reddish brown, moist, fine to medium Poorly sorted SAND, trace gravel	SP																								
			57																										
			58																										
			59																										
			60																										
			61																										
			62																										
			63																										
			64																										
			65																										
			66																										
			67																										
			68																										
			69																										
			70																										
			71																										
		SC 12	240 210														72	Light brownish gray, moist, fine to medium Well sorted SAND, trace silt											
																	73												
	74																												
	75																												
	76																												
	77																												
	78																												
	79																												
	80																												
	81																												
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	84																												
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	87																												
	88																												
	89																												
	90																												

Boring Number		MW-12D		Use only as an attachment to Form 4400-122.					Page 4 of 5					
Sample		Blow Counts	Depth In Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P200	
SC 13	240 228		91	Light brownish gray, moist, fine to medium Well sorted SAND, trace silt	SW									
		92												
		93												
		94												
		95	Reddish brown, wet, fine to medium Poorly sorted SAND, trace silt and gravel	SP										
		96												
		97												
		98												
		99	Gray, wet, medium stiff, SILT, some clay, few poorly laminated sand seems	ML										
		100												
		101												
		102												
		103	Reddish bronw, moist, medium Well sorted SAND, trace gravel	SW										
		104												
		105	Brown, moist, fine to medium Poorly sorted SAND, trace sandstone fragments	SP										
		106												
		107												
		108												
		109	Gray, moist, very fine to fine SILTY SAND, trace silt lenses	SM										
		110												
		111												
		112	Brownish gray, moist, fine to medium Poorly sorted SAND, trace gravel	SP										
		113												
		114												
115														
116														
117														
118														
119	Grayish brown, moist, fine to coarse Poorly sorted SAND, with gravel and silt(Weathered SANDSTONE)													
120														
121														
122														
123														
124														
														122' Irregular interbedded Clay and silt layers

Boring Number MW-12D Use only as an attachment to Form 4400-122.

Page 5 of 5

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Appendix B

Well Construction Logs & Development Forms

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E.
☒ S. ☐ W.

Well Name
MW-4D

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.899 Long. -91.887 or

Wis. Unique Well No. VR311
DNR Well ID No.

Facility ID

St. Plane 1479471.9 ft. N. 394099.4 ft. E. S/C/N

Date Well Installed
5/20/24

Type of Well
Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D monitoring wells)

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm

Distance from Waste/Source ft. Enf. Stds. Apply ☐

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Mark Beirmaier

A. Protective pipe, top elevation 894.89 Ft. MSL

B. Well casing, top elevation 894.29 Ft. MSL

C. Land surface elevation 891.96 Ft. MSL

D. Surface seal, bottom 890.96 Ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☒

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top 811.6 Ft. MSL or 80.4 ft.

F. Fine sand, top 806.6 Ft. MSL or 85.4 ft.

G. Filter pack, top 804.6 Ft. MSL or 87.4 ft.

H. Screen joint, top 802.0 Ft. MSL or 90.0 ft.

I. Well bottom 697 Ft. MSL or 195 ft.

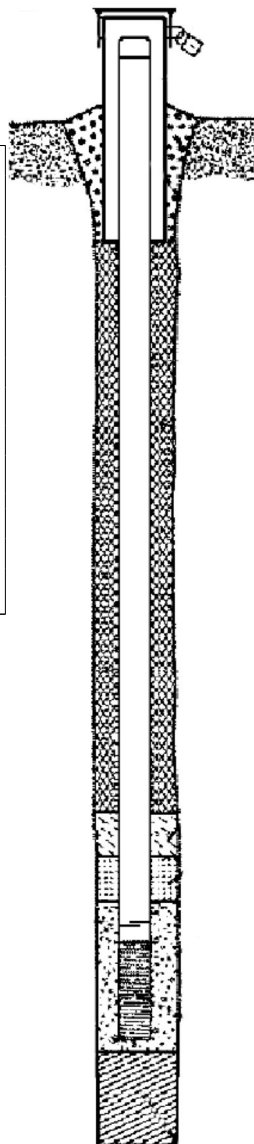
J. Filter pack, bottom 787.0 Ft. MSL or 105.0 ft.

K. Borehole, bottom 697.0 Ft. MSL or 195.0 ft.

L. Borehole, diameter 6 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: 4.00 in.

b Length: 4.00 Ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: Bumper Posts

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☒ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 10 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☒ 1/4 in. ☐ 1/2 in. ☐ 1/2 in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a RFWS #10

b. Volume added 0.2 cu ft

8. Filter pack material: Manufacturer, product name & mesh size

a RFWS #40

b. Volume added 1.9 cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☐ 2 3

Flush threaded PVC schedule 80 ☐ 2 4

Other ☐

10. Screen Material: 80 PVC

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer Johnson

c. Slot size 0.01 in.

d. Slotted length: 10.00 ft.

11. Backfill material (below filter pack): None ☒ 1.4

Grout, bent. chips Other ☒

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

Signature Connor Larson

Firm: Tetra Tech

Phone: 262-792-1282

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E.
☒ S. ☐ W.

Well Name
MW-5D

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.900 Long. -91.887 or

Wis. Unique Well No. VR312
DNR Well ID No.

Facility ID

St. Plane 1479594.0 ft. N. 394500.8 ft. E. S/C/N

Date Well Installed
5/16/24

Type of Well
MW - Water table observation well (monitoring well screen intersecting the water table) (non

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm

Distance from Waste/Source ft. Apply ☐

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Mark Beirmaier Cascade Environmental

A. Protective pipe, top elevation **894.77** Ft. MSL

B. Well casing, top elevation **894.67** Ft. MSL

C. Land surface elevation **892.04** Ft. MSL

D. Surface seal, bottom **891.04** Ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top **811.0** Ft. MSL or **81.0** ft.

F. Fine sand, top **806.0** Ft. MSL or **86.0** ft.

G. Filter pack, top **804.5** Ft. MSL or **87.5** ft.

H. Screen joint, top **801.3** Ft. MSL or **90.8** ft.

I. Well bottom **697** Ft. MSL or **195** ft.

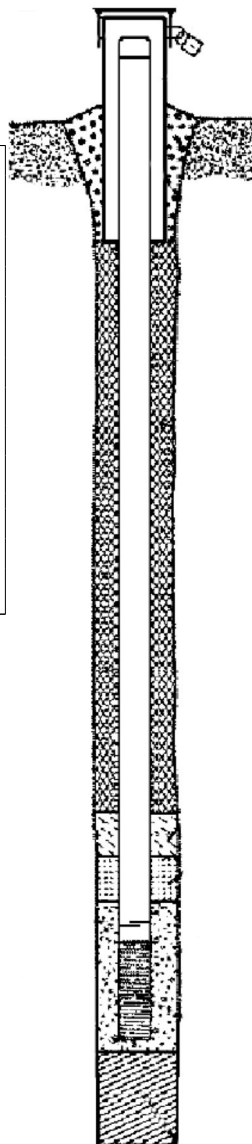
J. Filter pack, bottom **786.0** Ft. MSL or **106.0** ft.

K. Borehole, bottom **697.0** Ft. MSL or **195.0** ft.

L. Borehole, diameter **6** in.

M. O.D. well casing **2.38** in.

N. I.D. well casing **2.067** in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: **4.00 in** in.

b Length: **4.00 Ft** ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: **Bumper Posts**

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☒ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 10 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4in. ☒ 1/2in. ☐ 1/2in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a **RFWS #10**

b. Volume added **0.2 cu ft**

8. Filter pack material: Manufacturer, product name & mesh size

a **FRWS #40**

b. Volume added **2.0** cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☐ 2 3

Flush threaded PVC schedule 80 ☐ 2 4

Other ☐

10. Screen Material: **80 PVC**

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer **Johnson**

c. Slot size **0.01** in.

d. Slotted length: **10.00** ft.

11. Backfill material (below filter pack): None ☒ 1.4

Grout, bent. chips Other ☒

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

Signature *Connor Larson*

Firm: **Tetra Tech**

Phone: **262-792-1282**

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E. ☒ S. ☐ W.

Well Name
MW-8

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒

Wis. Unique Well No. DNR Well ID No.

Facility ID

Lat. 44.899 Long. -91.884 or
St. Plane 1480387.0 ft. N. 394262.0 ft. E. S/C/N

Date Well Installed
5/13/24

Type of Well
MW - Water table observation well (monitoring well screen intersecting the water table) (non

Section Location of Waste/Source
1/4 of 1/4 of Sec. T. N.R. Apply ☐

Well Installed By: Name (first, last) and Firm
Gage Kapugi Onsite Environmental

Distance from Waste/Source ft.

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

A. Protective pipe, top elevation **898.00** Ft. MSL

B. Well casing, top elevation **897.68** Ft. MSL

C. Land surface elevation **895.31** Ft. MSL

D. Surface seal, bottom **894.31** Ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☒ 4 1

Other ☒

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

E. Bentonite seal, top **894.3** Ft. MSL or **1.0** ft.

F. Fine sand, top **839.3** Ft. MSL or **56.0** ft.

G. Filter pack, top **837.3** Ft. MSL or **58.0** ft.

H. Screen joint, top **835.3** Ft. MSL or **60.0** ft.

I. Well bottom **825.3** Ft. MSL or **70** ft.

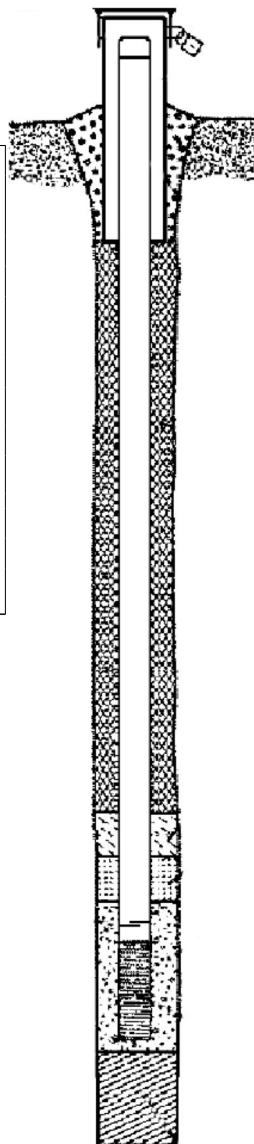
J. Filter pack, bottom **825.3** Ft. MSL or **70.0** ft.

K. Borehole, bottom **825.3** Ft. MSL or **70.0** ft.

L. Borehole, diameter **6** in.

M. O.D. well casing **2.38** in.

N. I.D. well casing **2.067** in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: **4.00 in** in.

b Length: **4.00 Ft** ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: **Bumper Posts**

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☒ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c Lbs/gal mud weight. . . Bentonite slurry ☐ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e 9.0 cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☐ 0 2

Gravity ☒ 0 8

6. Bentonite seal: a. Bentonite granules ☒ 3 3

b ☐ 1/4in. ☐ 1/2in. ☐ 1/2in. Bentonite chips ☐ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a **Swidley Co. 30-100**

b. Volume added **0.4 cu ft**

8. Filter pack material: Manufacturer, product name & mesh size

a **Swidley Co. No.5**

b. Volume added **2.2** cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☒ 2 4

Other ☐

10. Screen Material: **PVC**

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer **Hole Products**

c. Slot size **0.01** in.

d. Slotted length: **10.00** ft.

11. Backfill material (below filter pack): None ☒ 1.4

Other ☐

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

Signature *Connor Larson*

Firm: **Tetra Tech**

Phone: **262-792-1282**

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☒ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E.
☒ S. ☐ W.

Well Name
MW-9

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.897 Long. -91.885 or

Wis. Unique Well No. VR314
DNR Well ID No.

Facility ID

St. Plane 1480021.9 ft. N. 393569.9 ft. E. S/C/N

Date Well Installed
5/14/24

Type of Well
MW - Water table observation well (monitoring well screen intersecting the water table) (non

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm

Distance from Waste/Source ft. Apply ☐

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Mark Beirmaier Cascade Environmental

A. Protective pipe, top elevation 891.58 Ft. MSL

B. Well casing, top elevation 891.48 Ft. MSL

C. Land surface elevation 889.00 Ft. MSL

D. Surface seal, bottom 888.00 Ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top 839.0 Ft. MSL or 50.0 ft.

F. Fine sand, top 834.7 Ft. MSL or 54.3 ft.

G. Filter pack, top 831.0 Ft. MSL or 58.0 ft.

H. Screen joint, top 829.0 Ft. MSL or 60.0 ft.

I. Well bottom 819 Ft. MSL or 70 ft.

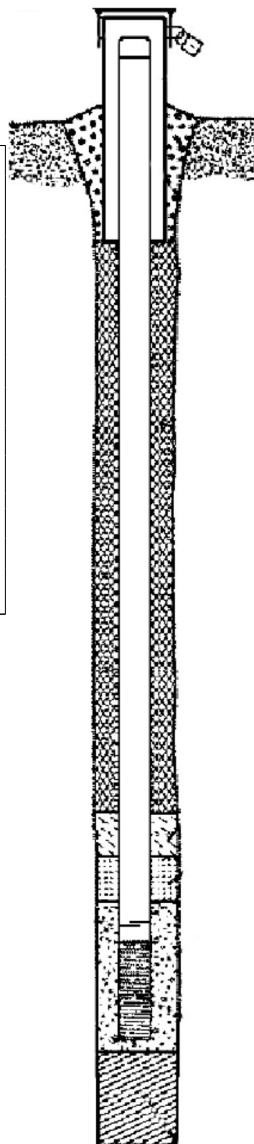
J. Filter pack, bottom 818.0 Ft. MSL or 71.0 ft.

K. Borehole, bottom 819.0 Ft. MSL or 70.0 ft.

L. Borehole, diameter 6 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: 4.00 in.

b Length: 4.00 Ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: Bumper Posts

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☒ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 17 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4in. ☒ 1/2in. ☐ 1/2in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a #10 RFWS

b. Volume added cu ft

8. Filter pack material: Manufacturer, product name & mesh size

a #40 RFWS

b. Volume added cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☒ 2 4

Other ☐

10. Screen Material: PVC

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer Johnson

c. Slot size 0.01 in.

d. Slotted length: 10.00 ft.

11. Backfill material (below filter pack): None ☒ 1.4

Other ☐

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

Signature Connor Larson

Firm: Tetra Tech

Phone: 262-792-1282

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Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E.
☒ S. ☐ W.

Well Name
MW-9D

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.897 Long. -91.885 or

Wis. Unique Well No. VR313
DNR Well ID No.

Facility ID

St. Plane 1480022.7 ft. N. 393564.2 ft. E. S/C/N

Date Well Installed
5/14/24

Type of Well

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm
Mark Beirmaier Cascade Environmental

Distance from Waste/Source ft.

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Gov. Lot Number

A. Protective pipe, top elevation 891.60 Ft. MSL

B. Well casing, top elevation 891.50 Ft. MSL

C. Land surface elevation 888.95 Ft. MSL

D. Surface seal, bottom 887.95 Ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top 813.0 Ft. MSL or 76.0 ft.

F. Fine sand, top 807.0 Ft. MSL or 82.0 ft.

G. Filter pack, top 806.0 Ft. MSL or 83.0 ft.

H. Screen joint, top 804.0 Ft. MSL or 85.0 ft.

I. Well bottom 714 Ft. MSL or 175 ft.

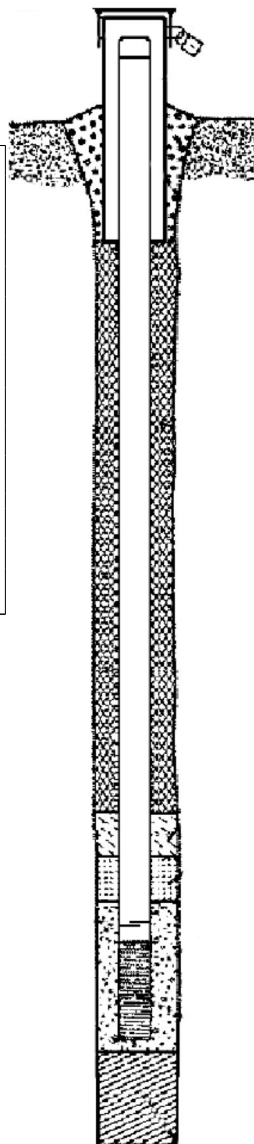
J. Filter pack, bottom 791.0 Ft. MSL or 98.0 ft.

K. Borehole, bottom 714.0 Ft. MSL or 175.0 ft.

L. Borehole, diameter 6 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: 4.00 in in.

b Length: 4.00 Ft ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: Bumper Posts

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☒ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 10 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e 10.9 cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4 in. ☒ 1/2 in. ☐ 1/2 in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a **RFWS#10**

b. Volume added 0.2 cu ft

8. Filter pack material: Manufacturer, product name & mesh size

a **RFWS#40**

b. Volume added 2.0 cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☒ 2 4

Other ☐

10. Screen Material: PVC 40

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer Johnson

c. Slot size 0.01 in.

d. Slotted length: 10.00 ft.

11. Backfill material (below filter pack): None ☐ 1.4

Grout, bent. chips ☒

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

Signature Connor Larson

Firm: Tetra Tech

Phone: 262-792-1282

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E.
☒ S. ☐ W.

Well Name
MW-10

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.903 Long. -91.884 or

Wis. Unique Well No. DNR Well ID No.

Facility ID

St. Plane 1480337.9 ft. N. 395612.7 ft. E. S/C/N

Date Well Installed
5/14/24

Type of Well

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm
Gage Kapugi Onsite Environmental

Distance from Waste/Source ft.

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Enf. Stds.
Apply ☐

A. Protective pipe, top elevation **893.95** Ft. MSL

B. Well casing, top elevation **893.85** Ft. MSL

C. Land surface elevation **891.24** Ft. MSL

D. Surface seal, bottom **890.24** Ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☒ 4 1

Other ☒

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

E. Bentonite seal, top **890.2** Ft. MSL or **1.0** ft.

F. Fine sand, top **835.2** Ft. MSL or **56.0** ft.

G. Filter pack, top **833.2** Ft. MSL or **58.0** ft.

H. Screen joint, top **831.2** Ft. MSL or **60.0** ft.

I. Well bottom **821.2** Ft. MSL or **70** ft.

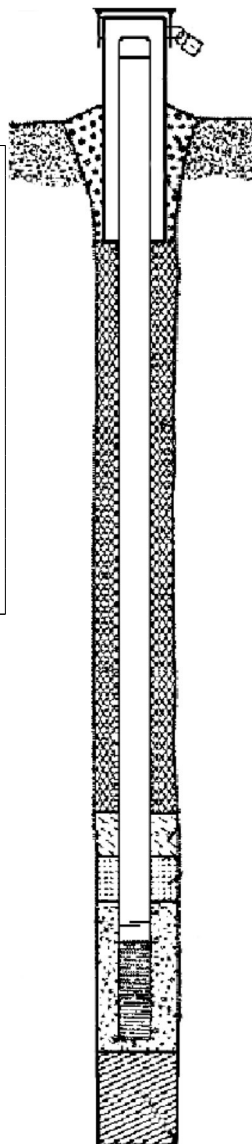
J. Filter pack, bottom **821.2** Ft. MSL or **70.0** ft.

K. Borehole, bottom **821.2** Ft. MSL or **70.0** ft.

L. Borehole, diameter **6** in.

M. O.D. well casing **2.37** in.

N. I.D. well casing **2.067** in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: **4.00 in** in.

b Length: **4.00 Ft** ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: **Bumper Posts**

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☐ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c Lbs/gal mud weight. . . Bentonite slurry ☐ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e 9.0 cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☐ 0 2

Gravity ☒ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4in. ☒ 1/2in. ☐ 1/2in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a **Swidley Co 30-100**

b. Volume added **0.4 cu ft**

8. Filter pack material: Manufacturer, product name & mesh size

a **Swidley Co No.5**

b. Volume added **2.2** cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☒ 2 4

Other ☐

10. Screen Material: **PVC40**

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer **Hole Products**

c. Slot size **0.01** in.

d. Slotted length: **10.00** ft.

11. Backfill material (below filter pack): None ☒ 1.4

Other ☐

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

Signature

Connor Larson

Firm:

Tetra Tech

Phone:

262-792-1282

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A

Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E.
☒ S. ☐ W.

Well Name
MW-11

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.898 Long. -91.890 or

Wis. Unique Well No. VR310
DNR Well ID No.

Facility ID

St. Plane 1478911.9 ft. N. 393699.5 ft. E. S/C/N

Date Well Installed
5/21/24

Type of Well

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm
Mark Beirmaier Cascade Environmental

Distance from Waste/Source ft.

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Gov. Lot Number

A. Protective pipe, top elevation 893.35 Ft. MSL

B. Well casing, top elevation 893.25 Ft. MSL

C. Land surface elevation 890.89 Ft. MSL

D. Surface seal, bottom 889.89 Ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top 889.9 Ft. MSL or 1.0 ft.

F. Fine sand, top 835.9 Ft. MSL or 55.0 ft.

G. Filter pack, top 834.6 Ft. MSL or 56.3 ft.

H. Screen joint, top 831.4 Ft. MSL or 59.5 ft.

I. Well bottom 820.9 Ft. MSL or 70 ft.

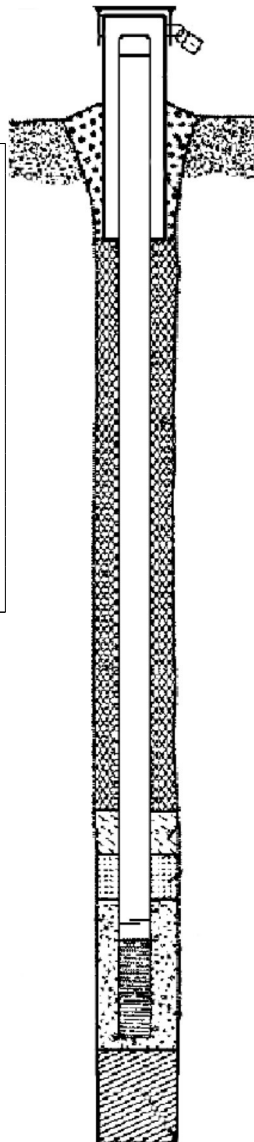
J. Filter pack, bottom 820.9 Ft. MSL or 70.0 ft.

K. Borehole, bottom 820.9 Ft. MSL or 70.0 ft.

L. Borehole, diameter 6 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: 4.00 in in.

b Length: 4.00 Ft ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: Bumper Posts

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☐ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 10 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4 in. ☒ 1/2 in. ☐ 1/2 in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a **RFWS #10**

b. Volume added 0.2 cu ft

8. Filter pack material: Manufacturer, product name & mesh size

a **FRWS #40**

b. Volume added 1.9 cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☒ 2 4

Other ☐

10. Screen Material: PVC 40

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer Johnson

c. Slot size 0.01 in.

d. Slotted length: 10.00 ft.

11. Backfill material (below filter pack): None ☒ 1.4

Other ☐

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

Signature Connor Larson

Firm: Tetra Tech

Phone: 262-792-1282

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E. ☐ S. ☐ W.

Well Name
MW-12

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.897 Long. -91.890 or

Wis. Unique Well No. VR316 DNR Well ID No.

Facility ID

St. Plane 1478905.9 ft. N. 393440.7 ft. E. S/C/N

Date Well Installed
5/10/24

Type of Well
MW - Water table observation well (monitoring well screen intersecting the water table) (non

Section Location of Waste/Source
1/4 of 1/4 of Sec. T. N.R. Apply ☐

Well Installed By: Name (first, last) and Firm
Mark Beirmaier Cascade Environmental

Distance from Waste/Source ft. Apply ☐

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

A. Protective pipe, top elevation 892.06 Ft. MSL

B. Well casing, top elevation 891.96 Ft. MSL

C. Land surface elevation 889.63 Ft. MSL

D. Surface seal, bottom 888.63 Ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐

Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top 833.1 Ft. MSL or 56.5 ft.

F. Fine sand, top 829.1 Ft. MSL or 60.5 ft.

G. Filter pack, top 826.6 Ft. MSL or 63.0 ft.

H. Screen joint, top 824.6 Ft. MSL or 65.0 ft.

I. Well bottom 814.6 Ft. MSL or 75 ft.

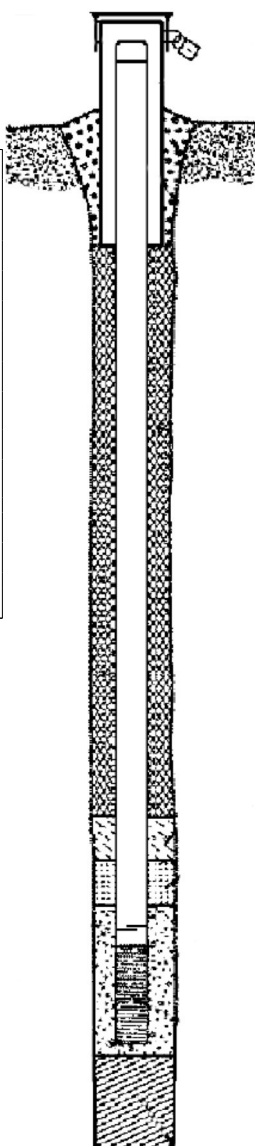
J. Filter pack, bottom 814.6 Ft. MSL or 75.0 ft.

K. Borehole, bottom 814.6 Ft. MSL or 75.0 ft.

L. Borehole, diameter 6 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: 4.00 in.

b Length: 4.00 Ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: Bumper Posts

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☐ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 10 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4in. ☒ 1/2in. ☐ 1/2in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a RFWS #10

b. Volume added 0.3 cu ft

8. Filter pack material: Manufacturer, product name & mesh size

a RFWS #40

b. Volume added 2.0 cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☒ 2 4

Other ☐

10. Screen Material: PVC 40

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer Johnson

c. Slot size 0.01 in.

d. Slotted length: 10.00 ft.

11. Backfill material (below filter pack): None ☒ 1.4

Other ☐

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

Signature Connor Larson

Firm: Tetra Tech

Phone: 262-792-1282

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to:

Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name
3M Menomonie Spring 2024 Sonic Drilling

Local Grid Location of Well
ft. ☐ N. ☐ E. ☒ S. ☐ W.

Well Name
MW-12D

Facility License, Permit or Monitoring No.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒
Lat. 44.897 Long. -91.890 or

Wis. Unique Well No. VR315 DNR Well ID No.

Facility ID

St. Plane 1478905.3 ft. N. 393447.7 ft. E. S/C/N

Date Well Installed
5/9/24

Type of Well

Section Location of Waste/Source ☐ E
1/4 of 1/4 of Sec. T. N.R. Apply ☐ W

Well Installed By: Name (first, last) and Firm
Mark Beirmaier Cascade Environmental

Distance from Waste/Source ft. Apply ☐

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

A. Protective pipe, top elevation **892.14** Ft. MSL

B. Well casing, top elevation **892.04** Ft. MSL

C. Land surface elevation **889.60** Ft. MSL

D. Surface seal, bottom **888.60** Ft. MSL or **1.0** ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0

Hollow Stem Auger ☐ 4 1

Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1

Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe:

17. Source of water (attach analysis, if required):

City of Menomonie

E. Bentonite seal, top **807.4** Ft. MSL or **82.2** ft.

F. Fine sand, top **802.9** Ft. MSL or **86.7** ft.

G. Filter pack, top **801.6** Ft. MSL or **88.0** ft.

H. Screen joint, top **799.6** Ft. MSL or **90.0** ft.

I. Well bottom **739.6** Ft. MSL or **150** ft.

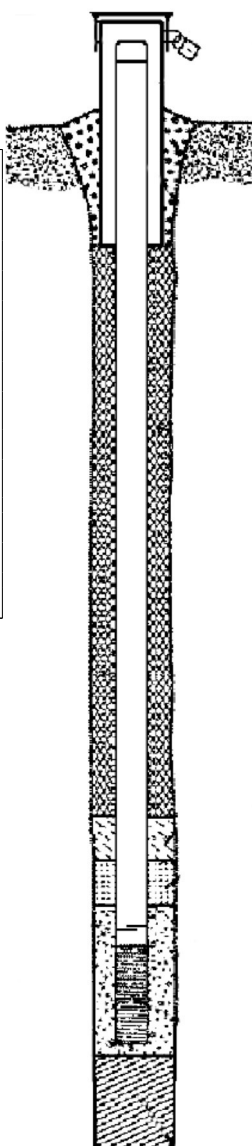
J. Filter pack, bottom **785.6** Ft. MSL or **104.0** ft.

K. Borehole, bottom **739.6** Ft. MSL or **150.0** ft.

L. Borehole, diameter **6** in.

M. O.D. well casing **2.38** in.

N. I.D. well casing **2.067** in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:

a Inside diameter: **4.00 in** in.

b Length: **4.00 Ft** ft.

c Material: Steel ☒ 0 4

Other ☐

d Additional protection? ☒ Yes ☐ No

If yes, describe: Bumper Posts

3. Surface seal: Bentonite ☒ 3 0

Concrete ☐ 0 1

Other ☐

4. Material between well casing and protective pipe:

Bentonite ☐ 3 0

Sand ☐ Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b Lbs/gal mud weight. . . Bentonite-sand slurry ☐ 3 5

c 10 Lbs/gal mud weight. . . Bentonite slurry ☒ 3 1

d % Bentonite. . . Bentonite-cement grout ☐ 5 0

e cu ft volume added for any of the above

f How installed: Tremie ☐ 0 1

Tremie pumped ☒ 0 2

Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b ☐ 1/4in. ☒ 1/2in. ☐ 1/2in. Bentonite chips ☒ 3 2

c ☐ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a **RFWS #10**

b. Volume added **0.3 cu ft**

8. Filter pack material: Manufacturer, product name & mesh size

a **RFWS #40**

b. Volume added **2.2** cu ft.

9. Well casing: Flush threaded PVC schedule 40 ☐ 2 3

Flush threaded PVC schedule 80 ☐ 2 4

Other ☐

10. Screen Material: PVC80

a. Screen type: Factory cut ☒

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer Johnson

c. Slot size **0.01** in.

d. Slotted length: **10.00** ft.

11. Backfill material (below filter pack): None ☐ 1.4

Grout, bent.chips Other ☒

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

Signature *Connor Larson*

Firm: Tetra Tech

Phone: 262-792-1282

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 295 and 299. Wis. Stats., and ch. NR141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295 and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Appendix C

May 2024 Groundwater Sampling Forms

Low-Flow Test Report:

Test Date / Time: 5/22/2024 1:48:26 PM
Project: 3M Menomonie (3)
Operator Name: CSL

Location Name: MW-3 Latitude: 44.89797846768915 Longitude: -91.88484803050979 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62 ft Total Depth: 72 ft Initial Depth to Water: 61.42 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 8620 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
---	---	--

Test Notes:

Weather Conditions:
65, windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/22/2024 1:48 PM	00:00	6.26 pH	19.86 °C	801.15 µS/cm	9.54 mg/L	311.30 NTU	129.6 mV	61.39 ft	150.00 ml/min
5/22/2024 1:49 PM	01:28	6.07 pH	18.29 °C	800.93 µS/cm	9.85 mg/L	662.16 NTU	139.4 mV	61.39 ft	150.00 ml/min
5/22/2024 1:51 PM	03:28	6.08 pH	17.25 °C	715.27 µS/cm	9.48 mg/L	362.71 NTU	142.0 mV	61.39 ft	150.00 ml/min
5/22/2024 1:53 PM	05:28	6.10 pH	19.51 °C	721.10 µS/cm	9.22 mg/L	312.56 NTU	143.3 mV	61.39 ft	150.00 ml/min
5/22/2024 1:55 PM	07:28	6.11 pH	21.10 °C	658.42 µS/cm	9.39 mg/L	383.84 NTU	140.7 mV	61.39 ft	150.00 ml/min
5/22/2024 1:57 PM	09:28	6.11 pH	18.11 °C	565.78 µS/cm	9.68 mg/L	254.52 NTU	144.6 mV	61.39 ft	150.00 ml/min
5/22/2024 1:59 PM	11:28	6.07 pH	17.09 °C	460.77 µS/cm	9.74 mg/L	112.24 NTU	149.4 mV	61.39 ft	150.00 ml/min
5/22/2024 2:01 PM	13:28	6.04 pH	16.30 °C	395.40 µS/cm	9.77 mg/L	68.11 NTU	154.9 mV	61.39 ft	150.00 ml/min
5/22/2024 2:03 PM	15:28	6.03 pH	16.22 °C	366.92 µS/cm	9.80 mg/L	33.60 NTU	157.2 mV	61.39 ft	150.00 ml/min
5/22/2024 2:05 PM	17:28	6.04 pH	16.07 °C	347.62 µS/cm	9.84 mg/L	26.40 NTU	158.1 mV	61.39 ft	150.00 ml/min
5/22/2024 2:07 PM	19:28	6.04 pH	16.33 °C	331.54 µS/cm	9.79 mg/L	24.50 NTU	159.7 mV	61.39 ft	150.00 ml/min
5/22/2024 2:09 PM	21:28	6.06 pH	16.40 °C	324.56 µS/cm	9.84 mg/L	18.42 NTU	161.2 mV	61.39 ft	150.00 ml/min
5/22/2024 2:11 PM	23:28	6.04 pH	17.11 °C	311.30 µS/cm	9.61 mg/L	15.78 NTU	164.0 mV	61.39 ft	150.00 ml/min

5/22/2024 2:13 PM	25:28	6.25 pH	19.35 °C	0.06 µS/cm	9.04 mg/L	0.78 NTU	159.0 mV	61.39 ft	150.00 ml/min
5/22/2024 2:15 PM	27:28	6.54 pH	21.96 °C	0.06 µS/cm	8.51 mg/L	0.76 NTU	142.3 mV	61.39 ft	150.00 ml/min
5/22/2024 2:17 PM	29:28	6.67 pH	22.62 °C	0.06 µS/cm	8.40 mg/L	0.73 NTU	138.8 mV	61.39 ft	150.00 ml/min
5/22/2024 2:19 PM	31:28	6.29 pH	22.52 °C	284.96 µS/cm	7.86 mg/L	58.28 NTU	153.9 mV	61.39 ft	150.00 ml/min
5/22/2024 2:21 PM	33:28	6.00 pH	19.80 °C	276.38 µS/cm	9.23 mg/L	21.70 NTU	164.9 mV	61.39 ft	150.00 ml/min
5/22/2024 2:23 PM	35:28	5.96 pH	19.48 °C	298.53 µS/cm	9.56 mg/L	14.39 NTU	167.8 mV	61.39 ft	150.00 ml/min
5/22/2024 2:25 PM	37:28	6.42 pH	23.57 °C	0.06 µS/cm	8.23 mg/L	2.45 NTU	144.7 mV	61.39 ft	150.00 ml/min
5/22/2024 2:27 PM	39:28	6.59 pH	26.28 °C	0.05 µS/cm	7.74 mg/L	0.95 NTU	139.8 mV	61.39 ft	150.00 ml/min
5/22/2024 2:29 PM	41:28	6.64 pH	27.59 °C	0.05 µS/cm	7.56 mg/L	1.06 NTU	141.5 mV	61.39 ft	150.00 ml/min
5/22/2024 2:31 PM	43:28	6.27 pH	23.73 °C	276.13 µS/cm	7.55 mg/L	27.98 NTU	150.9 mV	61.39 ft	150.00 ml/min
5/22/2024 2:33 PM	45:28	6.05 pH	19.13 °C	269.96 µS/cm	9.49 mg/L	7.09 NTU	161.1 mV	61.39 ft	150.00 ml/min
5/22/2024 2:35 PM	47:28	6.01 pH	18.99 °C	246.77 µS/cm	9.47 mg/L	7.70 NTU	166.1 mV	61.39 ft	150.00 ml/min
5/22/2024 2:37 PM	49:28	6.04 pH	19.27 °C	300.26 µS/cm	9.35 mg/L	7.02 NTU	165.5 mV	61.39 ft	150.00 ml/min
5/22/2024 2:39 PM	51:28	6.05 pH	18.68 °C	296.93 µS/cm	9.36 mg/L	5.01 NTU	166.9 mV	61.39 ft	150.00 ml/min
5/22/2024 2:41 PM	53:28	6.05 pH	18.02 °C	298.03 µS/cm	9.35 mg/L	6.00 NTU	169.3 mV	61.39 ft	150.00 ml/min
5/22/2024 2:43 PM	55:28	6.05 pH	17.82 °C	294.71 µS/cm	9.44 mg/L	8.38 NTU	171.1 mV	61.39 ft	150.00 ml/min
5/22/2024 2:45 PM	57:28	6.07 pH	17.77 °C	294.13 µS/cm	9.48 mg/L	4.11 NTU	171.7 mV	61.39 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-3	PFAS Sampled: 14:50 Dup: 14:55

Low-Flow Test Report:

Test Date / Time: 5/22/2024 3:47:17 PM
Project: 3M Menomonie (4)
Operator Name: CSL

Location Name: MW-4D Latitude: 44.89876017299261 Longitude: -91.88742692833263 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 92.74 ft Total Depth: 102.74 ft Initial Depth to Water: 67.57 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 98 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: -0.02 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Weather Conditions:
65, windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/22/2024 3:47 PM	00:00	7.19 pH	19.63 °C	430.27 µS/cm	6.54 mg/L	44.40 NTU	126.2 mV	67.57 ft	150.00 ml/min
5/22/2024 3:49 PM	02:00	6.93 pH	16.96 °C	587.50 µS/cm	6.13 mg/L	137.85 NTU	107.2 mV	67.47 ft	150.00 ml/min
5/22/2024 3:51 PM	04:00	6.86 pH	16.63 °C	567.48 µS/cm	5.29 mg/L	134.67 NTU	96.4 mV	67.55 ft	150.00 ml/min
5/22/2024 3:53 PM	06:00	6.80 pH	15.42 °C	761.20 µS/cm	4.19 mg/L	122.01 NTU	90.8 mV	67.55 ft	150.00 ml/min
5/22/2024 3:55 PM	08:00	6.80 pH	14.92 °C	770.47 µS/cm	3.56 mg/L	117.31 NTU	84.4 mV	67.55 ft	150.00 ml/min
5/22/2024 3:57 PM	10:00	6.82 pH	14.83 °C	730.40 µS/cm	3.12 mg/L	113.95 NTU	78.1 mV	67.55 ft	150.00 ml/min
5/22/2024 3:59 PM	12:00	6.85 pH	14.34 °C	753.27 µS/cm	2.81 mg/L	112.52 NTU	72.5 mV	67.55 ft	150.00 ml/min
5/22/2024 4:01 PM	14:00	6.89 pH	13.94 °C	777.02 µS/cm	2.55 mg/L	132.23 NTU	67.3 mV	67.55 ft	150.00 ml/min
5/22/2024 4:03 PM	16:00	6.92 pH	13.74 °C	783.06 µS/cm	2.35 mg/L	157.70 NTU	63.1 mV	67.55 ft	150.00 ml/min
5/22/2024 4:05 PM	18:00	6.93 pH	13.49 °C	782.72 µS/cm	2.24 mg/L	167.86 NTU	59.4 mV	67.55 ft	150.00 ml/min
5/22/2024 4:07 PM	20:00	6.95 pH	13.41 °C	773.68 µS/cm	2.14 mg/L	173.73 NTU	56.1 mV	67.55 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW4D-O-240 522	PFAS Sampled: 16:15

Low-Flow Test Report:

Test Date / Time: 5/23/2024 7:38:29AM
Project: 3M MW-5
Operator Name: LRB

Location Name: MW-5 Latitude: 44.89989764 Longitude: -91.88699857 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.61 ft Total Depth: 76.61 ft Initial Depth to Water: 68.06 ft	Estimated Total Volume Pumped: 3032.5 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Serial Number: 925170
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/23/2024 7:38AM	00:00	6.62 pH	14.71 °C	0.97 mS/cm	10.01 mg/L	52.71 NTU	96.3 mV	68.06 ft	150.00 ml/min
5/23/2024 7:40AM	02:00	6.42 pH	13.25 °C	0.89 mS/cm	10.99 mg/L	86.41 NTU	99.1 mV	68.06 ft	150.00 ml/min
5/23/2024 7:40AM	02:13	6.41 pH	13.40 °C	0.89 mS/cm	10.98 mg/L	79.03 NTU	101.9 mV	68.18 ft	150.00 ml/min
5/23/2024 7:42AM	04:13	6.35 pH	12.86 °C	0.87 mS/cm	11.12 mg/L	95.65 NTU	107.2 mV	68.09 ft	150.00 ml/min
5/23/2024 7:44AM	06:13	6.33 pH	12.55 °C	0.84 mS/cm	11.29 mg/L	91.32 NTU	115.7 mV	68.08 ft	150.00 ml/min
5/23/2024 7:46AM	08:13	6.33 pH	12.31 °C	0.82 mS/cm	11.21 mg/L	83.67 NTU	119.1 mV	68.08 ft	150.00 ml/min
5/23/2024 7:48AM	10:13	6.32 pH	12.18 °C	0.81 mS/cm	11.11 mg/L	71.79 NTU	117.6 mV	68.08 ft	150.00 ml/min
5/23/2024 7:50AM	12:13	6.32 pH	12.05 °C	0.80 mS/cm	11.04 mg/L	64.55 NTU	121.9 mV	68.08 ft	150.00 ml/min
5/23/2024 7:52AM	14:13	6.32 pH	12.01 °C	0.78 mS/cm	11.14 mg/L	58.70 NTU	122.8 mV	68.08 ft	150.00 ml/min
5/23/2024 7:54AM	16:13	6.32 pH	12.00 °C	0.77 mS/cm	10.80 mg/L	54.23 NTU	123.7 mV	68.08 ft	150.00 ml/min
5/23/2024 7:56AM	18:13	6.32 pH	11.94 °C	0.76 mS/cm	10.65 mg/L	51.61 NTU	125.8 mV	68.08 ft	150.00 ml/min
5/23/2024 7:58AM	20:13	6.32 pH	11.90 °C	0.75 mS/cm	10.75 mg/L	51.17 NTU	128.9 mV	68.08 ft	150.00 ml/min

Samples

Sample ID:	Description:
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MEWI-GW-MW5-O-2405

23

PFAS

Sampled: 8:05

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/23/2024 7:38:27 AM
Project: 3M Menomonie (5)
Operator Name: CSL

Location Name: MW-5D Latitude: 44.89972035254907 Longitude: -91.88684578843095 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 93.73 ft Total Depth: 103.73 ft Initial Depth to Water: 67.96 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 100 ft Estimated Total Volume Pumped: 3600 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: -0.06 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/23/2024 7:38 AM	00:00	7.64 pH	15.83 °C	389.87 µS/cm	7.38 mg/L	20.53 NTU	143.3 mV	67.96 ft	150.00 ml/min
5/23/2024 7:40 AM	02:00	7.51 pH	13.56 °C	500.67 µS/cm	6.41 mg/L	93.02 NTU	130.5 mV	67.91 ft	150.00 ml/min
5/23/2024 7:42 AM	04:00	7.39 pH	12.86 °C	771.68 µS/cm	5.65 mg/L	175.40 NTU	114.0 mV	67.91 ft	150.00 ml/min
5/23/2024 7:44 AM	06:00	7.32 pH	12.56 °C	1,010.8 µS/cm	5.17 mg/L	252.13 NTU	94.9 mV	67.90 ft	150.00 ml/min
5/23/2024 7:46 AM	08:00	7.28 pH	12.24 °C	1,159.9 µS/cm	5.27 mg/L	376.50 NTU	76.1 mV	67.90 ft	150.00 ml/min
5/23/2024 7:48 AM	10:00	7.27 pH	12.37 °C	1,249.0 µS/cm	5.50 mg/L	486.00 NTU	61.1 mV	67.90 ft	150.00 ml/min
5/23/2024 7:50 AM	12:00	7.28 pH	12.64 °C	1,257.7 µS/cm	5.72 mg/L	448.45 NTU	50.9 mV	67.90 ft	150.00 ml/min
5/23/2024 7:52 AM	14:00	7.28 pH	12.51 °C	1,318.4 µS/cm	5.99 mg/L	512.87 NTU	44.1 mV	67.90 ft	150.00 ml/min
5/23/2024 7:54 AM	16:00	7.30 pH	12.49 °C	1,359.5 µS/cm	6.25 mg/L	513.12 NTU	39.5 mV	67.90 ft	150.00 ml/min
5/23/2024 7:56 AM	18:00	7.31 pH	12.50 °C	1,385.6 µS/cm	6.43 mg/L	557.17 NTU	37.0 mV	67.90 ft	150.00 ml/min
5/23/2024 7:58 AM	20:00	7.32 pH	12.46 °C	1,421.0 µS/cm	7.16 mg/L	584.63 NTU	35.3 mV	67.90 ft	150.00 ml/min
5/23/2024 8:00 AM	22:00	7.34 pH	12.40 °C	1,434.6 µS/cm	7.44 mg/L	597.41 NTU	34.3 mV	67.90 ft	150.00 ml/min
5/23/2024 8:02 AM	24:00	7.36 pH	12.33 °C	1,440.4 µS/cm	7.69 mg/L	572.14 NTU	33.4 mV	67.90 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW5D-O-240 523	PFAS Sampled: 8:15

Low-Flow Test Report:

Test Date / Time: 5/23/2024 9:15:38 AM
Project: 3M Menomonie (6)
Operator Name: CSL

Location Name: MW-8 Latitude: 44.899272916442314 Longitude: -91.88387056965189 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 63 ft Total Depth: 73 ft Initial Depth to Water: 65.17 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 5400 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Weather Conditions:
75, sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/23/2024 9:15 AM	00:00	6.78 pH	20.82 °C	655.16 µS/cm	9.49 mg/L	28.89 NTU	113.6 mV	65.17 ft	150.00 ml/min
5/23/2024 9:17 AM	02:00	6.60 pH	18.29 °C	712.99 µS/cm	11.07 mg/L	168.97 NTU	115.4 mV	65.17 ft	150.00 ml/min
5/23/2024 9:19 AM	04:00	6.54 pH	17.64 °C	648.22 µS/cm	10.88 mg/L	187.32 NTU	118.3 mV	65.17 ft	150.00 ml/min
5/23/2024 9:21 AM	06:00	6.57 pH	17.63 °C	684.13 µS/cm	10.89 mg/L	213.44 NTU	116.8 mV	65.17 ft	150.00 ml/min
5/23/2024 9:23 AM	08:00	6.59 pH	17.19 °C	670.62 µS/cm	11.26 mg/L	182.15 NTU	116.0 mV	65.17 ft	150.00 ml/min
5/23/2024 9:25 AM	10:00	6.57 pH	17.25 °C	598.99 µS/cm	11.15 mg/L	191.49 NTU	116.9 mV	65.17 ft	150.00 ml/min
5/23/2024 9:27 AM	12:00	6.57 pH	17.49 °C	643.48 µS/cm	10.92 mg/L	189.80 NTU	117.5 mV	65.17 ft	150.00 ml/min
5/23/2024 9:29 AM	14:00	6.56 pH	16.70 °C	615.24 µS/cm	10.77 mg/L	174.06 NTU	118.4 mV	65.17 ft	150.00 ml/min
5/23/2024 9:31 AM	16:00	6.55 pH	16.39 °C	600.47 µS/cm	10.53 mg/L	192.65 NTU	120.1 mV	65.17 ft	150.00 ml/min
5/23/2024 9:33 AM	18:00	6.55 pH	16.20 °C	601.30 µS/cm	10.41 mg/L	183.93 NTU	120.9 mV	65.17 ft	150.00 ml/min
5/23/2024 9:35 AM	20:00	6.55 pH	15.91 °C	605.21 µS/cm	10.33 mg/L	141.61 NTU	122.5 mV	65.17 ft	150.00 ml/min
5/23/2024 9:37 AM	22:00	6.55 pH	15.95 °C	609.91 µS/cm	10.58 mg/L	163.14 NTU	123.7 mV	65.17 ft	150.00 ml/min
5/23/2024 9:39 AM	24:00	6.54 pH	16.11 °C	607.25 µS/cm	10.46 mg/L	165.05 NTU	124.7 mV	65.17 ft	150.00 ml/min

5/23/2024 9:41 AM	26:00	6.53 pH	16.04 °C	590.92 µS/cm	10.34 mg/L	178.32 NTU	126.1 mV	65.17 ft	150.00 ml/min
5/23/2024 9:43 AM	28:00	6.53 pH	16.64 °C	605.00 µS/cm	10.42 mg/L	151.89 NTU	126.8 mV	65.17 ft	150.00 ml/min
5/23/2024 9:45 AM	30:00	6.54 pH	16.44 °C	610.41 µS/cm	10.55 mg/L	120.19 NTU	127.8 mV	65.17 ft	150.00 ml/min
5/23/2024 9:47 AM	32:00	6.53 pH	16.23 °C	605.10 µS/cm	10.38 mg/L	137.87 NTU	128.8 mV	65.17 ft	150.00 ml/min
5/23/2024 9:49 AM	34:00	6.52 pH	16.22 °C	600.19 µS/cm	10.41 mg/L	125.72 NTU	130.1 mV	65.17 ft	150.00 ml/min
5/23/2024 9:51 AM	36:00	6.52 pH	16.15 °C	599.60 µS/cm	10.43 mg/L	126.42 NTU	131.8 mV	65.17 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW8-O-2405 23	PFAS Sampled: 10:00

Low-Flow Test Report:

Test Date / Time: 5/22/2024 12:15:37PM
Project: 3M
Operator Name: LRB

Location Name: MW-9 Latitude: 44.89735827 Longitude: -91.88515673 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.86 ft Total Depth: 72.86 ft Initial Depth to Water: 58.58 ft	Estimated Total Volume Pumped: 0.7 gal Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 600 Serial Number: 925170
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/22/2024 12:15PM	00:00	6.62 pH	16.65 °C	0.24 mS/cm	9.64 mg/L	72.04 NTU	92.6 mV	58.58 ft	150.00 ml/min
5/22/2024 12:17PM	02:00	6.38 pH	14.60 °C	0.28 mS/cm	9.94 mg/L	199.29 NTU	99.6 mV	58.61 ft	150.00 ml/min
5/22/2024 12:19PM	04:00	6.28 pH	13.74 °C	0.28 mS/cm	9.94 mg/L	234.46 NTU	105.9 mV	58.61 ft	150.00 ml/min
5/22/2024 12:21PM	06:00	6.24 pH	13.32 °C	0.28 mS/cm	9.60 mg/L	222.16 NTU	110.3 mV	58.56 ft	150.00 ml/min
5/22/2024 12:23PM	08:00	6.22 pH	12.99 °C	0.28 mS/cm	9.58 mg/L	193.62 NTU	112.5 mV	58.61 ft	150.00 ml/min
5/22/2024 12:25PM	10:00	6.21 pH	12.89 °C	0.28 mS/cm	9.81 mg/L	173.19 NTU	113.8 mV	58.61 ft	150.00 ml/min
5/22/2024 12:27PM	12:00	6.21 pH	12.74 °C	0.28 mS/cm	9.79 mg/L	167.53 NTU	117.4 mV	58.61 ft	150.00 ml/min
5/22/2024 12:29PM	14:00	6.21 pH	12.72 °C	0.28 mS/cm	9.83 mg/L	150.46 NTU	114.9 mV	58.61 ft	150.00 ml/min
5/22/2024 12:31PM	16:00	6.21 pH	12.62 °C	0.28 mS/cm	9.73 mg/L	140.02 NTU	118.0 mV	58.61 ft	150.00 ml/min
5/22/2024 12:33PM	18:00	6.22 pH	12.64 °C	0.28 mS/cm	9.72 mg/L	143.92 NTU	117.9 mV	58.61 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW9-O-2405 22	PFAS Sampled: 12:45

Low-Flow Test Report:

Test Date / Time: 5/22/2024 12:11:25 PM
Project: 3M Menomonie (2)
Operator Name: CSL

Location Name: MW-9D Latitude: 44.89737716427247 Longitude: -91.88525448407015 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 87.95 ft Total Depth: 97.95 ft Initial Depth to Water: 58.5 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 95 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Weather Conditions:
65, windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/22/2024 12:11 PM	00:00	7.11 pH	19.37 °C	2.22 µS/cm	7.14 mg/L	415.99 NTU	109.5 mV	58.50 ft	150.00 ml/min
5/22/2024 12:13 PM	02:00	6.81 pH	15.99 °C	512.71 µS/cm	5.23 mg/L	25.53 NTU	79.0 mV	58.50 ft	150.00 ml/min
5/22/2024 12:15 PM	04:00	6.87 pH	14.84 °C	537.73 µS/cm	4.54 mg/L	606.49 NTU	46.9 mV	58.50 ft	150.00 ml/min
5/22/2024 12:17 PM	06:00	6.91 pH	14.17 °C	552.05 µS/cm	3.75 mg/L	634.25 NTU	33.4 mV	58.50 ft	150.00 ml/min
5/22/2024 12:19 PM	08:00	6.90 pH	13.85 °C	551.71 µS/cm	3.48 mg/L	446.62 NTU	31.0 mV	58.50 ft	150.00 ml/min
5/22/2024 12:21 PM	10:00	6.89 pH	13.63 °C	553.53 µS/cm	3.28 mg/L	303.35 NTU	29.5 mV	58.50 ft	150.00 ml/min
5/22/2024 12:23 PM	12:00	6.89 pH	13.43 °C	549.70 µS/cm	3.13 mg/L	242.17 NTU	26.4 mV	58.50 ft	150.00 ml/min
5/22/2024 12:25 PM	14:00	6.90 pH	13.27 °C	543.69 µS/cm	3.05 mg/L	208.72 NTU	22.9 mV	58.50 ft	150.00 ml/min
5/22/2024 12:27 PM	16:00	6.90 pH	13.22 °C	539.83 µS/cm	3.06 mg/L	161.75 NTU	20.1 mV	58.50 ft	150.00 ml/min
5/22/2024 12:29 PM	18:00	6.90 pH	13.27 °C	537.59 µS/cm	3.01 mg/L	149.98 NTU	18.2 mV	58.50 ft	150.00 ml/min
5/22/2024 12:31 PM	20:00	6.91 pH	13.20 °C	537.36 µS/cm	3.16 mg/L	149.74 NTU	15.9 mV	58.50 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW9D-O-240 522	PFAS Sampled: 12:40

Low-Flow Test Report:

Test Date / Time: 5/23/2024 12:42:44 PM
Project: 3M Menomonie (8)
Operator Name: CSL

Location Name: MW-10 Latitude: 44.90304480147294 Longitude: -91.88416644302295 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.81 ft Total Depth: 72.81 ft Initial Depth to Water: 65.07 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 4800 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Weather Conditions:
80, sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/23/2024 12:42 PM	00:00	6.47 pH	18.62 °C	499.89 µS/cm	8.56 mg/L	138.84 NTU	133.5 mV	65.07 ft	150.00 ml/min
5/23/2024 12:44 PM	02:00	6.43 pH	16.55 °C	507.35 µS/cm	8.01 mg/L	177.71 NTU	131.8 mV	65.07 ft	150.00 ml/min
5/23/2024 12:46 PM	04:00	6.43 pH	15.42 °C	505.12 µS/cm	7.67 mg/L	151.18 NTU	130.3 mV	65.07 ft	150.00 ml/min
5/23/2024 12:48 PM	06:00	6.43 pH	16.04 °C	506.31 µS/cm	7.18 mg/L	96.64 NTU	130.5 mV	65.07 ft	150.00 ml/min
5/23/2024 12:50 PM	08:00	6.40 pH	15.27 °C	417.54 µS/cm	6.63 mg/L	135.90 NTU	131.7 mV	65.07 ft	150.00 ml/min
5/23/2024 12:52 PM	10:00	6.42 pH	14.23 °C	498.05 µS/cm	7.15 mg/L	127.31 NTU	131.0 mV	65.07 ft	150.00 ml/min
5/23/2024 12:54 PM	12:00	6.43 pH	14.06 °C	463.55 µS/cm	7.23 mg/L	139.36 NTU	129.8 mV	65.07 ft	150.00 ml/min
5/23/2024 12:56 PM	14:00	6.43 pH	14.15 °C	492.90 µS/cm	6.72 mg/L	153.64 NTU	130.0 mV	65.07 ft	150.00 ml/min
5/23/2024 12:58 PM	16:00	6.43 pH	14.12 °C	488.90 µS/cm	6.79 mg/L	120.88 NTU	129.3 mV	65.07 ft	150.00 ml/min
5/23/2024 1:00 PM	18:00	6.43 pH	14.13 °C	487.22 µS/cm	6.84 mg/L	140.43 NTU	129.2 mV	65.07 ft	150.00 ml/min
5/23/2024 1:02 PM	20:00	6.43 pH	14.20 °C	486.99 µS/cm	6.91 mg/L	114.05 NTU	129.3 mV	65.07 ft	150.00 ml/min
5/23/2024 1:04 PM	22:00	6.43 pH	14.14 °C	484.50 µS/cm	6.77 mg/L	129.82 NTU	129.5 mV	65.07 ft	150.00 ml/min
5/23/2024 1:06 PM	24:00	6.44 pH	13.82 °C	478.11 µS/cm	6.74 mg/L	121.44 NTU	129.5 mV	65.07 ft	150.00 ml/min

5/23/2024 1:08 PM	26:00	6.45 pH	13.60 °C	482.81 µS/cm	6.82 mg/L	122.75 NTU	129.8 mV	65.07 ft	150.00 ml/min
5/23/2024 1:10 PM	28:00	6.45 pH	13.55 °C	483.44 µS/cm	6.61 mg/L	110.99 NTU	129.8 mV	65.07 ft	150.00 ml/min
5/23/2024 1:12 PM	30:00	6.45 pH	13.46 °C	482.76 µS/cm	6.60 mg/L	106.35 NTU	130.4 mV	65.07 ft	150.00 ml/min
5/23/2024 1:14 PM	32:00	6.45 pH	13.54 °C	482.48 µS/cm	6.73 mg/L	112.27 NTU	130.7 mV	65.07 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW10-O-240 523	PFAS Sampled: 13:20

Low-Flow Test Report:

Test Date / Time: 5/23/2024 10:43:30 AM
Project: 3M Menomonie (7)
Operator Name: CSL

Location Name: MW-11 Latitude: 44.89770495249538 Longitude: -91.88769568696493 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 61.48 ft Total Depth: 71.48 ft Initial Depth to Water: 65.7 ft	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 68 ft Estimated Total Volume Pumped: 4500 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: -0.02 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Weather Conditions:
75, sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/23/2024 10:43 AM	00:00	6.48 pH	21.88 °C	368.53 µS/cm	9.11 mg/L	164.44 NTU	149.9 mV	65.70 ft	150.00 ml/min
5/23/2024 10:45 AM	02:00	6.27 pH	18.76 °C	339.08 µS/cm	9.37 mg/L	176.47 NTU	152.0 mV	65.68 ft	150.00 ml/min
5/23/2024 10:47 AM	04:00	6.32 pH	17.33 °C	355.81 µS/cm	9.34 mg/L	230.17 NTU	147.1 mV	65.68 ft	150.00 ml/min
5/23/2024 10:49 AM	06:00	6.36 pH	16.55 °C	356.61 µS/cm	9.41 mg/L	238.08 NTU	145.8 mV	65.68 ft	150.00 ml/min
5/23/2024 10:51 AM	08:00	6.39 pH	16.21 °C	359.43 µS/cm	9.42 mg/L	222.56 NTU	144.2 mV	65.68 ft	150.00 ml/min
5/23/2024 10:53 AM	10:00	6.38 pH	15.85 °C	363.86 µS/cm	9.34 mg/L	207.86 NTU	143.4 mV	65.68 ft	150.00 ml/min
5/23/2024 10:55 AM	12:00	6.37 pH	15.63 °C	363.95 µS/cm	9.30 mg/L	194.37 NTU	144.5 mV	65.68 ft	150.00 ml/min
5/23/2024 10:57 AM	14:00	6.37 pH	15.70 °C	364.81 µS/cm	9.25 mg/L	159.13 NTU	144.0 mV	65.68 ft	150.00 ml/min
5/23/2024 10:59 AM	16:00	6.39 pH	16.72 °C	350.54 µS/cm	9.13 mg/L	191.54 NTU	144.8 mV	65.68 ft	150.00 ml/min
5/23/2024 11:01 AM	18:00	6.39 pH	16.34 °C	368.75 µS/cm	9.24 mg/L	146.13 NTU	144.6 mV	65.68 ft	150.00 ml/min
5/23/2024 11:03 AM	20:00	6.39 pH	16.23 °C	367.69 µS/cm	9.24 mg/L	121.78 NTU	144.9 mV	65.68 ft	150.00 ml/min
5/23/2024 11:05 AM	22:00	6.41 pH	16.37 °C	368.91 µS/cm	9.17 mg/L	129.63 NTU	143.6 mV	65.68 ft	150.00 ml/min
5/23/2024 11:07 AM	24:00	6.39 pH	16.46 °C	371.83 µS/cm	9.12 mg/L	110.37 NTU	144.9 mV	65.68 ft	150.00 ml/min

5/23/2024 11:09 AM	26:00	6.40 pH	16.48 °C	370.30 µS/cm	9.10 mg/L	90.28 NTU	144.9 mV	65.68 ft	150.00 ml/min
5/23/2024 11:11 AM	28:00	6.41 pH	16.28 °C	370.92 µS/cm	9.13 mg/L	91.82 NTU	144.9 mV	65.68 ft	150.00 ml/min
5/23/2024 11:13 AM	30:00	6.41 pH	16.27 °C	371.61 µS/cm	9.11 mg/L	90.80 NTU	145.4 mV	65.68 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW11-O-240 523	PFAS Sampled: 11:20

Low-Flow Test Report:

Test Date / Time: 5/22/2024 9:40:12 AM
Project: 3M Menomonie
Operator Name: CSL

Location Name: MW-12 Latitude: 44.89698286703722 Longitude: -91.88946163352331 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.72 ft Total Depth: 77.72 ft Initial Depth to Water: 70.66 m	Pump Type: SamplePro Tubing Type: HDPE Pump Intake From TOC: 75 ft Estimated Total Volume Pumped: 4800 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 962988
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Test Notes:

Weather Conditions:
60, windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/22/2024 9:40 AM	00:00	6.37 pH	15.52 °C	604.10 µS/cm	9.32 mg/L	150.23 NTU	130.6 mV	67.81 ft	150.00 ml/min
5/22/2024 9:42 AM	02:00	6.35 pH	15.49 °C	628.63 µS/cm	8.42 mg/L	132.93 NTU	132.8 mV	67.81 ft	150.00 ml/min
5/22/2024 9:44 AM	04:00	6.33 pH	15.18 °C	648.89 µS/cm	7.95 mg/L	119.34 NTU	135.2 mV	67.81 ft	150.00 ml/min
5/22/2024 9:46 AM	06:00	6.31 pH	14.62 °C	658.18 µS/cm	7.67 mg/L	112.33 NTU	136.1 mV	67.81 ft	150.00 ml/min
5/22/2024 9:48 AM	08:00	6.31 pH	14.78 °C	664.97 µS/cm	7.22 mg/L	88.95 NTU	136.5 mV	67.81 ft	150.00 ml/min
5/22/2024 9:50 AM	10:00	6.28 pH	14.38 °C	666.35 µS/cm	7.33 mg/L	83.32 NTU	141.5 mV	67.81 ft	150.00 ml/min
5/22/2024 9:52 AM	12:00	6.28 pH	13.82 °C	663.58 µS/cm	7.44 mg/L	76.78 NTU	142.4 mV	67.81 ft	150.00 ml/min
5/22/2024 9:54 AM	14:00	6.44 pH	14.52 °C	0.07 µS/cm	9.91 mg/L	0.15 NTU	137.1 mV	67.81 ft	150.00 ml/min
5/22/2024 9:56 AM	16:00	6.39 pH	14.19 °C	641.30 µS/cm	8.52 mg/L	33.64 NTU	136.2 mV	67.81 ft	150.00 ml/min
5/22/2024 9:58 AM	18:00	6.33 pH	13.85 °C	661.73 µS/cm	8.02 mg/L	14.72 NTU	137.4 mV	67.81 ft	150.00 ml/min
5/22/2024 10:00 AM	20:00	6.32 pH	13.61 °C	663.44 µS/cm	7.94 mg/L	13.62 NTU	139.7 mV	67.81 ft	150.00 ml/min
5/22/2024 10:02 AM	22:00	6.31 pH	13.50 °C	662.28 µS/cm	7.90 mg/L	9.17 NTU	141.0 mV	67.81 ft	150.00 ml/min
5/22/2024 10:04 AM	24:00	6.32 pH	13.66 °C	658.97 µS/cm	7.90 mg/L	8.57 NTU	141.5 mV	67.81 ft	150.00 ml/min

5/22/2024 10:06 AM	26:00	6.34 pH	13.44 °C	660.31 µS/cm	7.86 mg/L	5.34 NTU	142.3 mV	67.81 ft	150.00 ml/min
5/22/2024 10:08 AM	28:00	6.33 pH	13.10 °C	659.33 µS/cm	7.88 mg/L	4.06 NTU	143.7 mV	67.81 ft	150.00 ml/min
5/22/2024 10:10 AM	30:00	6.33 pH	13.20 °C	656.66 µS/cm	7.91 mg/L	5.11 NTU	145.2 mV	67.81 ft	150.00 ml/min
5/22/2024 10:12 AM	32:00	6.34 pH	13.08 °C	653.95 µS/cm	7.89 mg/L	2.76 NTU	146.3 mV	67.81 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW12-O-240 522	PFAS Sampled: 10:20

Low-Flow Test Report:

Test Date / Time: 5/22/2024 10:04:01AM
Project:
Operator Name:

Location Name: Device Location Initial Depth to Water: 68.04 ft	Estimated Total Volume Pumped: 2700 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.19 ft	Instrument Used: Aqua TROLL 600 Serial Number: 925170
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
5/22/2024 10:04AM	00:00	7.69 pH	17.44 °C	0.48 mS/cm	8.15 mg/L	5.68 NTU	85.8 mV	68.04 ft	150.00 ml/min
5/22/2024 10:06AM	02:00	7.36 pH	14.54 °C	0.56 mS/cm	7.16 mg/L	23.37 NTU	81.2 mV	68.04 ft	150.00 ml/min
5/22/2024 10:08AM	04:00	7.13 pH	13.23 °C	0.63 mS/cm	6.26 mg/L	85.72 NTU	83.9 mV	68.01 ft	150.00 ml/min
5/22/2024 10:10AM	06:00	6.98 pH	12.82 °C	0.67 mS/cm	5.30 mg/L	103.36 NTU	94.3 mV	68.19 ft	150.00 ml/min
5/22/2024 10:12AM	08:00	6.92 pH	12.59 °C	0.69 mS/cm	4.96 mg/L	89.14 NTU	96.0 mV	68.22 ft	150.00 ml/min
5/22/2024 10:14AM	10:00	6.90 pH	12.38 °C	0.69 mS/cm	5.01 mg/L	85.62 NTU	102.3 mV	68.22 ft	150.00 ml/min
5/22/2024 10:16AM	12:00	6.89 pH	12.20 °C	0.69 mS/cm	5.15 mg/L	67.42 NTU	100.1 mV	68.22 ft	150.00 ml/min
5/22/2024 10:18AM	14:00	6.89 pH	12.14 °C	0.68 mS/cm	5.21 mg/L	61.65 NTU	105.1 mV	68.15 ft	150.00 ml/min
5/22/2024 10:20AM	16:00	6.89 pH	12.14 °C	0.68 mS/cm	5.24 mg/L	62.04 NTU	106.3 mV	68.23 ft	150.00 ml/min
5/22/2024 10:22AM	18:00	6.90 pH	11.98 °C	0.69 mS/cm	5.29 mg/L	55.62 NTU	104.8 mV	68.23 ft	150.00 ml/min

Samples

Sample ID:	Description:
MEWI-GW-MW12D-O-24 0522	PFAS Sampled: 10:30

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-8

Client: 3M **Project Name:** 3M Menomonie **Project No.:** 117-001312-24002.03

Personnel: CSL, LRB

Date: 5/23/24

Weather: 75° sunny

Purge Method: Low-Flow

Other

Serial #

Field Instruments: SamplePro

Flow Cell: AquaTROLL

Screen / Pump Interv:

Initial Depth to Water: 65.17

General Comments:

Free Product: Yes- inches NO free product

[illegible]

All measurements to Nearest Hundredth of a Foot (0.01 feet)

Well diameter/gallon per ft:

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0006	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.6528

1 gallon = 231 inches
1 inch = 2.54 cm

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-10

Project No.: 117-001312-24002.03

Date: 5/23/24

Weather: 80° sunny

Other

Brand

Serial #

Initial Depth to Water: 65.07

Free Product: Yes- inches NO free product

Time	Depth to H2O (FT)	Pump Rate (mL/min)	Temp (°C)	pH (S.U.)	Specific Conductance (mS/cm)	ORP (mV)	O ₂ (mg/l)	Turb (NTU)	Visual and Olfactory Observations / Notes
			Parameter Stabilization Ranges						
			3%	±0.1	3%	±10 mV	10%	10%	
Sample Taken at: 13 : 25									
Amount Purged: _____ gallon(s)									_____ CAPACITY Dissolved Metals Field Filtered ☐

1 gallon = 231 inches

1 inch = 2.54 cm

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0006	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1832	0.6528

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-11

Personnel: CSL, LRB Date: 5/23/24

Weather: 81 Sunny

Purge Method:	Low-Flow	Other
	Brand	Serial #

Field Instruments:	SamplePro	Flow Cell:	AquaTROLL
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Screen / Pump Interv: / Initial Depth to Water: 63.70

General Comments:	Free Product: Yes- inches NO free product
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[illegible]

Sample Taken at: 11 : 20		CAPACITY
Amount Purged: _____ gallon(s)		Dissolved Metals Field Filtered ☐

1 gallon = 231 inches³

1 inch = 2.54 cm

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0006	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.8528

WATER QUALITY DATA SHEET

13555 Bishops Ct., Ste. 201, Brookfield, WI 53005

SAMPLE LOCATION:

SAMPLE ID NUMBER: MW-5

Client: 3M

Project Name: 3M Menomonie

Project No.: 117-001312-24002.03

Personnel:	CSL, LRB
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Date: 5/23/24

Weather: 58 partly cloudy

Purge Method:	Low-Flow
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Other

Serial #

Field Instruments: SamplePro

Flow Cell: AquaTROLL

Screen / Pump Interv:

Initial Depth to Water: 68.06

General Comments:

Free Product: Yes- inches NO free product

[illegible]

Sample Taken at: 8:05

CAPACITY

Amount Purged: 3032.5 ^mgallon(s)

Dissolved Metals Field Filtered ☐

All measurements to Nearest Hundredth of a Foot (0.01 feet)

$$Vol = \pi(r)^2 \cdot h$$

1 liter = 264 gallons

1 gallon = 231 inches

Well diameter/gallon per ft.:

1/8 inch

3/16 inch

1/4 inch

3/8 inch

1/2 inch

5/8 inch

3/4 inch

1 inch

2 inch

4 inch

0 1632

0.6528

0.0001

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13555 Bishops Ct., Ste. 201, Brookfield, WI 53005

MEWI-GW-MW9-0-240522

SAMPLE ID NUMBER: MW-9

Project No.: 117-001312-24002.03

Date: 5/22/24

Weather: 65° windy, cloudy

Other

Flow Cell: AquaTROLL

Initial Depth to Water: 58.58

Free Product: Yes- inches **NO free product**

Sample Taken at: <u>12 : 45</u>		CAPACITY
Amount Purged: <u>~ 0.7</u> gallon(s)		Dissolved Metals Field Filtered ☐

1 gallon = 231 inches

1 inch = 2.54 cm

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0008	0.0014	0.0025	0.0057	0.0102	0.0159	0.0228	0.0408	0.1632	0.6528

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-12D (Low-Flow Test Report is the report name)

Personnel: CSL, LRB Date: 5/20/24

Weather: 58° windy, part sunny

Purge Method:	Low-Flow	Other
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Field Instruments: SamplePro **Flow Cell:** AquaTROLL

Screen / Pump Interv: / Initial Depth to Water: 68.04

General Comments: 2 min/sample Free Product: Yes- inches NO free product

[illegible]

Sample Taken at: <u>10 : 30</u>		<u> </u> CAPACITY
Amount Purged: <u>~ 0.7</u> gallon(s)		Dissolved Metals Field Filtered ☐

All measurements to Nearest Hundredth of a Foot (0.01 feet)

Well diameter/gallon per ft.

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0008	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.6528

$$Vol = \pi(r)^2 \cdot h$$

1 liter = 264 gallons
1 liter = 61.02 inches

1 gallon = 231 inches³
1 inch = 2.54 cm

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-3 / DVP

Project No.: 117-001312-24002.03

Date: 5/22/24

Weather:

Other

Flow Cell: AquaTROLL

Initial Depth to Water: 61.42

Free Product: Yes- inches NO free product

[illegible]

Sample Taken at: 14 : 50 / 14 : 55

Amount Purged: _____ gallon(s)

CAPACITY

Dissolved Metals Field Filtered ☐

1 gallon = 231 inches

1 inch = 2.54 cm

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0008	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.6528

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-4D

Project No.: 117-001312-24002.03

Date: 5/22/24

Other

Serial #

Initial Depth to Water: 67.57

Free Product: Yes- inches NO free product

Sample Taken at: <u>16 : 15</u>		CAPACITY
Amount Purged: _____ gallon(s)		Dissolved Metals Field Filtered ☐

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0006	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.6528

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: MW-9D

Personnel: CSL, LRB Date: 5/22/24

Weather: 65, windy

Other	Serial #
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Screen / Pump Intv: / Initial Depth to Water: 58.50

Time	Depth to H2O (FT)	Pump Rate (mL/min)	Temp (°C)	pH (S.U.)	Specific Conductance (mS/cm)	ORP (mV)	O ₂ (mg/l)	Turb (NTU)	Visual and Olfactory Observations / Notes
			Parameter Stabilization Ranges						
			3%	±0.1	3%	±10 mV	10%	10%	
									see low-flow report
Sample Taken at: 12 : 40									CAPACITY
Amount Purged: _____ gallon(s)									Dissolved Metals Field Filtered ☐

1 gallon = 231 inches

1 inch = 2.54 cm

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0006	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.6528

WATER QUALITY DATA SHEET

SAMPLE ID NUMBER: mw-12

Date: 5/22/24

Weather: 56°, windy

Other

Brand

Serial #

Initial Depth to Water: 70.66

Free Product: Yes- inches NO free product

Time	Depth to H2O (FT)	Pump Rate (mL/min)	Temp (°C)	pH (S.U.)	Specific Conductance (mS/cm)	ORP (mV)	O ₂ (mg/l)	Turb (NTU)	Visual and Olfactory Observations / Notes
			Parameter Stabilization Ranges						
			3%	±0.1	3%	±10 mV	10%	10%	
28:00	67.81	150	13.10	6.33	659.33	143.7	7.88	4.06	
30:00	67.81		13.20	6.33	656.66	145.2	7.91	5.11	
32:00	67.81		13.08	6.34	653.95	146.3	7.89	2.76	
Sample Taken at: _____ :									_____ CAPACITY
Amount Purged: _____ gallon(s)									Dissolved Metals Field Filtered ☐

All measurements to Nearest Hundredth of a Foot (0.01 feet).

Well diameter/gallon per ft:

1/8 inch	3/16 inch	1/4 inch	3/8 inch	1/2 inch	5/8 inch	3/4 inch	1 inch	2 inch	4 inch
0.0006	0.0014	0.0025	0.0057	0.0102	0.0159	0.0229	0.0408	0.1632	0.6528

1 liter = .264 gallons

1 liter = 61.02 inches³

2 inch	4 inch
0.1632	0.6528

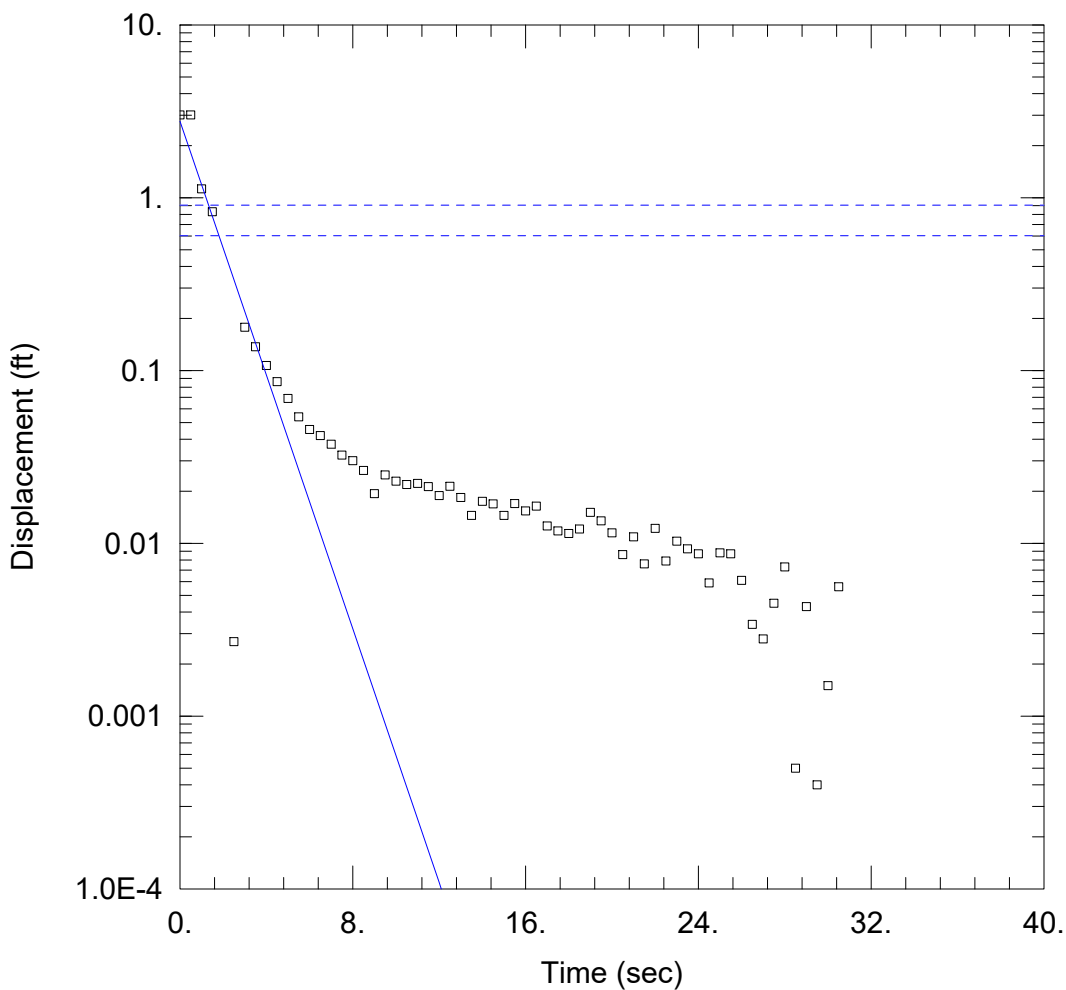
1 gallon = 231 inches

1 inch = 2.54 cm

Keywords: child sexual abuse; disclosure; social support

Appendix D

Slug Testing Analyses



MW-3 SLUG IN

Data Set: P:\...\MW3_SlugIn_01.aqt

Date: 09/13/24

Time: 11:30:52

PROJECT INFORMATION

Company: Tetra Tech

Client: 3M

Location: Menomonie, WI

Test Well: MW-3

Test Date: 5/24/24

AQUIFER DATA

Saturated Thickness: 10.66 ft

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW-3)

Initial Displacement: 3.017 ft

Static Water Column Height: 10.66 ft

Total Well Penetration Depth: 72. ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

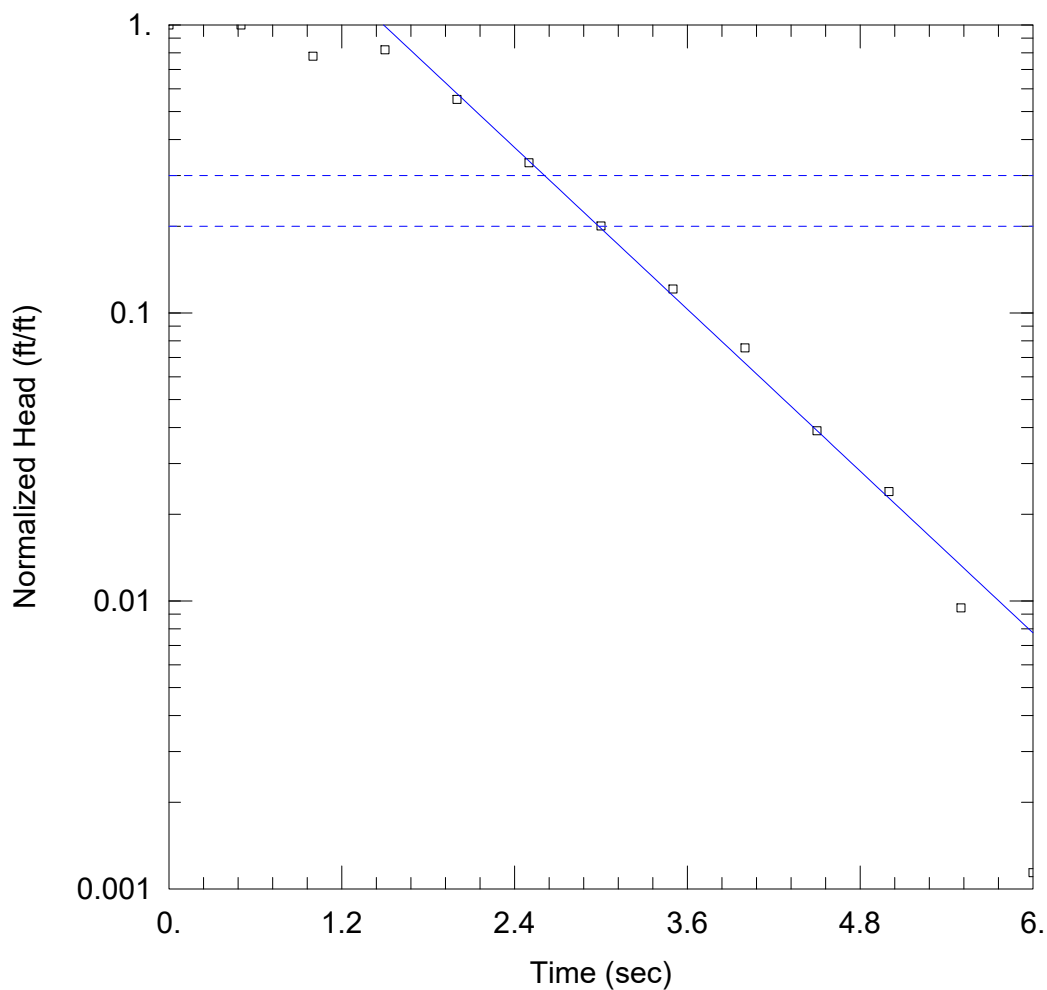
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 0.04104$ cm/sec

$y_0 = 2.77$ ft



MW-3 SLUG OUT (02)

Data Set: P:\...\MW3_SlugOut_02.aqt

Date: 09/13/24

Time: 11:45:45

PROJECT INFORMATION

Company: Tetra Tech

Client: 3M

Location: Menomonie, WI

Test Well: MW-3

Test Date: 5/24/24

AQUIFER DATA

Saturated Thickness: 10.66 ft

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW-3)

Initial Displacement: 1.406 ft

Static Water Column Height: 10.66 ft

Total Well Penetration Depth: 72. ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

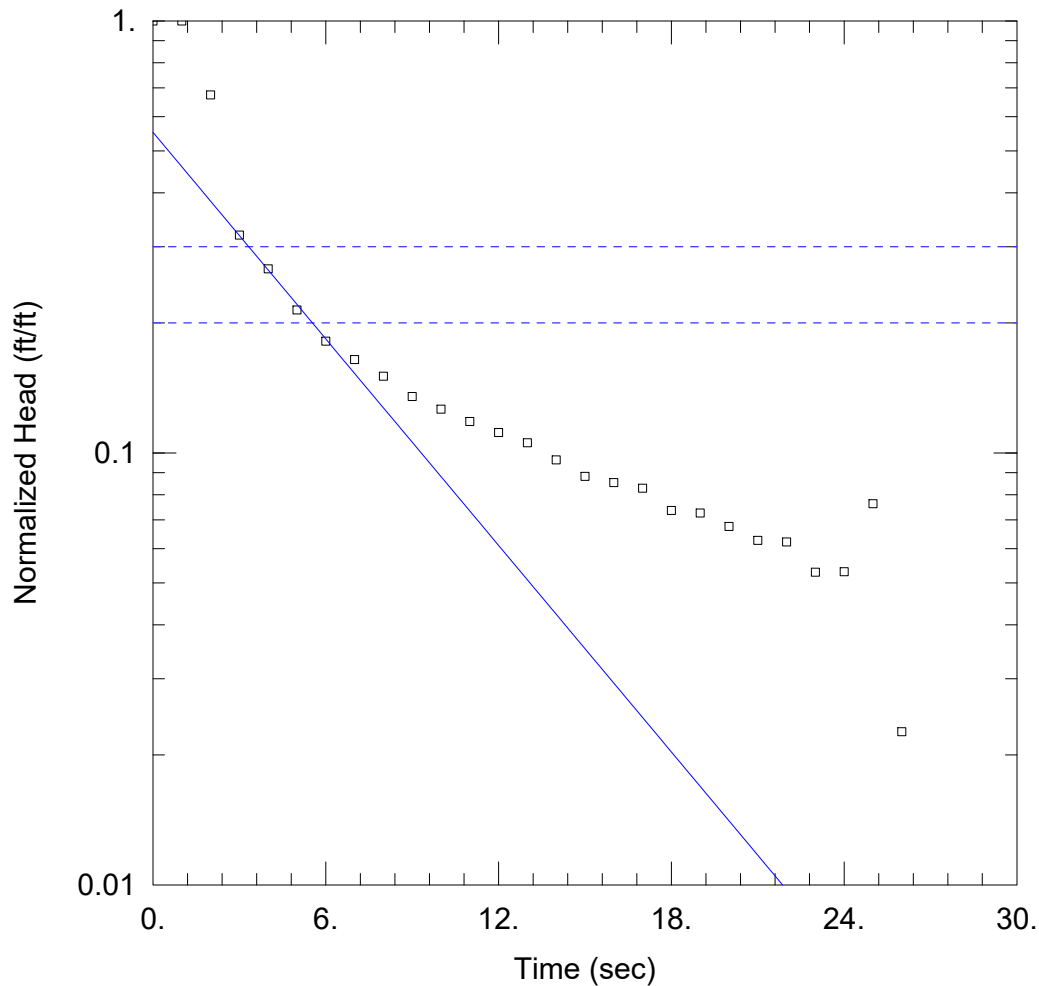
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 0.05233$ cm/sec

$y_0 = 7.005$ ft



MW-4 SLUG IN (02)

Data Set: P:\...\MW4_SlugIn_02.aqt

Date: 09/13/24

Time: 11:48:54

PROJECT INFORMATION

Company: Tetra Tech

Client: 3M

Location: Menomonie, WI

Test Well: MW-4

Test Date: 5/24/24

AQUIFER DATA

Saturated Thickness: 6.62 ft

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW-4)

Initial Displacement: 0.7026 ft

Static Water Column Height: 6.62 ft

Total Well Penetration Depth: 74.01 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

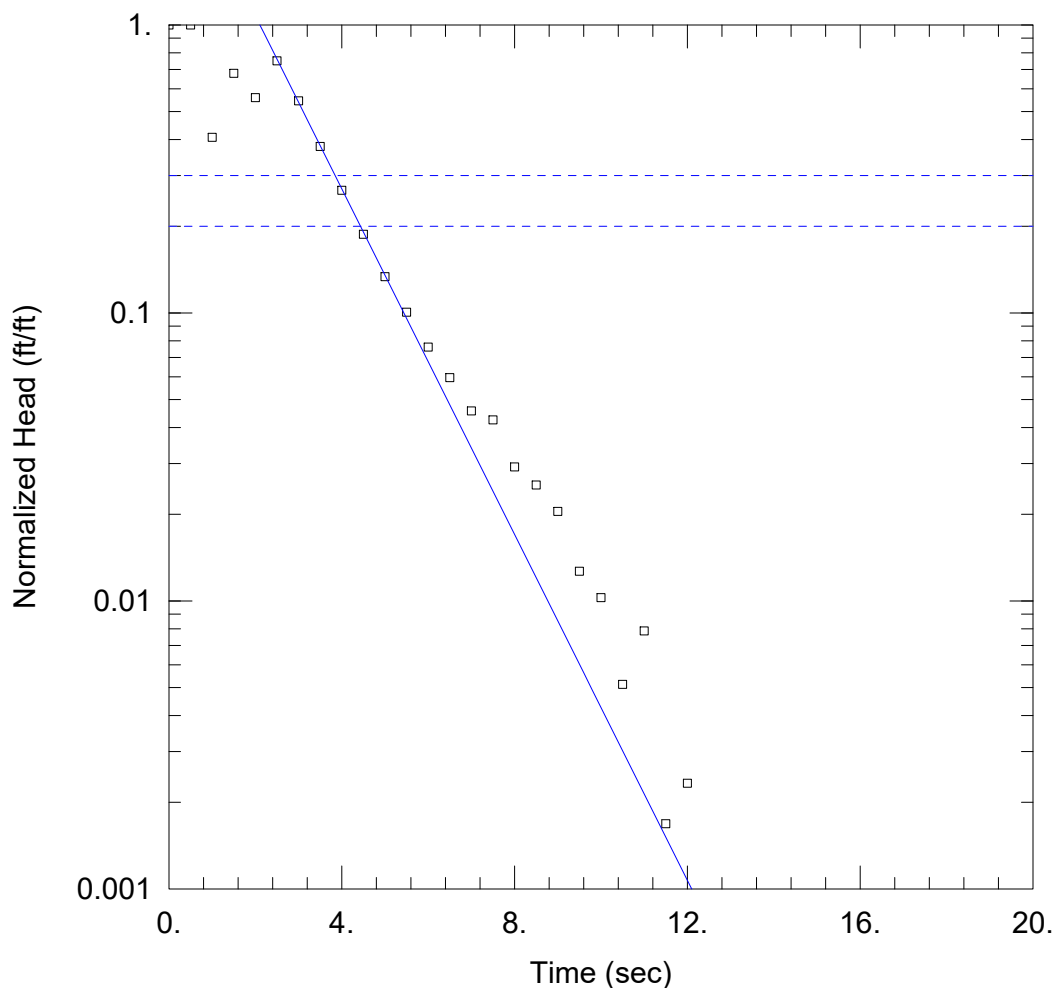
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 0.01318$ cm/sec

$y_0 = 0.388$ ft



MW-4 SLUG-OUT

Data Set: P:\...\MW4_SlugOut.aqt

Date: 09/13/24

Time: 11:50:41

PROJECT INFORMATION

Company: Tetra Tech

Client: 3M

Location: Menomonie, WI

Test Well: MW-4

Test Date: 5/24/24

AQUIFER DATA

Saturated Thickness: 6.62 ft

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW-4)

Initial Displacement: 1.246 ft

Static Water Column Height: 6.62 ft

Total Well Penetration Depth: 74.01 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.083 ft

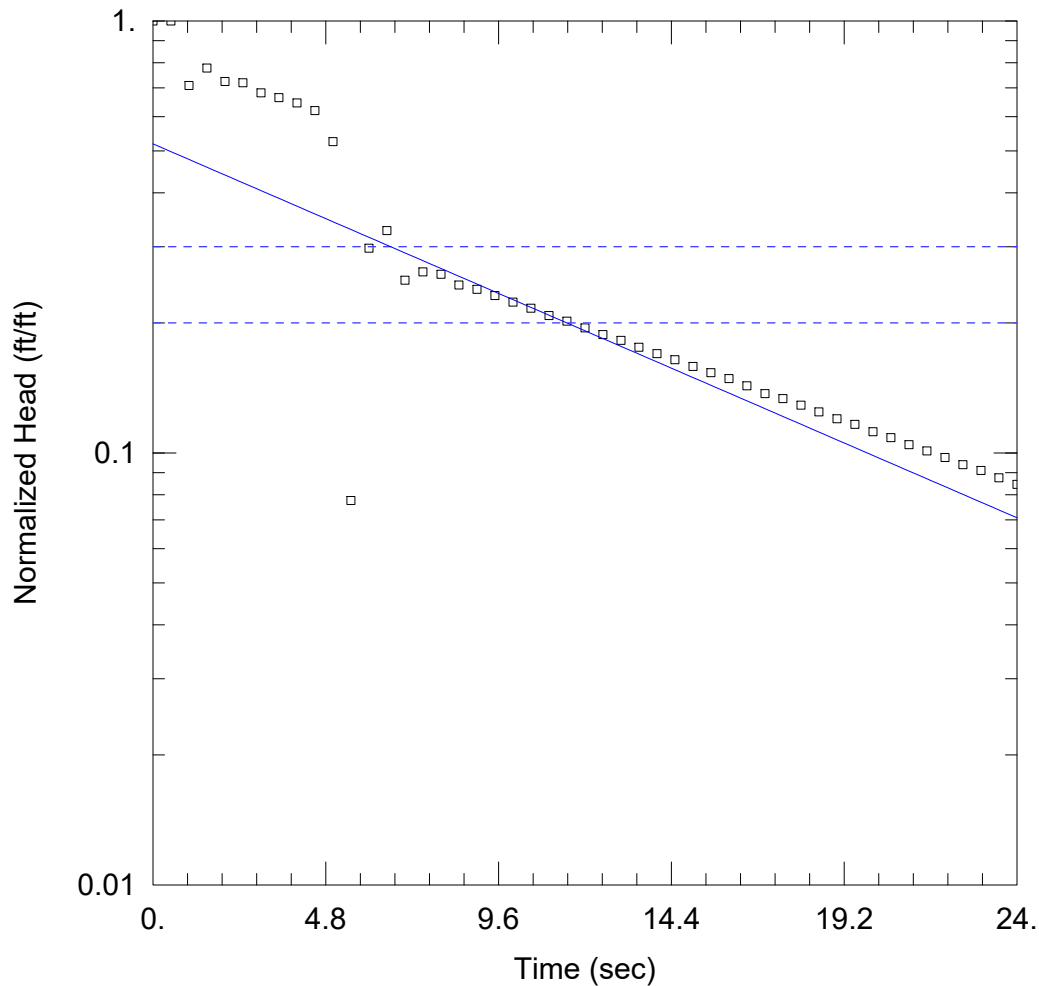
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 0.04964$ cm/sec

$y_0 = 5.333$ ft



WELL TEST ANALYSIS

Data Set: P:\...\MW4D_SlugIn.aqt
 Date: 09/13/24

Time: 11:54:48

PROJECT INFORMATION

Company: Tetra Tech
 Client: 3M
 Location: Menomonie, WI
 Test Well: MW-4D
 Test Date: 5/24/24

AQUIFER DATA

Saturated Thickness: 35.21 ft

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW-4D)

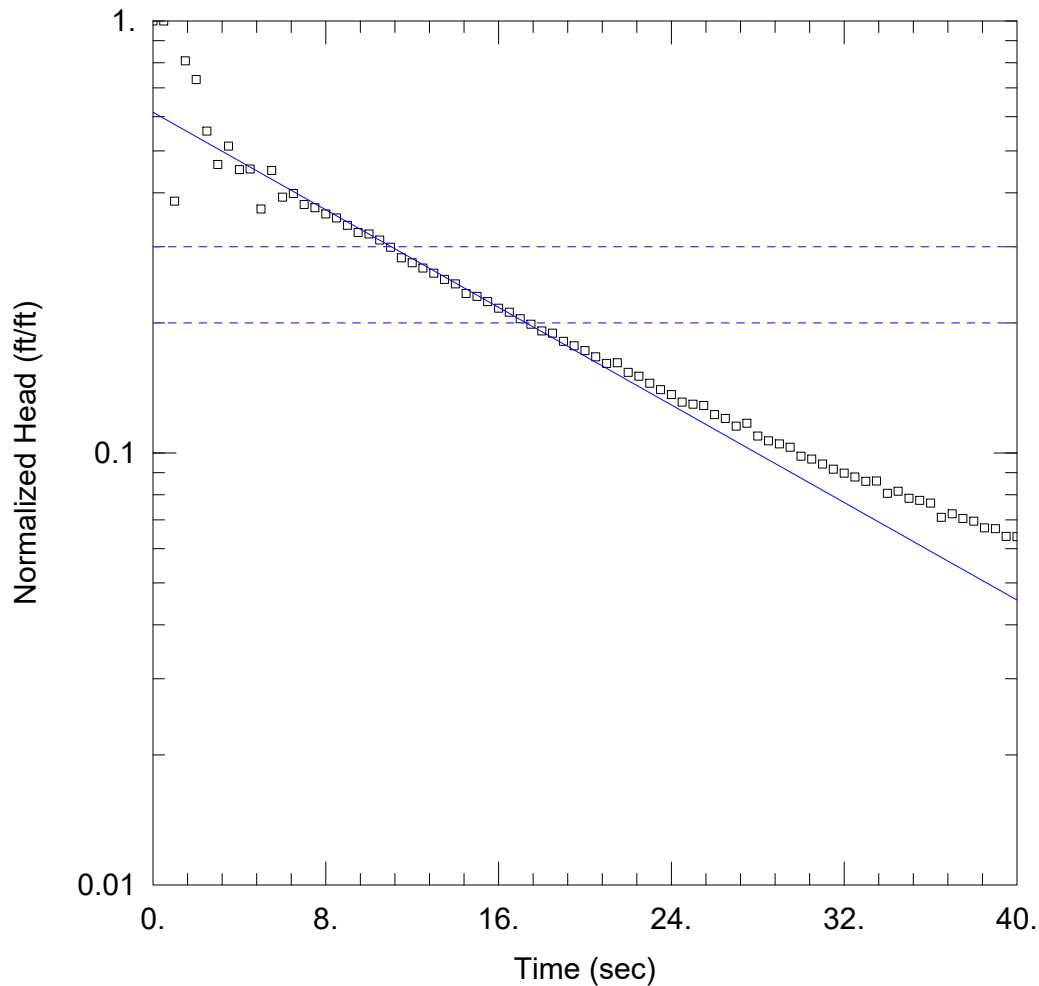
Initial Displacement: 6.428 ft
 Total Well Penetration Depth: 102.7 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 35.21 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.004199$ cm/sec

Solution Method: Bouwer-Rice
 $y_0 = 3.338$ ft



MW-4D SLUG OUT

Data Set: P:\...\MW4D_SlugOut.aqt
 Date: 09/13/24

Time: 11:56:03

PROJECT INFORMATION

Company: Tetra Tech
 Client: 3M
 Location: Menomonie, WI
 Test Well: MW-4D
 Test Date: 5/24/24

AQUIFER DATA

Saturated Thickness: 35.21 ft

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW-4D)

Initial Displacement: 6.768 ft
 Total Well Penetration Depth: 102.7 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 35.21 ft
 Screen Length: 10. ft
 Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
 $K = 0.003287$ cm/sec

Solution Method: Bouwer-Rice
 $y_0 = 4.159$ ft

Appendix E

May 2024 Laboratory Analytical Report



August 06, 2024

Amanda Albrecht
3M Environmental
3M Center, 260-05-N-17
Saint Paul, MN 551441000

RE: Project: E24-0277 3M Menomonie GW PFAS-Revised Report
Pace Project No.: 10694182

Dear Amanda Albrecht:

Enclosed are the analytical results for sample(s) received by the laboratory on May 23, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

This report was revised on August 6, 2024 to add QC qualifiers and also revised on August 6, 2024, to correct a typographical error.

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

Sincerely,

Carolynne Trout

Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures

cc: 3M Environmental Laboratory, 3M Environmental



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

DoD Certification via A2LA #: 2926.01

EPA Region 8 Tribal Water Systems+Wyoming DW

Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

ISO/IEC 17025 Certification via A2LA #: 2926.01

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification via A2LA #: 2926.01

USDA Permit #: P330-19-00208

REPORT OF LABORATORY ANALYSIS

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**SAMPLE SUMMARY**

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10694182001	MEWI-GW-MW3-0-240522	Water	05/22/24 14:50	05/23/24 18:00
10694182002	MEWI-GW-MW3-DB-240522	Water	05/22/24 14:55	05/23/24 18:00
10694182003	MEWI-GW-MW5-0-240523	Water	05/23/24 08:05	05/23/24 18:00
10694182004	MEWI-GW-MW8-0-240523	Water	05/23/24 10:00	05/23/24 18:00
10694182005	MEWI-GW-MW9-0-240522	Water	05/22/24 12:45	05/23/24 18:00
10694182006	MEWI-GW-MW10-0-240523	Water	05/23/24 13:25	05/23/24 18:00
10694182007	MEWI-GW-MW11-0-240523	Water	05/23/24 11:20	05/23/24 18:00
10694182008	MEWI-GW-MW12-0-240522	Water	05/22/24 10:20	05/23/24 18:00
10694182009	MEWI-GW-MW4D-0-240522	Water	05/22/24 16:15	05/23/24 18:00
10694182010	MEWI-GW-MW5D-0-240523	Water	05/23/24 08:15	05/23/24 18:00
10694182011	MEWI-GW-MW9D-0-240522	Water	05/22/24 12:40	05/23/24 18:00
10694182012	MEWI-GW-MW12D-0-240522	Water	05/22/24 10:30	05/23/24 18:00
10694182013	MEWI-GW-PZ1-0-240523	Water	05/23/24 09:40	05/23/24 18:00
10694182014	MEWI-GW-PZ2-0-240523	Water	05/23/24 12:55	05/23/24 18:00
10694182015	MEWI-GW-PZ3-0-240523	Water	05/23/24 13:10	05/23/24 18:00
10694182016	MEWI-GW-PZ3-DB-240523	Water	05/23/24 13:10	05/23/24 18:00
10694182017	MEWI-GW-PZ4-0-240523	Water	05/23/24 13:35	05/23/24 18:00
10694182018	MEWI-GW-PZ5-0-240523	Water	05/23/24 13:50	05/23/24 18:00
10694182019	MEWI-GW-PZ6-0-240523	Water	05/23/24 14:00	05/23/24 18:00
10694182020	MEWI-GW-PZ7-0-240523	Water	05/23/24 14:15	05/23/24 18:00
10694182021	MEWI-GW-PZ8-0-240523	Water	05/23/24 15:15	05/23/24 18:00
10694182022	MEWI-GW-PZ9-0-240523	Water	05/23/24 15:25	05/23/24 18:00
10694182023	MEWI-SW-CREEK01-0-240523	Water	05/23/24 14:10	05/23/24 18:00
10694182024	MEWI-SW-CREEK03-DB-240523	Water	05/23/24 15:05	05/23/24 18:00
10694182025	MEWI-SW-CREEK02-0-240523	Water	05/23/24 14:25	05/23/24 18:00
10694182026	MEWI-SW-CREEK03-0-240523	Water	05/23/24 15:00	05/23/24 18:00
10694182027	MEWI-SW-CREEK04-0-240523	Water	05/23/24 14:45	05/23/24 18:00
10694182028	MEWI-GW-PZ0-0-240523	Water	05/23/24 09:25	05/23/24 18:00
10694182029	MEWI-GW-PZ10-0-240523	Water	05/23/24 14:30	05/23/24 18:00
10694182030	MEWI-W-FB1-FB-240523	Water	05/23/24 09:25	05/23/24 18:00
10694182031	MEWI-W-EB1-EB-240523	Water	05/23/24 09:20	05/23/24 18:00
10694182032	MEWI-W-TB1-TB-240523	Water	05/23/24 00:00	05/23/24 18:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10694182001	MEWI-GW-MW3-0-240522	ENV-SOP-MIN4-0178	MJL	58	PASI-M
10694182002	MEWI-GW-MW3-DB-240522	ENV-SOP-MIN4-0178	MJL	58	PASI-M
10694182003	MEWI-GW-MW5-0-240523	ENV-SOP-MIN4-0178	MJL	58	PASI-M
10694182004	MEWI-GW-MW8-0-240523	ENV-SOP-MIN4-0178	MJL	58	PASI-M
10694182005	MEWI-GW-MW9-0-240522	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182006	MEWI-GW-MW10-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182007	MEWI-GW-MW11-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182008	MEWI-GW-MW12-0-240522	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182009	MEWI-GW-MW4D-0-240522	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182010	MEWI-GW-MW5D-0-240523	ENV-SOP-MIN4-0178	MJL	58	PASI-M
10694182011	MEWI-GW-MW9D-0-240522	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182012	MEWI-GW-MW12D-0-240522	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182013	MEWI-GW-PZ1-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182014	MEWI-GW-PZ2-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182015	MEWI-GW-PZ3-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182016	MEWI-GW-PZ3-DB-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182017	MEWI-GW-PZ4-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182018	MEWI-GW-PZ5-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182019	MEWI-GW-PZ6-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182020	MEWI-GW-PZ7-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182021	MEWI-GW-PZ8-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182022	MEWI-GW-PZ9-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182023	MEWI-SW-CREEK01-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182024	MEWI-SW-CREEK03-DB-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182025	MEWI-SW-CREEK02-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182026	MEWI-SW-CREEK03-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182027	MEWI-SW-CREEK04-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182028	MEWI-GW-PZ0-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182029	MEWI-GW-PZ10-0-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182030	MEWI-W-FB1-FB-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182031	MEWI-W-EB1-EB-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M
10694182032	MEWI-W-TB1-TB-240523	ENV-SOP-MIN4-0178	NBH	58	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10694182001	MEWI-GW-MW3-0-240522					
ENV-SOP-MIN4-0178	PFBS	2.5	ng/L	1.7	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFHxA	2.2	ng/L	1.9	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFBA	3.9	ng/L	1.9	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFHpS	4.5	ng/L	1.8	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFPeS	2.4	ng/L	1.8	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFHxS	66.6	ng/L	1.7	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFOS	134	ng/L	1.8	05/31/24 09:57	
ENV-SOP-MIN4-0178	PFOA	11.5	ng/L	1.9	05/31/24 09:57	
10694182002	MEWI-GW-MW3-DB-240522					
ENV-SOP-MIN4-0178	PFBS	2.6	ng/L	1.7	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFHxA	2.1	ng/L	2.0	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFBA	3.9	ng/L	2.0	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFHpS	4.2	ng/L	1.9	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFPeS	2.3	ng/L	1.9	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFHxS	66.8	ng/L	1.8	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFOS	132	ng/L	1.8	05/31/24 10:04	
ENV-SOP-MIN4-0178	PFOA	10.8	ng/L	2.0	05/31/24 10:04	
10694182003	MEWI-GW-MW5-0-240523					
ENV-SOP-MIN4-0178	6:2 FTS	2.2	ng/L	1.9	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFBS	3.4	ng/L	1.7	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFHxA	2.8	ng/L	2.0	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFBA	8.9	ng/L	2.0	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFPeS	2.3	ng/L	1.8	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFHxS	35.8	ng/L	1.8	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFOS	37.3	ng/L	1.8	05/31/24 10:11	
ENV-SOP-MIN4-0178	PFOA	3.8	ng/L	2.0	05/31/24 10:11	
10694182004	MEWI-GW-MW8-0-240523					
ENV-SOP-MIN4-0178	6:2 FTS	7.2	ng/L	1.9	05/31/24 10:18	
ENV-SOP-MIN4-0178	PFBS	2.4	ng/L	1.8	05/31/24 10:18	
ENV-SOP-MIN4-0178	PFBA	8.5	ng/L	2.0	05/31/24 10:18	
ENV-SOP-MIN4-0178	PFHxS	15.9	ng/L	1.8	05/31/24 10:18	
10694182005	MEWI-GW-MW9-0-240522					
ENV-SOP-MIN4-0178	PFBA	5.4	ng/L	2.0	06/13/24 16:11	
ENV-SOP-MIN4-0178	PFHxS	7.4	ng/L	1.8	06/13/24 16:11	
10694182006	MEWI-GW-MW10-0-240523					
ENV-SOP-MIN4-0178	PFBS	2.2	ng/L	1.8	06/13/24 16:18	
ENV-SOP-MIN4-0178	PFBA	31.1	ng/L	2.1	06/13/24 16:18	
ENV-SOP-MIN4-0178	PFPeS	2.3	ng/L	1.9	06/13/24 16:18	
ENV-SOP-MIN4-0178	PFHxS	12.6	ng/L	1.9	06/13/24 16:18	
10694182007	MEWI-GW-MW11-0-240523					
ENV-SOP-MIN4-0178	PFBA	7.0	ng/L	2.0	06/13/24 16:50	
10694182008	MEWI-GW-MW12-0-240522					
ENV-SOP-MIN4-0178	PFBA	2.7	ng/L	2.0	06/13/24 16:58	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10694182009	MEWI-GW-MW4D-0-240522					
ENV-SOP-MIN4-0178	PFBA	10.6	ng/L	2.1	06/13/24 17:05	
ENV-SOP-MIN4-0178	PFHxS	3.7	ng/L	1.9	06/13/24 17:05	
10694182011	MEWI-GW-MW9D-0-240522					
ENV-SOP-MIN4-0178	PFBS	3.3	ng/L	1.8	06/13/24 17:12	
ENV-SOP-MIN4-0178	PFBA	7.2	ng/L	2.1	06/13/24 17:12	
ENV-SOP-MIN4-0178	PFHxS	5.4	ng/L	1.9	06/13/24 17:12	
10694182012	MEWI-GW-MW12D-0-240522					
ENV-SOP-MIN4-0178	PFBA	4.7	ng/L	1.9	06/13/24 17:19	
10694182013	MEWI-GW-PZ1-0-240523					
ENV-SOP-MIN4-0178	6:2 FTS	27.4	ng/L	19.1	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFBS	45.7	ng/L	17.8	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFHxA	139	ng/L	20.1	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFBA	54.7	ng/L	20.1	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFPeA	27.8	ng/L	20.1	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFPeS	150	ng/L	18.9	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFHpA	27.7	ng/L	20.1	06/13/24 17:27	
ENV-SOP-MIN4-0178	PFHxS	4040	ng/L	91.5	06/14/24 13:05	
ENV-SOP-MIN4-0178	PFOA	52.6	ng/L	20.1	06/13/24 17:27	
10694182014	MEWI-GW-PZ2-0-240523					
ENV-SOP-MIN4-0178	PFBS	31.9	ng/L	18.0	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFHxA	132	ng/L	20.3	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFBA	56.5	ng/L	20.3	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFHpS	60.9	ng/L	19.3	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFPeA	40.1	ng/L	20.3	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFPeS	112	ng/L	19.1	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFHpA	27.7	ng/L	20.3	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFHxS	1700	ng/L	18.5	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFOS	673	ng/L	18.8	06/13/24 17:34	
ENV-SOP-MIN4-0178	PFOA	166	ng/L	20.3	06/13/24 17:34	
10694182015	MEWI-GW-PZ3-0-240523					
ENV-SOP-MIN4-0178	PFBS	111	ng/L	17.8	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFHxA	225	ng/L	20.1	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFBA	62.9	ng/L	20.1	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFHpS	50.0	ng/L	19.1	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFPeA	52.7	ng/L	20.1	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFPeS	275	ng/L	18.9	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFHpA	43.0	ng/L	20.1	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFHxS	1080	ng/L	18.3	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFOS	1610	ng/L	18.6	06/13/24 17:48	
ENV-SOP-MIN4-0178	PFOA	89.4	ng/L	20.1	06/13/24 17:48	
10694182016	MEWI-GW-PZ3-DB-240523					
ENV-SOP-MIN4-0178	PFBS	121	ng/L	17.3	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFHxA	290	ng/L	19.6	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFBA	131	ng/L	19.6	06/13/24 17:55	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10694182016	MEWI-GW-PZ3-DB-240523					
ENV-SOP-MIN4-0178	PFHpS	70.2	ng/L	18.6	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFPeA	76.8	ng/L	19.6	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFPeS	264	ng/L	18.4	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFHpA	55.5	ng/L	19.6	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFHxS	1220	ng/L	17.8	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFOS	1580	ng/L	18.1	06/13/24 17:55	
ENV-SOP-MIN4-0178	PFOA	184	ng/L	19.6	06/13/24 17:55	
10694182017	MEWI-GW-PZ4-0-240523					
ENV-SOP-MIN4-0178	6:2 FTS	22.7	ng/L	18.6	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFHxA	34.0	ng/L	19.6	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFBA	55.9	ng/L	19.6	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFHpS	119	ng/L	18.6	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFPeS	27.1	ng/L	18.4	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFHxS	511	ng/L	17.8	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFOS	261	ng/L	18.1	06/13/24 18:03	
ENV-SOP-MIN4-0178	PFOA	61.9	ng/L	19.6	06/13/24 18:03	
10694182018	MEWI-GW-PZ5-0-240523					
ENV-SOP-MIN4-0178	PFBA	116	ng/L	34.1	06/13/24 18:10	
ENV-SOP-MIN4-0178	PFHxS	54.6	ng/L	31.0	06/13/24 18:10	
ENV-SOP-MIN4-0178	PFOS	34.9	ng/L	31.5	06/13/24 18:10	
10694182019	MEWI-GW-PZ6-0-240523					
ENV-SOP-MIN4-0178	6:2 FTS	37.7	ng/L	34.5	06/13/24 18:17	
ENV-SOP-MIN4-0178	PFBA	99.6	ng/L	36.3	06/13/24 18:17	
ENV-SOP-MIN4-0178	PFHxS	50.3	ng/L	33.0	06/13/24 18:17	
10694182020	MEWI-GW-PZ7-0-240523					
ENV-SOP-MIN4-0178	PFBA	43.8	ng/L	34.7	06/13/24 18:24	
10694182022	MEWI-GW-PZ9-0-240523					
ENV-SOP-MIN4-0178	6:2 FTS	35.7	ng/L	20.8	06/13/24 18:39	
ENV-SOP-MIN4-0178	PFBA	41.1	ng/L	21.8	06/13/24 18:39	
10694182023	MEWI-SW-CREEK01-0-240523					
ENV-SOP-MIN4-0178	PFBS	4.4	ng/L	1.7	06/13/24 18:46	
ENV-SOP-MIN4-0178	PFHxA	5.1	ng/L	1.9	06/13/24 18:46	
ENV-SOP-MIN4-0178	PFBA	8.4	ng/L	1.9	06/13/24 18:46	
ENV-SOP-MIN4-0178	PFPeS	6.6	ng/L	1.8	06/13/24 18:46	
ENV-SOP-MIN4-0178	PFHxS	86.3	ng/L	1.8	06/13/24 18:46	
ENV-SOP-MIN4-0178	PFOS	34.8	ng/L	1.8	06/13/24 18:46	
ENV-SOP-MIN4-0178	PFOA	6.5	ng/L	1.9	06/13/24 18:46	
10694182024	MEWI-SW-CREEK03-DB-240523					
ENV-SOP-MIN4-0178	PFBA	13.1	ng/L	4.0	06/13/24 18:53	
ENV-SOP-MIN4-0178	PFHxS	37.9	ng/L	3.6	06/13/24 18:53	
ENV-SOP-MIN4-0178	PFOS	39.7	ng/L	3.7	06/13/24 18:53	

REPORT OF LABORATORY ANALYSIS

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**SUMMARY OF DETECTION**

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10694182025	MEWI-SW-CREEK02-0-240523					
ENV-SOP-MIN4-0178	PFBA	6.9	ng/L	2.1	06/13/24 23:29	
ENV-SOP-MIN4-0178	PFHxS	25.1	ng/L	1.9	06/13/24 23:29	
ENV-SOP-MIN4-0178	PFOS	12.8	ng/L	1.9	06/13/24 23:29	
ENV-SOP-MIN4-0178	PFOA	2.4	ng/L	2.1	06/13/24 23:29	
10694182026	MEWI-SW-CREEK03-0-240523					
ENV-SOP-MIN4-0178	PFBA	12.0	ng/L	10.4	06/13/24 23:36	
ENV-SOP-MIN4-0178	PFHxS	38.1	ng/L	9.4	06/13/24 23:36	
ENV-SOP-MIN4-0178	PFOS	37.1	ng/L	9.6	06/13/24 23:36	
10694182027	MEWI-SW-CREEK04-0-240523					
ENV-SOP-MIN4-0178	PFBS	2.3	ng/L	1.8	06/13/24 23:43	
ENV-SOP-MIN4-0178	PFBA	9.0	ng/L	2.0	06/13/24 23:43	
ENV-SOP-MIN4-0178	PFPeS	2.0	ng/L	1.9	06/13/24 23:43	
ENV-SOP-MIN4-0178	PFHxS	30.0	ng/L	1.8	06/13/24 23:43	
ENV-SOP-MIN4-0178	PFOS	9.2	ng/L	1.9	06/13/24 23:43	
ENV-SOP-MIN4-0178	PFOA	2.5	ng/L	2.0	06/13/24 23:43	
10694182028	MEWI-GW-PZ0-0-240523					
ENV-SOP-MIN4-0178	PFBA	10.2	ng/L	9.9	06/13/24 23:51	
ENV-SOP-MIN4-0178	PFHxS	15.2	ng/L	9.0	06/13/24 23:51	
10694182029	MEWI-GW-PZ10-0-240523					
ENV-SOP-MIN4-0178	PFBS	11.1	ng/L	8.6	06/13/24 23:58	
ENV-SOP-MIN4-0178	PFHxA	20.1	ng/L	9.7	06/13/24 23:58	
ENV-SOP-MIN4-0178	PFBA	32.8	ng/L	9.7	06/13/24 23:58	
ENV-SOP-MIN4-0178	PFPeS	18.6	ng/L	9.2	06/13/24 23:58	
ENV-SOP-MIN4-0178	PFHxS	361	ng/L	8.9	06/13/24 23:58	
ENV-SOP-MIN4-0178	PFOS	13.7	ng/L	9.0	06/13/24 23:58	
ENV-SOP-MIN4-0178	PFOA	33.0	ng/L	9.7	06/13/24 23:58	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Date: August 06, 2024

The quality system for Pace Analytical Services, LLC in Minneapolis, MN (Pace-MN) has been audited and was found to be in conformance with ISO/IEC 17025:2017 by an independent assessment (A2LA Certificate # 2926). The PFAS test results in non-drinking water for this project are not covered by this accreditation.

Pace-MN maintains accreditation with the state of Wisconsin for their isotope dilution analysis as defined in ENV-SOP-MIN4-0178 under certificate number 999407970. All of the test results for this project are covered by the Wisconsin accreditation.

MEWI-GW-MW5D-0-240523 (Lab ID: 10694182010)

- RX at 25 mls

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Method: ENV-SOP-MIN4-0178

Description: WI ID NPW

Client: 3M Environmental

Date: August 06, 2024

General Information:

32 samples were analyzed for ENV-SOP-MIN4-0178 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with ENV-SOP-MIN4-0178 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

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

QC Batch: 947068

S0: Surrogate recovery outside laboratory control limits.

- LCSD (Lab ID: 4955033)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-MW3-0-240522 (Lab ID: 10694182001)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-MW3-DB-240522 (Lab ID: 10694182002)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-MW8-0-240523 (Lab ID: 10694182004)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)

QC Batch: 950057

S0: Surrogate recovery outside laboratory control limits.

- MEWI-GW-MW4D-0-240522 (Lab ID: 10694182009)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-PZ2-0-240523 (Lab ID: 10694182014)
 - d3-NMeFOSA (S)

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PROJECT NARRATIVE

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Method: ENV-SOP-MIN4-0178

Description: WI ID NPW

Client: 3M Environmental

Date: August 06, 2024

QC Batch: 950057

S0: Surrogate recovery outside laboratory control limits.

- d5-NEtFOSA (S)
- MEWI-GW-PZ5-0-240523 (Lab ID: 10694182018)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-PZ7-0-240523 (Lab ID: 10694182020)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-PZ8-0-240523 (Lab ID: 10694182021)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-SW-CREEK01-0-240523 (Lab ID: 10694182023)
 - d5-NEtFOSA (S)

QC Batch: 950058

S0: Surrogate recovery outside laboratory control limits.

- LCSD (Lab ID: 4968878)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-GW-PZ0-0-240523 (Lab ID: 10694182028)
 - d5-NEtFOSA (S)
- MEWI-GW-PZ10-0-240523 (Lab ID: 10694182029)
 - 13C2PFHxDA (S)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d7-NMeFOSE (S)
 - d9-NEtFOSE (S)
- MEWI-SW-CREEK02-0-240523 (Lab ID: 10694182025)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-SW-CREEK03-0-240523 (Lab ID: 10694182026)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MEWI-SW-CREEK04-0-240523 (Lab ID: 10694182027)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d7-NMeFOSE (S)
 - d9-NEtFOSE (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

- MEWI-W-EB1-EB-240523 (Lab ID: 10694182031)
 - 13C28:2FTS (S)
- MEWI-W-FB1-FB-240523 (Lab ID: 10694182030)
 - 13C28:2FTS (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Method: ENV-SOP-MIN4-0178

Description: WI ID NPW

Client: 3M Environmental

Date: August 06, 2024

QC Batch: 951340

S0: Surrogate recovery outside laboratory control limits.

- BLANK (Lab ID: 4975499)
 - 13C2PFHxDA (S)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d9-NEtFOSE (S)
- LCS (Lab ID: 4975500)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- LCSD (Lab ID: 4975501)
 - 13C24:2FTS (S)
 - 13C26:2FTS (S)
 - 13C28:2FTS (S)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d7-NMeFOSE (S)
 - d9-NEtFOSE (S)

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 951340

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCSD (Lab ID: 4975501)
 - NEtFOSA

R1: RPD value was outside control limits.

- LCSD (Lab ID: 4975501)
 - NMeFOSA

Matrix Spikes:

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

Additional Comments:

Analyte Comments:

QC Batch: 947068

1M: All narrated results associated with this sample confirmed through secondary analysis.

- MEWI-GW-MW3-0-240522 (Lab ID: 10694182001)
 - 13C4-PFBA (S)

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PROJECT NARRATIVE

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Method: ENV-SOP-MIN4-0178

Description: WI ID NPW

Client: 3M Environmental

Date: August 06, 2024

Analyte Comments:

QC Batch: 947068

1M: All narrated results associated with this sample confirmed through secondary analysis.

- MEWI-GW-MW3-DB-240522 (Lab ID: 10694182002)
 - 13C4-PFBA (S)
- MEWI-GW-MW8-0-240523 (Lab ID: 10694182004)
 - 13C4-PFBA (S)

QC Batch: 950057

1M: All narrated results associated with this sample confirmed through secondary analysis.

- MEWI-GW-MW4D-0-240522 (Lab ID: 10694182009)
 - 13C4-PFBA (S)
- MEWI-GW-PZ2-0-240523 (Lab ID: 10694182014)
 - 13C4-PFBA (S)
- MEWI-GW-PZ5-0-240523 (Lab ID: 10694182018)
 - 13C4-PFBA (S)
- MEWI-GW-PZ7-0-240523 (Lab ID: 10694182020)
 - 13C4-PFBA (S)
- MEWI-GW-PZ8-0-240523 (Lab ID: 10694182021)
 - 13C4-PFBA (S)
- MEWI-SW-CREEK01-0-240523 (Lab ID: 10694182023)
 - 13C4-PFBA (S)

QC Batch: 950058

1M: All narrated results associated with this sample confirmed through secondary analysis.

- MEWI-GW-PZ0-0-240523 (Lab ID: 10694182028)
 - 13C4-PFBA (S)
- MEWI-GW-PZ10-0-240523 (Lab ID: 10694182029)
 - 13C4-PFBA (S)
- MEWI-SW-CREEK02-0-240523 (Lab ID: 10694182025)
 - 13C4-PFBA (S)
- MEWI-SW-CREEK03-0-240523 (Lab ID: 10694182026)
 - 13C4-PFBA (S)
- MEWI-SW-CREEK04-0-240523 (Lab ID: 10694182027)
 - 13C4-PFBA (S)
- MEWI-W-EB1-EB-240523 (Lab ID: 10694182031)
 - 13C4-PFBA (S)
- MEWI-W-FB1-FB-240523 (Lab ID: 10694182030)
 - 13C4-PFBA (S)

QC Batch: 951340

1M: All narrated results associated with this sample confirmed through secondary analysis.

- MEWI-GW-MW5D-0-240523 (Lab ID: 10694182010)
 - 13C4-PFBA (S)

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW3-0-240522		Lab ID: 10694182001		Collected: 05/22/24 14:50		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 263.3904 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
11CI-PF3OUdS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	763051-92-9		
4:2 FTS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	757124-72-4		
6:2 FTS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	27619-97-2		
8:2 FTS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	756426-58-1		
ADONA	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	919005-14-4		
HFPO-DA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	13252-13-6		
NEtFOSAA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	2991-50-6		
NEtFOSA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	4151-50-2		
NEtFOSE	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	1691-99-2		
NMeFOSAA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	2355-31-9		
NMeFOSA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	31506-32-8		
NMeFOSE	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	24448-09-7		
PFBS	2.5	ng/L	1.7	1	05/29/24 14:13	05/31/24 09:57	375-73-5		
PFDA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	335-76-2		
PFHxA	2.2	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	307-24-4		
PFBA	3.9	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	375-22-4		
PFDS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	335-77-3		
PFDoS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	79780-39-5		
PFHpS	4.5	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	375-92-8		
PFNS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	68259-12-1		
PFOSA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	754-91-6		
PFPeA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	2706-90-3		
PFPeS	2.4	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	2706-91-4		
PFDoA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	307-55-1		
PFHpA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	375-85-9		
PFHxS	66.6	ng/L	1.7	1	05/29/24 14:13	05/31/24 09:57	355-46-4		
PFNA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	375-95-1		
PFOS	134	ng/L	1.8	1	05/29/24 14:13	05/31/24 09:57	1763-23-1		
PFOA	11.5	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	335-67-1		
PFTeDA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	376-06-7		
PFTTrDA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	72629-94-8		
PFUnA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 09:57	2058-94-8		
Surrogates									
13C4-PFBA (S)	72	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			1M
13C5-PFPeA (S)	76	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C3-PFBS (S)	85	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C24:2FTS (S)	36	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C3HFPO-DA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C4-PFHpA (S)	87	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C3-PFHxS (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C26:2FTS (S)	41	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C8-PFOA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C8-PFOS (S)	84	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			
13C9-PFNA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 09:57			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW3-0-240522 Lab ID: 10694182001 Collected: 05/22/24 14:50 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 263.3904 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	98	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
13C28:2FTS (S)	81	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
d3-MeFOSAA (S)	63	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
13C7-PFUDa (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
13C8-PFOSA (S)	66	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
d5-EtFOSAA (S)	73	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
13C2-PFDoA (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
d3-NMeFOSA (S)	3	%.	10-150	1	05/29/24 14:13	05/31/24 09:57		S0
d7-NMeFOSE (S)	50	%.	10-150	1	05/29/24 14:13	05/31/24 09:57		
13C2-PFTA (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
d9-NEtFOSE (S)	47	%.	10-150	1	05/29/24 14:13	05/31/24 09:57		
d5-NEtFOSA (S)	2	%.	10-150	1	05/29/24 14:13	05/31/24 09:57		S0
13C2PFHxDA (S)	73	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		
13C5-PFHxA (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 09:57		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW3-DB-240522 Lab ID: 10694182002 Collected: 05/22/24 14:55 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 253.324 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	763051-92-9	
4:2 FTS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:04	757124-72-4	
6:2 FTS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	27619-97-2	
8:2 FTS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	39108-34-4	
9CI-PF3ONS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:04	756426-58-1	
ADONA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	919005-14-4	
HFPO-DA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	13252-13-6	
NEtFOSAA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	2991-50-6	
NEtFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	4151-50-2	
NEtFOSE	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	1691-99-2	
NMeFOSAA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	2355-31-9	
NMeFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	31506-32-8	
NMeFOSE	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	24448-09-7	
PFBS	2.6	ng/L	1.7	1	05/29/24 14:13	05/31/24 10:04	375-73-5	
PFDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	335-76-2	
PFHxA	2.1	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	307-24-4	
PFBA	3.9	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	375-22-4	
PFDS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	335-77-3	
PFDoS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	79780-39-5	
PFHpS	4.2	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	375-92-8	
PFNS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	68259-12-1	
PFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	754-91-6	
PFPeA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	2706-90-3	
PFPeS	2.3	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:04	2706-91-4	
PFDoA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	307-55-1	
PFHpA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	375-85-9	
PFHxS	66.8	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:04	355-46-4	
PFNA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	375-95-1	
PFOS	132	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:04	1763-23-1	
PFOA	10.8	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	335-67-1	
PFTeDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	376-06-7	
PFTTrDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	72629-94-8	
PFUnA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:04	2058-94-8	
Surrogates								
13C4-PFBA (S)	73	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		1M
13C5-PFPeA (S)	77	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C3-PFBS (S)	84	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C24:2FTS (S)	35	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C3HFPO-DA (S)	85	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C4-PFHpA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C3-PFHxS (S)	87	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C26:2FTS (S)	42	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C8-PFOA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C8-PFOS (S)	87	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C9-PFNA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW3-DB-240522 Lab ID: 10694182002 Collected: 05/22/24 14:55 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 253.324 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	93	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C28:2FTS (S)	67	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
d3-MeFOSAA (S)	67	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C7-PFUDa (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C8-PFOSA (S)	72	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
d5-EtFOSAA (S)	73	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C2-PFDoA (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
d3-NMeFOSA (S)	8	%.	10-150	1	05/29/24 14:13	05/31/24 10:04		S0
d7-NMeFOSE (S)	61	%.	10-150	1	05/29/24 14:13	05/31/24 10:04		
13C2-PFTA (S)	85	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
d9-NEtFOSE (S)	55	%.	10-150	1	05/29/24 14:13	05/31/24 10:04		
d5-NEtFOSA (S)	6	%.	10-150	1	05/29/24 14:13	05/31/24 10:04		S0
13C2PFHxDA (S)	73	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		
13C5-PFHxA (S)	87	%.	25-150	1	05/29/24 14:13	05/31/24 10:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW5-0-240523 Lab ID: 10694182003 Collected: 05/23/24 08:05 Received: 05/23/24 18:00 Matrix: Water								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 255.8688 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	763051-92-9	
4:2 FTS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	757124-72-4	
6:2 FTS	2.2	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:11	27619-97-2	
8:2 FTS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:11	39108-34-4	
9CI-PF3ONS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	756426-58-1	
ADONA	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	919005-14-4	
HFPO-DA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	13252-13-6	
NEtFOSAA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	2991-50-6	
NEtFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	4151-50-2	
NEtFOSE	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	1691-99-2	
NMeFOSAA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	2355-31-9	
NMeFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	31506-32-8	
NMeFOSE	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	24448-09-7	
PFBS	3.4	ng/L	1.7	1	05/29/24 14:13	05/31/24 10:11	375-73-5	
PFDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	335-76-2	
PFHxA	2.8	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	307-24-4	
PFBA	8.9	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	375-22-4	
PFDS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:11	335-77-3	
PFDoS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:11	79780-39-5	
PFHpS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:11	375-92-8	
PFNS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:11	68259-12-1	
PFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	754-91-6	
PFPeA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	2706-90-3	
PFPeS	2.3	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	2706-91-4	
PFDoA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	307-55-1	
PFHpA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	375-85-9	
PFHxS	35.8	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	355-46-4	
PFNA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	375-95-1	
PFOS	37.3	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:11	1763-23-1	
PFOA	3.8	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	335-67-1	
PFTeDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	376-06-7	
PFTrDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	72629-94-8	
PFUnA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:11	2058-94-8	
Surrogates								
13C4-PFBA (S)	72	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C5-PFPeA (S)	72	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C3-PFBS (S)	83	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C24:2FTS (S)	46	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C3HFPO-DA (S)	80	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C4-PFHpA (S)	85	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C3-PFHxS (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C26:2FTS (S)	51	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C8-PFOA (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C8-PFOS (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C9-PFNA (S)	90	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW5-0-240523 Lab ID: 10694182003 Collected: 05/23/24 08:05 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 255.8688 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	95	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C28:2FTS (S)	73	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
d3-MeFOSAA (S)	65	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C7-PFUDa (S)	94	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C8-PFOSA (S)	69	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
d5-EtFOSAA (S)	77	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C2-PFDoA (S)	98	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
d3-NMeFOSA (S)	55	%.	10-150	1	05/29/24 14:13	05/31/24 10:11		
d7-NMeFOSE (S)	79	%.	10-150	1	05/29/24 14:13	05/31/24 10:11		
13C2-PFTA (S)	101	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
d9-NEtFOSE (S)	67	%.	10-150	1	05/29/24 14:13	05/31/24 10:11		
d5-NEtFOSA (S)	53	%.	10-150	1	05/29/24 14:13	05/31/24 10:11		
13C2PFHxDA (S)	84	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		
13C5-PFHxA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 10:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW8-0-240523		Lab ID: 10694182004		Collected: 05/23/24 10:00		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 250.9017 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
11CI-PF3OUdS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	763051-92-9		
4:2 FTS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	757124-72-4		
6:2 FTS	7.2	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	27619-97-2		
8:2 FTS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	756426-58-1		
ADONA	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	24448-09-7		
PFBS	2.4	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:18	375-73-5		
PFDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	335-76-2		
PFHxA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	307-24-4		
PFBA	8.5	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	375-22-4		
PFDS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	335-77-3		
PFDoS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	79780-39-5		
PFHpS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	375-92-8		
PFNS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	68259-12-1		
PFOSA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	754-91-6		
PFPeA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	2706-90-3		
PFPeS	ND	ng/L	1.9	1	05/29/24 14:13	05/31/24 10:18	2706-91-4		
PFDoA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	307-55-1		
PFHpA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	375-85-9		
PFHxS	15.9	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:18	355-46-4		
PFNA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	375-95-1		
PFOS	ND	ng/L	1.8	1	05/29/24 14:13	05/31/24 10:18	1763-23-1		
PFOA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	335-67-1		
PFTeDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	376-06-7		
PFTTrDA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	72629-94-8		
PFUnA	ND	ng/L	2.0	1	05/29/24 14:13	05/31/24 10:18	2058-94-8		
Surrogates									
13C4-PFBA (S)	72	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			1M
13C5-PFPeA (S)	75	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C3-PFBS (S)	83	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C24:2FTS (S)	51	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C3HFPO-DA (S)	83	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C4-PFHpA (S)	86	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C3-PFHxS (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C26:2FTS (S)	50	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C8-PFOA (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C8-PFOS (S)	88	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			
13C9-PFNA (S)	90	%.	25-150	1	05/29/24 14:13	05/31/24 10:18			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW8-0-240523 Lab ID: 10694182004 Collected: 05/23/24 10:00 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 250.9017 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	89	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
13C28:2FTS (S)	68	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
d3-MeFOSAA (S)	68	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
13C7-PFUDa (S)	93	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
13C8-PFOSA (S)	64	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
d5-EtFOSAA (S)	82	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
13C2-PFDoA (S)	96	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
d3-NMeFOSA (S)	3	%.	10-150	1	05/29/24 14:13	05/31/24 10:18		S0
d7-NMeFOSE (S)	39	%.	10-150	1	05/29/24 14:13	05/31/24 10:18		
13C2-PFTA (S)	87	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
d9-NEtFOSE (S)	33	%.	10-150	1	05/29/24 14:13	05/31/24 10:18		
d5-NEtFOSA (S)	2	%.	10-150	1	05/29/24 14:13	05/31/24 10:18		S0
13C2PFHxDA (S)	54	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		
13C5-PFHxA (S)	87	%.	25-150	1	05/29/24 14:13	05/31/24 10:18		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW9-0-240522		Lab ID: 10694182005		Collected: 05/22/24 12:45		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 246.81 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	763051-92-9		
4:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	757124-72-4		
6:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	27619-97-2		
8:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	756426-58-1		
ADONA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	24448-09-7		
PFBS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:11	375-73-5		
PFDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	335-76-2		
PFHxA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	307-24-4		
PFBA	5.4	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	375-22-4		
PFDS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	335-77-3		
PFDoS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	79780-39-5		
PFHpS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	375-92-8		
PFNS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	68259-12-1		
PFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	754-91-6		
PFPeA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	2706-90-3		
PFPeS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	2706-91-4		
PFDoA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	307-55-1		
PFHpA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	375-85-9		
PFHxS	7.4	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:11	355-46-4		
PFNA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	375-95-1		
PFOS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:11	1763-23-1		
PFOA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	335-67-1		
PFTeDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	376-06-7		
PFTTrDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	72629-94-8		
PFUnA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:11	2058-94-8		
Surrogates									
13C4-PFBA (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C5-PFPeA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C3-PFBS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C24:2FTS (S)	55	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C3HFPO-DA (S)	87	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C4-PFHpA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C3-PFHxS (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C26:2FTS (S)	56	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C8-PFOA (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C8-PFOS (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			
13C9-PFNA (S)	107	%.	25-150	1	06/12/24 06:52	06/13/24 16:11			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW9-0-240522 Lab ID: 10694182005 Collected: 05/22/24 12:45 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 246.81 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	107	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
13C28:2FTS (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
d3-MeFOSAA (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
13C7-PFUDa (S)	110	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
13C8-PFOSA (S)	76	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
d5-EtFOSAA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
13C2-PFDoA (S)	111	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
d3-NMeFOSA (S)	27	%.	10-150	1	06/12/24 06:52	06/13/24 16:11		
d7-NMeFOSE (S)	78	%.	10-150	1	06/12/24 06:52	06/13/24 16:11		
13C2-PFTA (S)	113	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
d9-NEtFOSE (S)	73	%.	10-150	1	06/12/24 06:52	06/13/24 16:11		
d5-NEtFOSA (S)	26	%.	10-150	1	06/12/24 06:52	06/13/24 16:11		
13C2PFHxDA (S)	93	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		
13C5-PFHxA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:11		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW10-0-240523 Lab ID: 10694182006 Collected: 05/23/24 13:25 Received: 05/23/24 18:00 Matrix: Water								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 243.732 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	763051-92-9	
4:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	757124-72-4	
6:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	27619-97-2	
8:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:18	39108-34-4	
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	756426-58-1	
ADONA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	919005-14-4	
HFPO-DA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	13252-13-6	
NEtFOSAA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	2991-50-6	
NEtFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	4151-50-2	
NEtFOSE	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	1691-99-2	
NMeFOSAA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	2355-31-9	
NMeFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	31506-32-8	
NMeFOSE	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	24448-09-7	
PFBS	2.2	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:18	375-73-5	
PFDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	335-76-2	
PFHxA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	307-24-4	
PFBA	31.1	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	375-22-4	
PFDS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:18	335-77-3	
PFDoS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:18	79780-39-5	
PFHpS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	375-92-8	
PFNS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:18	68259-12-1	
PFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	754-91-6	
PFPeA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	2706-90-3	
PFPeS	2.3	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	2706-91-4	
PFDoA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	307-55-1	
PFHpA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	375-85-9	
PFHxS	12.6	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	355-46-4	
PFNA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	375-95-1	
PFOS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:18	1763-23-1	
PFOA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	335-67-1	
PFTeDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	376-06-7	
PFTTrDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	72629-94-8	
PFUnA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 16:18	2058-94-8	
Surrogates								
13C4-PFBA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C5-PFPeA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C3-PFBS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C24:2FTS (S)	64	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C3HFPO-DA (S)	80	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C4-PFHpA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C3-PFHxS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C26:2FTS (S)	59	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C8-PFOA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C8-PFOS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C9-PFNA (S)	106	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW10-0-240523 Lab ID: 10694182006 Collected: 05/23/24 13:25 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 243.732 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C28:2FTS (S)	80	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
d3-MeFOSAA (S)	80	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C7-PFUDa (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C8-PFOSA (S)	79	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
d5-EtFOSAA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C2-PFDoA (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
d3-NMeFOSA (S)	61	%.	10-150	1	06/12/24 06:52	06/13/24 16:18		
d7-NMeFOSE (S)	83	%.	10-150	1	06/12/24 06:52	06/13/24 16:18		
13C2-PFTA (S)	110	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
d9-NEtFOSE (S)	74	%.	10-150	1	06/12/24 06:52	06/13/24 16:18		
d5-NEtFOSA (S)	58	%.	10-150	1	06/12/24 06:52	06/13/24 16:18		
13C2PFHxDA (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		
13C5-PFHxA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 16:18		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW11-0-240523		Lab ID: 10694182007		Collected: 05/23/24 11:20		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 251.114 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	763051-92-9		
4:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	757124-72-4		
6:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	27619-97-2		
8:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	756426-58-1		
ADONA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	24448-09-7		
PFBS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:50	375-73-5		
PFDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	335-76-2		
PFHxA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	307-24-4		
PFBA	7.0	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	375-22-4		
PFDS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	335-77-3		
PFDoS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	79780-39-5		
PFHpS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	375-92-8		
PFNS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	68259-12-1		
PFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	754-91-6		
PFPeA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	2706-90-3		
PFPeS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:50	2706-91-4		
PFDoA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	307-55-1		
PFHpA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	375-85-9		
PFHxS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:50	355-46-4		
PFNA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	375-95-1		
PFOS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:50	1763-23-1		
PFOA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	335-67-1		
PFTeDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	376-06-7		
PFTrDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	72629-94-8		
PFUnA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:50	2058-94-8		
Surrogates									
13C4-PFBA (S)	80	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C5-PFPeA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C3-PFBS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C24:2FTS (S)	48	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C3HFPO-DA (S)	81	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C4-PFHpA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C3-PFHxS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C26:2FTS (S)	52	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C8-PFOA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C8-PFOS (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			
13C9-PFNA (S)	109	%.	25-150	1	06/12/24 06:52	06/13/24 16:50			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW11-0-240523		Lab ID: 10694182007		Collected: 05/23/24 11:20		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 251.114 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)		116	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
13C28:2FTS (S)		110	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
d3-MeFOSAA (S)		82	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
13C7-PFUdA (S)		110	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
13C8-PFOSA (S)		77	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
d5-EtFOSAA (S)		90	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
13C2-PFDoA (S)		111	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
d3-NMeFOSA (S)		52	%.	10-150	1	06/12/24 06:52	06/13/24 16:50		
d7-NMeFOSE (S)		79	%.	10-150	1	06/12/24 06:52	06/13/24 16:50		
13C2-PFTA (S)		118	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
d9-NEtFOSE (S)		83	%.	10-150	1	06/12/24 06:52	06/13/24 16:50		
d5-NEtFOSA (S)		49	%.	10-150	1	06/12/24 06:52	06/13/24 16:50		
13C2PFHxDA (S)		90	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		
13C5-PFHxA (S)		100	%.	25-150	1	06/12/24 06:52	06/13/24 16:50		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW12-0-240522		Lab ID: 10694182008		Collected: 05/22/24 10:20		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 249.299 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	763051-92-9		
4:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	757124-72-4		
6:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	27619-97-2		
8:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	756426-58-1		
ADONA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	24448-09-7		
PFBS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:58	375-73-5		
PFDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	335-76-2		
PFHxA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	307-24-4		
PFBA	2.7	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	375-22-4		
PFDS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	335-77-3		
PFDoS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	79780-39-5		
PFHpS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	375-92-8		
PFNS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	68259-12-1		
PFOSA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	754-91-6		
PFPeA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	2706-90-3		
PFPeS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	2706-91-4		
PFDoA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	307-55-1		
PFHpA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	375-85-9		
PFHxS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 16:58	355-46-4		
PFNA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	375-95-1		
PFOS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 16:58	1763-23-1		
PFOA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	335-67-1		
PFTeDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	376-06-7		
PFTTrDA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	72629-94-8		
PFUnA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 16:58	2058-94-8		
Surrogates									
13C4-PFBA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C5-PFPeA (S)	91	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C3-PFBS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C24:2FTS (S)	47	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C3HFPO-DA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C4-PFHpA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C3-PFHxS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C26:2FTS (S)	54	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C8-PFOA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C8-PFOS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			
13C9-PFNA (S)	107	%.	25-150	1	06/12/24 06:52	06/13/24 16:58			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW12-0-240522 Lab ID: 10694182008 Collected: 05/22/24 10:20 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 249.299 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	113	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
13C28:2FTS (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
d3-MeFOSAA (S)	76	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
13C7-PFUDa (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
13C8-PFOSA (S)	80	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
d5-EtFOSAA (S)	76	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
13C2-PFDoA (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
d3-NMeFOSA (S)	47	%.	10-150	1	06/12/24 06:52	06/13/24 16:58		
d7-NMeFOSE (S)	72	%.	10-150	1	06/12/24 06:52	06/13/24 16:58		
13C2-PFTA (S)	91	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
d9-NEtFOSE (S)	73	%.	10-150	1	06/12/24 06:52	06/13/24 16:58		
d5-NEtFOSA (S)	47	%.	10-150	1	06/12/24 06:52	06/13/24 16:58		
13C2PFHxDA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		
13C5-PFHxA (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 16:58		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW4D-0-240522 Lab ID: 10694182009 Collected: 05/22/24 16:15 Received: 05/23/24 18:00 Matrix: Water								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 237.4643 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	763051-92-9	
4:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	757124-72-4	
6:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	27619-97-2	
8:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	39108-34-4	
9CI-PF3ONS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	756426-58-1	
ADONA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	919005-14-4	
HFPO-DA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	13252-13-6	
NEtFOSAA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	2991-50-6	
NEtFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	4151-50-2	
NEtFOSE	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	1691-99-2	
NMeFOSAA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	2355-31-9	
NMeFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	31506-32-8	
NMeFOSE	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	24448-09-7	
PFBS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:05	375-73-5	
PFDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	335-76-2	
PFHxA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	307-24-4	
PFBA	10.6	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	375-22-4	
PFDS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	335-77-3	
PFDoS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	79780-39-5	
PFHpS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	375-92-8	
PFNS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	68259-12-1	
PFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	754-91-6	
PFPeA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	2706-90-3	
PFPeS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:05	2706-91-4	
PFDoA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	307-55-1	
PFHpA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	375-85-9	
PFHxS	3.7	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:05	355-46-4	
PFNA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	375-95-1	
PFOS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:05	1763-23-1	
PFOA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	335-67-1	
PFTeDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	376-06-7	
PFTrDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	72629-94-8	
PFUnA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:05	2058-94-8	
Surrogates								
13C4-PFBA (S)	74	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		1M
13C5-PFPeA (S)	79	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C3-PFBS (S)	85	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C24:2FTS (S)	46	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C3HFPO-DA (S)	73	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C4-PFHpA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C3-PFHxS (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C26:2FTS (S)	49	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C8-PFOA (S)	91	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C8-PFOS (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C9-PFNA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW4D-0-240522 Lab ID: 10694182009 Collected: 05/22/24 16:15 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 237.4643 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C28:2FTS (S)	62	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
d3-MeFOSAA (S)	71	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C7-PFUDa (S)	87	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C8-PFOSA (S)	64	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
d5-EtFOSAA (S)	69	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C2-PFDoA (S)	85	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
d3-NMeFOSA (S)	7	%.	10-150	1	06/12/24 06:52	06/13/24 17:05		S0
d7-NMeFOSE (S)	36	%.	10-150	1	06/12/24 06:52	06/13/24 17:05		
13C2-PFTA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
d9-NEtFOSE (S)	34	%.	10-150	1	06/12/24 06:52	06/13/24 17:05		
d5-NEtFOSA (S)	6	%.	10-150	1	06/12/24 06:52	06/13/24 17:05		S0
13C2PFHxDA (S)	62	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		
13C5-PFHxA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 17:05		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW5D-0-240523 Lab ID: 10694182010 Collected: 05/23/24 08:15 Received: 05/23/24 18:00 Matrix: Water								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 23.357 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	20.1	1	06/19/24 14:31	06/21/24 17:24	763051-92-9	
4:2 FTS	ND	ng/L	20.0	1	06/19/24 14:31	06/21/24 17:24	757124-72-4	
6:2 FTS	ND	ng/L	20.3	1	06/19/24 14:31	06/21/24 17:24	27619-97-2	
8:2 FTS	ND	ng/L	20.7	1	06/19/24 14:31	06/21/24 17:24	39108-34-4	
9CI-PF3ONS	ND	ng/L	19.9	1	06/19/24 14:31	06/21/24 17:24	756426-58-1	
ADONA	ND	ng/L	20.2	1	06/19/24 14:31	06/21/24 17:24	919005-14-4	
HFPO-DA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	13252-13-6	
NEtFOSAA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	2991-50-6	
NEtFOSA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	4151-50-2	L2
NEtFOSE	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	1691-99-2	
NMeFOSAA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	2355-31-9	
NMeFOSA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	31506-32-8	
NMeFOSE	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	24448-09-7	
PFBS	ND	ng/L	18.9	1	06/19/24 14:31	06/21/24 17:24	375-73-5	
PFDA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	335-76-2	
PFHxA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	307-24-4	
PFBA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	375-22-4	
PFDS	ND	ng/L	20.7	1	06/19/24 14:31	06/21/24 17:24	335-77-3	
PFDoS	ND	ng/L	20.8	1	06/19/24 14:31	06/21/24 17:24	79780-39-5	
PFHpS	ND	ng/L	20.3	1	06/19/24 14:31	06/21/24 17:24	375-92-8	
PFNS	ND	ng/L	20.6	1	06/19/24 14:31	06/21/24 17:24	68259-12-1	
PFOSA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	754-91-6	
PFPeA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	2706-90-3	
PFPeS	ND	ng/L	20.1	1	06/19/24 14:31	06/21/24 17:24	2706-91-4	
PFDoA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	307-55-1	
PFHpA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	375-85-9	
PFHxS	ND	ng/L	19.5	1	06/19/24 14:31	06/21/24 17:24	355-46-4	
PFNA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	375-95-1	
PFOS	ND	ng/L	19.8	1	06/19/24 14:31	06/21/24 17:24	1763-23-1	
PFOA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	335-67-1	
PFTeDA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	376-06-7	
PFTTrDA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	72629-94-8	
PFUnA	ND	ng/L	21.4	1	06/19/24 14:31	06/21/24 17:24	2058-94-8	
Surrogates								
13C4-PFBA (S)	104	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		1M
13C5-PFPeA (S)	117	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C3-PFBS (S)	111	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C24:2FTS (S)	110	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C3HFPO-DA (S)	100	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C4-PFHpA (S)	120	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C3-PFHxS (S)	105	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C26:2FTS (S)	105	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C8-PFOA (S)	121	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C8-PFOS (S)	103	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C9-PFNA (S)	120	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW5D-0-240523 Lab ID: 10694182010 Collected: 05/23/24 08:15 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 23.357 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	121	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C28:2FTS (S)	110	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
d3-MeFOSAA (S)	109	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C7-PFUDa (S)	120	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C8-PFOSA (S)	81	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
d5-EtFOSAA (S)	118	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C2-PFDoA (S)	116	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
d3-NMeFOSA (S)	11	%.	10-150	1	06/19/24 14:31	06/21/24 17:24		
d7-NMeFOSE (S)	54	%.	10-150	1	06/19/24 14:31	06/21/24 17:24		
13C2-PFTA (S)	96	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
d9-NEtFOSE (S)	49	%.	10-150	1	06/19/24 14:31	06/21/24 17:24		
d5-NEtFOSA (S)	11	%.	10-150	1	06/19/24 14:31	06/21/24 17:24		
13C2PFHxDA (S)	62	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		
13C5-PFHxA (S)	126	%.	25-150	1	06/19/24 14:31	06/21/24 17:24		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW9D-0-240522 Lab ID: 10694182011 Collected: 05/22/24 12:40 Received: 05/23/24 18:00 Matrix: Water								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 241.9833 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:12	763051-92-9	
4:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:12	757124-72-4	
6:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	27619-97-2	
8:2 FTS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	39108-34-4	
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:12	756426-58-1	
ADONA	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	919005-14-4	
HFPO-DA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	13252-13-6	
NEtFOSAA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	2991-50-6	
NEtFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	4151-50-2	
NEtFOSE	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	1691-99-2	
NMeFOSAA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	2355-31-9	
NMeFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	31506-32-8	
NMeFOSE	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	24448-09-7	
PFBS	3.3	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:12	375-73-5	
PFDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	335-76-2	
PFHxA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	307-24-4	
PFBA	7.2	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	375-22-4	
PFDS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	335-77-3	
PFDoS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	79780-39-5	
PFHpS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	375-92-8	
PFNS	ND	ng/L	2.0	1	06/12/24 06:52	06/13/24 17:12	68259-12-1	
PFOSA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	754-91-6	
PFPeA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	2706-90-3	
PFPeS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:12	2706-91-4	
PFDoA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	307-55-1	
PFHpA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	375-85-9	
PFHxS	5.4	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:12	355-46-4	
PFNA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	375-95-1	
PFOS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:12	1763-23-1	
PFOA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	335-67-1	
PFTeDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	376-06-7	
PFTrDA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	72629-94-8	
PFUnA	ND	ng/L	2.1	1	06/12/24 06:52	06/13/24 17:12	2058-94-8	
Surrogates								
13C4-PFBA (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C5-PFPeA (S)	89	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C3-PFBS (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C24:2FTS (S)	50	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C3HFPO-DA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C4-PFHpA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C3-PFHxS (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C26:2FTS (S)	60	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C8-PFOA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C8-PFOS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C9-PFNA (S)	107	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW9D-0-240522 Lab ID: 10694182011 Collected: 05/22/24 12:40 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 241.9833 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	111	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C28:2FTS (S)	83	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
d3-MeFOSAA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C7-PFUDa (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C8-PFOSA (S)	61	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
d5-EtFOSAA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C2-PFDoA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
d3-NMeFOSA (S)	30	%.	10-150	1	06/12/24 06:52	06/13/24 17:12		
d7-NMeFOSE (S)	50	%.	10-150	1	06/12/24 06:52	06/13/24 17:12		
13C2-PFTA (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
d9-NEtFOSE (S)	48	%.	10-150	1	06/12/24 06:52	06/13/24 17:12		
d5-NEtFOSA (S)	30	%.	10-150	1	06/12/24 06:52	06/13/24 17:12		
13C2PFHxDA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		
13C5-PFHxA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 17:12		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW12D-0-240522 **Lab ID:** 10694182012 **Collected:** 05/22/24 10:30 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 256.694 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11Cl-PF3OUdS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	763051-92-9	
4:2 FTS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	757124-72-4	
6:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	27619-97-2	
8:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	39108-34-4	
9Cl-PF3ONS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	756426-58-1	
ADONA	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	919005-14-4	
HFPO-DA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	13252-13-6	
NEtFOSAA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	2991-50-6	
NEtFOSA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	4151-50-2	
NEtFOSE	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	1691-99-2	
NMeFOSAA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	2355-31-9	
NMeFOSA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	31506-32-8	
NMeFOSE	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	24448-09-7	
PFBS	ND	ng/L	1.7	1	06/12/24 06:52	06/13/24 17:19	375-73-5	
PFDA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	335-76-2	
PFHxA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	307-24-4	
PFBA	4.7	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	375-22-4	
PFDS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	335-77-3	
PFDoS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	79780-39-5	
PFHpS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	375-92-8	
PFNS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	68259-12-1	
PFOSA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	754-91-6	
PFPeA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	2706-90-3	
PFPeS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	2706-91-4	
PFDoA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	307-55-1	
PFHpA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	375-85-9	
PFHxS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	355-46-4	
PFNA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	375-95-1	
PFOS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 17:19	1763-23-1	
PFOA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	335-67-1	
PFTeDA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	376-06-7	
PFTrDA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	72629-94-8	
PFUnA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 17:19	2058-94-8	
Surrogates								
13C4-PFBA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C5-PFPeA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C3-PFBS (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C24:2FTS (S)	45	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C3HFPO-DA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C4-PFHpA (S)	95	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C3-PFHxS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C26:2FTS (S)	48	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C8-PFOA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C8-PFOS (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-MW12D-0-240522 **Lab ID:** 10694182012 **Collected:** 05/22/24 10:30 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 256.694 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	104	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C6-PFDA (S)	106	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C28:2FTS (S)	83	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
d3-MeFOSAA (S)	75	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C7-PFUdA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C8-PFOSA (S)	79	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
d5-EtFOSAA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C2-PFDoA (S)	89	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
d3-NMeFOSA (S)	51	%.	10-150	1	06/12/24 06:52	06/13/24 17:19		
d7-NMeFOSE (S)	67	%.	10-150	1	06/12/24 06:52	06/13/24 17:19		
13C2-PFTA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
d9-NEtFOSE (S)	62	%.	10-150	1	06/12/24 06:52	06/13/24 17:19		
d5-NEtFOSA (S)	45	%.	10-150	1	06/12/24 06:52	06/13/24 17:19		
13C2PFHxDA (S)	75	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		
13C5-PFHxA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 17:19		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ1-0-240523		Lab ID: 10694182013		Collected: 05/23/24 09:40		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 24.854 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:27	763051-92-9		
4:2 FTS	ND	ng/L	18.8	1	06/12/24 06:52	06/13/24 17:27	757124-72-4		
6:2 FTS	27.4	ng/L	19.1	1	06/12/24 06:52	06/13/24 17:27	27619-97-2		
8:2 FTS	ND	ng/L	19.4	1	06/12/24 06:52	06/13/24 17:27	39108-34-4		
9CI-PF3ONS	ND	ng/L	18.7	1	06/12/24 06:52	06/13/24 17:27	756426-58-1		
ADONA	ND	ng/L	19.0	1	06/12/24 06:52	06/13/24 17:27	919005-14-4		
HFPO-DA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	13252-13-6		
NEtFOSAA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	2991-50-6		
NEtFOSA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	4151-50-2		
NEtFOSE	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	1691-99-2		
NMeFOSAA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	2355-31-9		
NMeFOSA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	31506-32-8		
NMeFOSE	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	24448-09-7		
PFBS	45.7	ng/L	17.8	1	06/12/24 06:52	06/13/24 17:27	375-73-5		
PFDA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	335-76-2		
PFHxA	139	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	307-24-4		
PFBA	54.7	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	375-22-4		
PFDS	ND	ng/L	19.4	1	06/12/24 06:52	06/13/24 17:27	335-77-3		
PFDoS	ND	ng/L	19.5	1	06/12/24 06:52	06/13/24 17:27	79780-39-5		
PFHpS	ND	ng/L	19.1	1	06/12/24 06:52	06/13/24 17:27	375-92-8		
PFNS	ND	ng/L	19.3	1	06/12/24 06:52	06/13/24 17:27	68259-12-1		
PFOSA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	754-91-6		
PFPeA	27.8	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	2706-90-3		
PFPeS	150	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:27	2706-91-4		
PFDoA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	307-55-1		
PFHpA	27.7	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	375-85-9		
PFHxS	4040	ng/L	91.5	5	06/12/24 06:52	06/14/24 13:05	355-46-4		
PFNA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	375-95-1		
PFOS	ND	ng/L	18.6	1	06/12/24 06:52	06/13/24 17:27	1763-23-1		
PFOA	52.6	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	335-67-1		
PFTeDA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	376-06-7		
PFTrDA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	72629-94-8		
PFUnA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:27	2058-94-8		
Surrogates									
13C4-PFBA (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C5-PFPeA (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C3-PFBS (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C24:2FTS (S)	40	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C3HFPO-DA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C4-PFHpA (S)	93	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C3-PFHxS (S)	95	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C3-PFHxS (S)	95	%.	25-150	5	06/12/24 06:52	06/14/24 13:05			
13C26:2FTS (S)	50	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C8-PFOA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			
13C8-PFOS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 17:27			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ1-0-240523 Lab ID: 10694182013 Collected: 05/23/24 09:40 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 24.854 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
13C6-PFDA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
13C28:2FTS (S)	74	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
d3-MeFOSAA (S)	59	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
13C7-PFUDa (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
13C8-PFOA (S)	63	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
d5-EtFOSAA (S)	57	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
13C2-PFDoA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
d3-NMeFOA (S)	36	%.	10-150	1	06/12/24 06:52	06/13/24 17:27		
d7-NMeFOSE (S)	47	%.	10-150	1	06/12/24 06:52	06/13/24 17:27		
13C2-PFTA (S)	71	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
d9-NEtFOSE (S)	41	%.	10-150	1	06/12/24 06:52	06/13/24 17:27		
d5-NEtFOA (S)	32	%.	10-150	1	06/12/24 06:52	06/13/24 17:27		
13C2PFHxDA (S)	67	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		
13C5-PFHxA (S)	93	%.	25-150	1	06/12/24 06:52	06/13/24 17:27		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ2-0-240523		Lab ID: 10694182014		Collected: 05/23/24 12:55		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 24.607 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	19.1	1	06/12/24 06:52	06/13/24 17:34	763051-92-9		
4:2 FTS	ND	ng/L	19.0	1	06/12/24 06:52	06/13/24 17:34	757124-72-4		
6:2 FTS	ND	ng/L	19.3	1	06/12/24 06:52	06/13/24 17:34	27619-97-2		
8:2 FTS	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:34	39108-34-4		
9CI-PF3ONS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:34	756426-58-1		
ADONA	ND	ng/L	19.2	1	06/12/24 06:52	06/13/24 17:34	919005-14-4		
HFPO-DA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	13252-13-6		
NEtFOSAA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	2991-50-6		
NEtFOSA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	4151-50-2		
NEtFOSE	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	1691-99-2		
NMeFOSAA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	2355-31-9		
NMeFOSA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	31506-32-8		
NMeFOSE	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	24448-09-7		
PFBS	31.9	ng/L	18.0	1	06/12/24 06:52	06/13/24 17:34	375-73-5		
PFDA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	335-76-2		
PFHxA	132	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	307-24-4		
PFBA	56.5	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	375-22-4		
PFDS	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:34	335-77-3		
PFDoS	ND	ng/L	19.7	1	06/12/24 06:52	06/13/24 17:34	79780-39-5		
PFHpS	60.9	ng/L	19.3	1	06/12/24 06:52	06/13/24 17:34	375-92-8		
PFNS	ND	ng/L	19.5	1	06/12/24 06:52	06/13/24 17:34	68259-12-1		
PFOSA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	754-91-6		
PFPeA	40.1	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	2706-90-3		
PFPeS	112	ng/L	19.1	1	06/12/24 06:52	06/13/24 17:34	2706-91-4		
PFDoA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	307-55-1		
PFHpA	27.7	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	375-85-9		
PFHxS	1700	ng/L	18.5	1	06/12/24 06:52	06/13/24 17:34	355-46-4		
PFNA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	375-95-1		
PFOS	673	ng/L	18.8	1	06/12/24 06:52	06/13/24 17:34	1763-23-1		
PFOA	166	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	335-67-1		
PFTeDA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	376-06-7		
PFTTrDA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	72629-94-8		
PFUnA	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 17:34	2058-94-8		
Surrogates									
13C4-PFBA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		1M	
13C5-PFPeA (S)	93	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C3-PFBS (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C24:2FTS (S)	42	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C3HFPO-DA (S)	87	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C4-PFHpA (S)	95	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C3-PFHxS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C26:2FTS (S)	58	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C8-PFOA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C8-PFOS (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			
13C9-PFNA (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 17:34			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ2-0-240523		Lab ID: 10694182014		Collected: 05/23/24 12:55		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 24.607 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)		94	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
13C28:2FTS (S)		65	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
d3-MeFOSAA (S)		66	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
13C7-PFUDa (S)		95	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
13C8-PFOSA (S)		67	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
d5-EtFOSAA (S)		68	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
13C2-PFDoA (S)		92	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
d3-NMeFOSA (S)		7	%.	10-150	1	06/12/24 06:52	06/13/24 17:34		S0
d7-NMeFOSE (S)		48	%.	10-150	1	06/12/24 06:52	06/13/24 17:34		
13C2-PFTA (S)		83	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
d9-NEtFOSE (S)		46	%.	10-150	1	06/12/24 06:52	06/13/24 17:34		
d5-NEtFOSA (S)		5	%.	10-150	1	06/12/24 06:52	06/13/24 17:34		S0
13C2PFHxDA (S)		55	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		
13C5-PFHxA (S)		96	%.	25-150	1	06/12/24 06:52	06/13/24 17:34		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ3-0-240523		Lab ID: 10694182015		Collected: 05/23/24 13:10		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 24.88 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:48	763051-92-9		
4:2 FTS	ND	ng/L	18.8	1	06/12/24 06:52	06/13/24 17:48	757124-72-4		
6:2 FTS	ND	ng/L	19.1	1	06/12/24 06:52	06/13/24 17:48	27619-97-2		
8:2 FTS	ND	ng/L	19.4	1	06/12/24 06:52	06/13/24 17:48	39108-34-4		
9CI-PF3ONS	ND	ng/L	18.7	1	06/12/24 06:52	06/13/24 17:48	756426-58-1		
ADONA	ND	ng/L	19.0	1	06/12/24 06:52	06/13/24 17:48	919005-14-4		
HFPO-DA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	13252-13-6		
NEtFOSAA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	2991-50-6		
NEtFOSA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	4151-50-2		
NEtFOSE	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	1691-99-2		
NMeFOSAA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	2355-31-9		
NMeFOSA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	31506-32-8		
NMeFOSE	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	24448-09-7		
PFBS	111	ng/L	17.8	1	06/12/24 06:52	06/13/24 17:48	375-73-5		
PFDA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	335-76-2		
PFHxA	225	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	307-24-4		
PFBA	62.9	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	375-22-4		
PFDS	ND	ng/L	19.4	1	06/12/24 06:52	06/13/24 17:48	335-77-3		
PFDoS	ND	ng/L	19.5	1	06/12/24 06:52	06/13/24 17:48	79780-39-5		
PFHpS	50.0	ng/L	19.1	1	06/12/24 06:52	06/13/24 17:48	375-92-8		
PFNS	ND	ng/L	19.3	1	06/12/24 06:52	06/13/24 17:48	68259-12-1		
PFOSA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	754-91-6		
PFPeA	52.7	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	2706-90-3		
PFPeS	275	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:48	2706-91-4		
PFDoA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	307-55-1		
PFHpA	43.0	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	375-85-9		
PFHxS	1080	ng/L	18.3	1	06/12/24 06:52	06/13/24 17:48	355-46-4		
PFNA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	375-95-1		
PFOS	1610	ng/L	18.6	1	06/12/24 06:52	06/13/24 17:48	1763-23-1		
PFOA	89.4	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	335-67-1		
PFTeDA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	376-06-7		
PFTrDA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	72629-94-8		
PFUnA	ND	ng/L	20.1	1	06/12/24 06:52	06/13/24 17:48	2058-94-8		
Surrogates									
13C4-PFBA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C5-PFPeA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C3-PFBS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C24:2FTS (S)	48	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C3HFPO-DA (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C4-PFHpA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C3-PFHxS (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C26:2FTS (S)	63	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C8-PFOA (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C8-PFOS (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			
13C9-PFNA (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 17:48			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ3-0-240523		Lab ID: 10694182015		Collected: 05/23/24 13:10		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 24.88 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)		102	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
13C28:2FTS (S)		79	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
d3-MeFOSAA (S)		75	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
13C7-PFUDa (S)		98	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
13C8-PFOSA (S)		77	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
d5-EtFOSAA (S)		72	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
13C2-PFDoA (S)		94	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
d3-NMeFOSA (S)		31	%.	10-150	1	06/12/24 06:52	06/13/24 17:48		
d7-NMeFOSE (S)		68	%.	10-150	1	06/12/24 06:52	06/13/24 17:48		
13C2-PFTA (S)		92	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
d9-NEtFOSE (S)		63	%.	10-150	1	06/12/24 06:52	06/13/24 17:48		
d5-NEtFOSA (S)		28	%.	10-150	1	06/12/24 06:52	06/13/24 17:48		
13C2PFHxDA (S)		84	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		
13C5-PFHxA (S)		99	%.	25-150	1	06/12/24 06:52	06/13/24 17:48		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ3-DB-240523 Lab ID: 10694182016 Collected: 05/23/24 13:10 Received: 05/23/24 18:00 Matrix: Water								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 25.533 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	18.4	1	06/12/24 06:52	06/13/24 17:55	763051-92-9	
4:2 FTS	ND	ng/L	18.3	1	06/12/24 06:52	06/13/24 17:55	757124-72-4	
6:2 FTS	ND	ng/L	18.6	1	06/12/24 06:52	06/13/24 17:55	27619-97-2	
8:2 FTS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:55	39108-34-4	
9CI-PF3ONS	ND	ng/L	18.2	1	06/12/24 06:52	06/13/24 17:55	756426-58-1	
ADONA	ND	ng/L	18.5	1	06/12/24 06:52	06/13/24 17:55	919005-14-4	
HFPO-DA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	13252-13-6	
NEtFOSAA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	2991-50-6	
NEtFOSA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	4151-50-2	
NEtFOSE	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	1691-99-2	
NMeFOSAA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	2355-31-9	
NMeFOSA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	31506-32-8	
NMeFOSE	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	24448-09-7	
PFBS	121	ng/L	17.3	1	06/12/24 06:52	06/13/24 17:55	375-73-5	
PFDA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	335-76-2	
PFHxA	290	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	307-24-4	
PFBA	131	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	375-22-4	
PFDS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 17:55	335-77-3	
PFDoS	ND	ng/L	19.0	1	06/12/24 06:52	06/13/24 17:55	79780-39-5	
PFHpS	70.2	ng/L	18.6	1	06/12/24 06:52	06/13/24 17:55	375-92-8	
PFNS	ND	ng/L	18.8	1	06/12/24 06:52	06/13/24 17:55	68259-12-1	
PFOSA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	754-91-6	
PFPeA	76.8	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	2706-90-3	
PFPeS	264	ng/L	18.4	1	06/12/24 06:52	06/13/24 17:55	2706-91-4	
PFDoA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	307-55-1	
PFHpA	55.5	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	375-85-9	
PFHxS	1220	ng/L	17.8	1	06/12/24 06:52	06/13/24 17:55	355-46-4	
PFNA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	375-95-1	
PFOS	1580	ng/L	18.1	1	06/12/24 06:52	06/13/24 17:55	1763-23-1	
PFOA	184	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	335-67-1	
PFTeDA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	376-06-7	
PFTTrDA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	72629-94-8	
PFUnA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 17:55	2058-94-8	
Surrogates								
13C4-PFBA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C5-PFPeA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C3-PFBS (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C24:2FTS (S)	72	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C3HFPO-DA (S)	81	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C4-PFHpA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C3-PFHxS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C26:2FTS (S)	112	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C8-PFOA (S)	106	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C8-PFOS (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C9-PFNA (S)	113	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ3-DB-240523 Lab ID: 10694182016 Collected: 05/23/24 13:10 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 25.533 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	106	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C28:2FTS (S)	122	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
d3-MeFOSAA (S)	76	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C7-PFUDa (S)	107	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C8-PFOSA (S)	75	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
d5-EtFOSAA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C2-PFDoA (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
d3-NMeFOSA (S)	37	%.	10-150	1	06/12/24 06:52	06/13/24 17:55		
d7-NMeFOSE (S)	59	%.	10-150	1	06/12/24 06:52	06/13/24 17:55		
13C2-PFTA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
d9-NEtFOSE (S)	58	%.	10-150	1	06/12/24 06:52	06/13/24 17:55		
d5-NEtFOSA (S)	30	%.	10-150	1	06/12/24 06:52	06/13/24 17:55		
13C2PFHxDA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		
13C5-PFHxA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 17:55		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ4-0-240523		Lab ID: 10694182017		Collected: 05/23/24 13:35		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 25.562 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	18.4	1	06/12/24 06:52	06/13/24 18:03	763051-92-9		
4:2 FTS	ND	ng/L	18.3	1	06/12/24 06:52	06/13/24 18:03	757124-72-4		
6:2 FTS	22.7	ng/L	18.6	1	06/12/24 06:52	06/13/24 18:03	27619-97-2		
8:2 FTS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 18:03	39108-34-4		
9CI-PF3ONS	ND	ng/L	18.2	1	06/12/24 06:52	06/13/24 18:03	756426-58-1		
ADONA	ND	ng/L	18.5	1	06/12/24 06:52	06/13/24 18:03	919005-14-4		
HFPO-DA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	13252-13-6		
NEtFOSAA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	2991-50-6		
NEtFOSA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	4151-50-2		
NEtFOSE	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	1691-99-2		
NMeFOSAA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	2355-31-9		
NMeFOSA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	31506-32-8		
NMeFOSE	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	24448-09-7		
PFBS	ND	ng/L	17.3	1	06/12/24 06:52	06/13/24 18:03	375-73-5		
PFDA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	335-76-2		
PFHxA	34.0	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	307-24-4		
PFBA	55.9	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	375-22-4		
PFDS	ND	ng/L	18.9	1	06/12/24 06:52	06/13/24 18:03	335-77-3		
PFDoS	ND	ng/L	19.0	1	06/12/24 06:52	06/13/24 18:03	79780-39-5		
PFHpS	119	ng/L	18.6	1	06/12/24 06:52	06/13/24 18:03	375-92-8		
PFNS	ND	ng/L	18.8	1	06/12/24 06:52	06/13/24 18:03	68259-12-1		
PFOSA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	754-91-6		
PFPeA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	2706-90-3		
PFPeS	27.1	ng/L	18.4	1	06/12/24 06:52	06/13/24 18:03	2706-91-4		
PFDoA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	307-55-1		
PFHpA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	375-85-9		
PFHxS	511	ng/L	17.8	1	06/12/24 06:52	06/13/24 18:03	355-46-4		
PFNA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	375-95-1		
PFOS	261	ng/L	18.1	1	06/12/24 06:52	06/13/24 18:03	1763-23-1		
PFOA	61.9	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	335-67-1		
PFTeDA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	376-06-7		
PFTTrDA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	72629-94-8		
PFUnA	ND	ng/L	19.6	1	06/12/24 06:52	06/13/24 18:03	2058-94-8		
Surrogates									
13C4-PFBA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C5-PFPeA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C3-PFBS (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C24:2FTS (S)	66	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C3HFPO-DA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C4-PFHpA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C3-PFHxS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C26:2FTS (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C8-PFOA (S)	109	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C8-PFOS (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			
13C9-PFNA (S)	116	%.	25-150	1	06/12/24 06:52	06/13/24 18:03			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ4-0-240523 Lab ID: 10694182017 Collected: 05/23/24 13:35 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 25.562 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	111	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
13C28:2FTS (S)	113	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
d3-MeFOSAA (S)	82	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
13C7-PFUDa (S)	115	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
13C8-PFOSA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
d5-EtFOSAA (S)	85	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
13C2-PFDoA (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
d3-NMeFOSA (S)	15	%.	10-150	1	06/12/24 06:52	06/13/24 18:03		
d7-NMeFOSE (S)	61	%.	10-150	1	06/12/24 06:52	06/13/24 18:03		
13C2-PFTA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
d9-NEtFOSE (S)	57	%.	10-150	1	06/12/24 06:52	06/13/24 18:03		
d5-NEtFOSA (S)	11	%.	10-150	1	06/12/24 06:52	06/13/24 18:03		
13C2PFHxDA (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		
13C5-PFHxA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 18:03		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ5-0-240523		Lab ID: 10694182018		Collected: 05/23/24 13:50		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 14.67 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	32.0	1	06/12/24 06:52	06/13/24 18:10	763051-92-9		
4:2 FTS	ND	ng/L	31.9	1	06/12/24 06:52	06/13/24 18:10	757124-72-4		
6:2 FTS	ND	ng/L	32.4	1	06/12/24 06:52	06/13/24 18:10	27619-97-2		
8:2 FTS	ND	ng/L	32.9	1	06/12/24 06:52	06/13/24 18:10	39108-34-4		
9CI-PF3ONS	ND	ng/L	31.7	1	06/12/24 06:52	06/13/24 18:10	756426-58-1		
ADONA	ND	ng/L	32.2	1	06/12/24 06:52	06/13/24 18:10	919005-14-4		
HFPO-DA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	13252-13-6		
NEtFOSAA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	2991-50-6		
NEtFOSA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	4151-50-2		
NEtFOSE	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	1691-99-2		
NMeFOSAA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	2355-31-9		
NMeFOSA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	31506-32-8		
NMeFOSE	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	24448-09-7		
PFBS	ND	ng/L	30.2	1	06/12/24 06:52	06/13/24 18:10	375-73-5		
PFDA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	335-76-2		
PFHxA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	307-24-4		
PFBA	116	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	375-22-4		
PFDS	ND	ng/L	32.9	1	06/12/24 06:52	06/13/24 18:10	335-77-3		
PFDoS	ND	ng/L	33.1	1	06/12/24 06:52	06/13/24 18:10	79780-39-5		
PFHpS	ND	ng/L	32.4	1	06/12/24 06:52	06/13/24 18:10	375-92-8		
PFNS	ND	ng/L	32.7	1	06/12/24 06:52	06/13/24 18:10	68259-12-1		
PFOSA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	754-91-6		
PFPeA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	2706-90-3		
PFPeS	ND	ng/L	32.0	1	06/12/24 06:52	06/13/24 18:10	2706-91-4		
PFDoA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	307-55-1		
PFHpA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	375-85-9		
PFHxS	54.6	ng/L	31.0	1	06/12/24 06:52	06/13/24 18:10	355-46-4		
PFNA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	375-95-1		
PFOS	34.9	ng/L	31.5	1	06/12/24 06:52	06/13/24 18:10	1763-23-1		
PFOA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	335-67-1		
PFTeDA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	376-06-7		
PFTTrDA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	72629-94-8		
PFUnA	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:10	2058-94-8		
Surrogates									
13C4-PFBA (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		1M	
13C5-PFPeA (S)	93	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C3-PFBS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C24:2FTS (S)	50	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C3HFPO-DA (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C4-PFHpA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C3-PFHxS (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C26:2FTS (S)	72	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C8-PFOA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C8-PFOS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			
13C9-PFNA (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:10			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ5-0-240523		Lab ID: 10694182018		Collected: 05/23/24 13:50		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 14.67 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)		99	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
13C28:2FTS (S)		75	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
d3-MeFOSAA (S)		73	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
13C7-PFUdA (S)		99	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
13C8-PFOSA (S)		69	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
d5-EtFOSAA (S)		77	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
13C2-PFDoA (S)		92	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
d3-NMeFOSA (S)		5	%.	10-150	1	06/12/24 06:52	06/13/24 18:10		S0
d7-NMeFOSE (S)		40	%.	10-150	1	06/12/24 06:52	06/13/24 18:10		
13C2-PFTA (S)		89	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
d9-NEtFOSE (S)		37	%.	10-150	1	06/12/24 06:52	06/13/24 18:10		
d5-NEtFOSA (S)		4	%.	10-150	1	06/12/24 06:52	06/13/24 18:10		S0
13C2PFHxDA (S)		50	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		
13C5-PFHxA (S)		97	%.	25-150	1	06/12/24 06:52	06/13/24 18:10		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ6-0-240523		Lab ID: 10694182019		Collected: 05/23/24 14:00		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 13.785 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:17	763051-92-9		
4:2 FTS	ND	ng/L	33.9	1	06/12/24 06:52	06/13/24 18:17	757124-72-4		
6:2 FTS	37.7	ng/L	34.5	1	06/12/24 06:52	06/13/24 18:17	27619-97-2		
8:2 FTS	ND	ng/L	35.0	1	06/12/24 06:52	06/13/24 18:17	39108-34-4		
9CI-PF3ONS	ND	ng/L	33.7	1	06/12/24 06:52	06/13/24 18:17	756426-58-1		
ADONA	ND	ng/L	34.3	1	06/12/24 06:52	06/13/24 18:17	919005-14-4		
HFPO-DA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	13252-13-6		
NEtFOSAA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	2991-50-6		
NEtFOSA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	4151-50-2		
NEtFOSE	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	1691-99-2		
NMeFOSAA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	2355-31-9		
NMeFOSA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	31506-32-8		
NMeFOSE	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	24448-09-7		
PFBS	ND	ng/L	32.1	1	06/12/24 06:52	06/13/24 18:17	375-73-5		
PFDA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	335-76-2		
PFHxA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	307-24-4		
PFBA	99.6	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	375-22-4		
PFDS	ND	ng/L	35.0	1	06/12/24 06:52	06/13/24 18:17	335-77-3		
PFDoS	ND	ng/L	35.2	1	06/12/24 06:52	06/13/24 18:17	79780-39-5		
PFHpS	ND	ng/L	34.5	1	06/12/24 06:52	06/13/24 18:17	375-92-8		
PFNS	ND	ng/L	34.8	1	06/12/24 06:52	06/13/24 18:17	68259-12-1		
PFOSA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	754-91-6		
PFPeA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	2706-90-3		
PFPeS	ND	ng/L	34.1	1	06/12/24 06:52	06/13/24 18:17	2706-91-4		
PFDoA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	307-55-1		
PFHpA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	375-85-9		
PFHxS	50.3	ng/L	33.0	1	06/12/24 06:52	06/13/24 18:17	355-46-4		
PFNA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	375-95-1		
PFOS	ND	ng/L	33.6	1	06/12/24 06:52	06/13/24 18:17	1763-23-1		
PFOA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	335-67-1		
PFTeDA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	376-06-7		
PFTTrDA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	72629-94-8		
PFUnA	ND	ng/L	36.3	1	06/12/24 06:52	06/13/24 18:17	2058-94-8		
Surrogates									
13C4-PFBA (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C5-PFPeA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C3-PFBS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C24:2FTS (S)	45	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C3HFPO-DA (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C4-PFHpA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C3-PFHxS (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C26:2FTS (S)	75	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C8-PFOA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C8-PFOS (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			
13C9-PFNA (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 18:17			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ6-0-240523 Lab ID: 10694182019 Collected: 05/23/24 14:00 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 13.785 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
13C28:2FTS (S)	89	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
d3-MeFOSAA (S)	72	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
13C7-PFUDa (S)	93	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
13C8-PFOSA (S)	64	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
d5-EtFOSAA (S)	77	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
13C2-PFDoA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
d3-NMeFOSA (S)	18	%.	10-150	1	06/12/24 06:52	06/13/24 18:17		
d7-NMeFOSE (S)	51	%.	10-150	1	06/12/24 06:52	06/13/24 18:17		
13C2-PFTA (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
d9-NEtFOSE (S)	47	%.	10-150	1	06/12/24 06:52	06/13/24 18:17		
d5-NEtFOSA (S)	15	%.	10-150	1	06/12/24 06:52	06/13/24 18:17		
13C2PFHxDA (S)	79	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		
13C5-PFHxA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:17		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ7-0-240523		Lab ID: 10694182020		Collected: 05/23/24 14:15		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 14.395 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	32.7	1	06/12/24 06:52	06/13/24 18:24	763051-92-9		
4:2 FTS	ND	ng/L	32.5	1	06/12/24 06:52	06/13/24 18:24	757124-72-4		
6:2 FTS	ND	ng/L	33.0	1	06/12/24 06:52	06/13/24 18:24	27619-97-2		
8:2 FTS	ND	ng/L	33.5	1	06/12/24 06:52	06/13/24 18:24	39108-34-4		
9CI-PF3ONS	ND	ng/L	32.3	1	06/12/24 06:52	06/13/24 18:24	756426-58-1		
ADONA	ND	ng/L	32.8	1	06/12/24 06:52	06/13/24 18:24	919005-14-4		
HFPO-DA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	13252-13-6		
NEtFOSAA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	2991-50-6		
NEtFOSA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	4151-50-2		
NEtFOSE	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	1691-99-2		
NMeFOSAA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	2355-31-9		
NMeFOSA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	31506-32-8		
NMeFOSE	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	24448-09-7		
PFBS	ND	ng/L	30.7	1	06/12/24 06:52	06/13/24 18:24	375-73-5		
PFDA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	335-76-2		
PFHxA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	307-24-4		
PFBA	43.8	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	375-22-4		
PFDS	ND	ng/L	33.5	1	06/12/24 06:52	06/13/24 18:24	335-77-3		
PFDoS	ND	ng/L	33.7	1	06/12/24 06:52	06/13/24 18:24	79780-39-5		
PFHpS	ND	ng/L	33.0	1	06/12/24 06:52	06/13/24 18:24	375-92-8		
PFNS	ND	ng/L	33.3	1	06/12/24 06:52	06/13/24 18:24	68259-12-1		
PFOSA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	754-91-6		
PFPeA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	2706-90-3		
PFPeS	ND	ng/L	32.7	1	06/12/24 06:52	06/13/24 18:24	2706-91-4		
PFDoA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	307-55-1		
PFHpA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	375-85-9		
PFHxS	ND	ng/L	31.6	1	06/12/24 06:52	06/13/24 18:24	355-46-4		
PFNA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	375-95-1		
PFOS	ND	ng/L	32.1	1	06/12/24 06:52	06/13/24 18:24	1763-23-1		
PFOA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	335-67-1		
PFTeDA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	376-06-7		
PFTrDA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	72629-94-8		
PFUnA	ND	ng/L	34.7	1	06/12/24 06:52	06/13/24 18:24	2058-94-8		
Surrogates									
13C4-PFBA (S)	92	%.	25-150	1	06/12/24 06:52	06/13/24 18:24		1M	
13C5-PFPeA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C3-PFBS (S)	100	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C24:2FTS (S)	54	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C3HFPO-DA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C4-PFHpA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C3-PFHxS (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C26:2FTS (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C8-PFOA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C8-PFOS (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C9-PFNA (S)	109	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ7-0-240523		Lab ID: 10694182020		Collected: 05/23/24 14:15		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178 Initial Volume/Weight: 14.395 mL Final Volume/Weight: 1 mL Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C28:2FTS (S)	110	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
d3-MeFOSAA (S)	65	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C7-PFUDa (S)	95	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C8-PFOSA (S)	58	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
d5-EtFOSAA (S)	65	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C2-PFDoA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
d3-NMeFOSA (S)	1	%.	10-150	1	06/12/24 06:52	06/13/24 18:24	S0		
d7-NMeFOSE (S)	34	%.	10-150	1	06/12/24 06:52	06/13/24 18:24			
13C2-PFTA (S)	87	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
d9-NEtFOSE (S)	35	%.	10-150	1	06/12/24 06:52	06/13/24 18:24			
d5-NEtFOSA (S)	1	%.	10-150	1	06/12/24 06:52	06/13/24 18:24	S0		
13C2PFHxDA (S)	62	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			
13C5-PFHxA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 18:24			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ8-0-240523		Lab ID: 10694182021		Collected: 05/23/24 15:15		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 10.108 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	46.5	1	06/12/24 06:52	06/13/24 18:32	763051-92-9		
4:2 FTS	ND	ng/L	46.3	1	06/12/24 06:52	06/13/24 18:32	757124-72-4		
6:2 FTS	ND	ng/L	47.0	1	06/12/24 06:52	06/13/24 18:32	27619-97-2		
8:2 FTS	ND	ng/L	47.7	1	06/12/24 06:52	06/13/24 18:32	39108-34-4		
9CI-PF3ONS	ND	ng/L	46.0	1	06/12/24 06:52	06/13/24 18:32	756426-58-1		
ADONA	ND	ng/L	46.7	1	06/12/24 06:52	06/13/24 18:32	919005-14-4		
HFPO-DA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	13252-13-6		
NEtFOSAA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	2991-50-6		
NEtFOSA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	4151-50-2		
NEtFOSE	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	1691-99-2		
NMeFOSAA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	2355-31-9		
NMeFOSA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	31506-32-8		
NMeFOSE	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	24448-09-7		
PFBS	ND	ng/L	43.8	1	06/12/24 06:52	06/13/24 18:32	375-73-5		
PFDA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	335-76-2		
PFHxA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	307-24-4		
PFBA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	375-22-4		
PFDS	ND	ng/L	47.7	1	06/12/24 06:52	06/13/24 18:32	335-77-3		
PFDoS	ND	ng/L	48.0	1	06/12/24 06:52	06/13/24 18:32	79780-39-5		
PFHpS	ND	ng/L	47.0	1	06/12/24 06:52	06/13/24 18:32	375-92-8		
PFNS	ND	ng/L	47.5	1	06/12/24 06:52	06/13/24 18:32	68259-12-1		
PFOSA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	754-91-6		
PFPeA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	2706-90-3		
PFPeS	ND	ng/L	46.5	1	06/12/24 06:52	06/13/24 18:32	2706-91-4		
PFDoA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	307-55-1		
PFHpA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	375-85-9		
PFHxS	ND	ng/L	45.0	1	06/12/24 06:52	06/13/24 18:32	355-46-4		
PFNA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	375-95-1		
PFOS	ND	ng/L	45.8	1	06/12/24 06:52	06/13/24 18:32	1763-23-1		
PFOA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	335-67-1		
PFTeDA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	376-06-7		
PFTrDA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	72629-94-8		
PFUnA	ND	ng/L	49.5	1	06/12/24 06:52	06/13/24 18:32	2058-94-8		
Surrogates									
13C4-PFBA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:32		1M	
13C5-PFPeA (S)	101	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C3-PFBS (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C24:2FTS (S)	52	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C3HFPO-DA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C4-PFHpA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C3-PFHxS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C26:2FTS (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C8-PFOA (S)	106	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C8-PFOS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C9-PFNA (S)	109	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ8-0-240523		Lab ID: 10694182021		Collected: 05/23/24 15:15		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178 Initial Volume/Weight: 10.108 mL Final Volume/Weight: 1 mL Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C28:2FTS (S)	81	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
d3-MeFOSAA (S)	83	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C7-PFUDa (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C8-PFOSA (S)	68	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
d5-EtFOSAA (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C2-PFDoA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
d3-NMeFOSA (S)	6	%.	10-150	1	06/12/24 06:52	06/13/24 18:32	S0		
d7-NMeFOSE (S)	36	%.	10-150	1	06/12/24 06:52	06/13/24 18:32			
13C2-PFTA (S)	84	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
d9-NEtFOSE (S)	32	%.	10-150	1	06/12/24 06:52	06/13/24 18:32			
d5-NEtFOSA (S)	5	%.	10-150	1	06/12/24 06:52	06/13/24 18:32	S0		
13C2PFHxDA (S)	47	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			
13C5-PFHxA (S)	104	%.	25-150	1	06/12/24 06:52	06/13/24 18:32			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ9-0-240523		Lab ID: 10694182022		Collected: 05/23/24 15:25		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 22.884 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	20.5	1	06/12/24 06:52	06/13/24 18:39	763051-92-9		
4:2 FTS	ND	ng/L	20.4	1	06/12/24 06:52	06/13/24 18:39	757124-72-4		
6:2 FTS	35.7	ng/L	20.8	1	06/12/24 06:52	06/13/24 18:39	27619-97-2		
8:2 FTS	ND	ng/L	21.1	1	06/12/24 06:52	06/13/24 18:39	39108-34-4		
9CI-PF3ONS	ND	ng/L	20.3	1	06/12/24 06:52	06/13/24 18:39	756426-58-1		
ADONA	ND	ng/L	20.6	1	06/12/24 06:52	06/13/24 18:39	919005-14-4		
HFPO-DA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	13252-13-6		
NEtFOSAA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	2991-50-6		
NEtFOSA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	4151-50-2		
NEtFOSE	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	1691-99-2		
NMeFOSAA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	2355-31-9		
NMeFOSA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	31506-32-8		
NMeFOSE	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	24448-09-7		
PFBS	ND	ng/L	19.3	1	06/12/24 06:52	06/13/24 18:39	375-73-5		
PFDA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	335-76-2		
PFHxA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	307-24-4		
PFBA	41.1	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	375-22-4		
PFDS	ND	ng/L	21.1	1	06/12/24 06:52	06/13/24 18:39	335-77-3		
PFDoS	ND	ng/L	21.2	1	06/12/24 06:52	06/13/24 18:39	79780-39-5		
PFHpS	ND	ng/L	20.8	1	06/12/24 06:52	06/13/24 18:39	375-92-8		
PFNS	ND	ng/L	21.0	1	06/12/24 06:52	06/13/24 18:39	68259-12-1		
PFOSA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	754-91-6		
PFPeA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	2706-90-3		
PFPeS	ND	ng/L	20.5	1	06/12/24 06:52	06/13/24 18:39	2706-91-4		
PFDoA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	307-55-1		
PFHpA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	375-85-9		
PFHxS	ND	ng/L	19.9	1	06/12/24 06:52	06/13/24 18:39	355-46-4		
PFNA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	375-95-1		
PFOS	ND	ng/L	20.2	1	06/12/24 06:52	06/13/24 18:39	1763-23-1		
PFOA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	335-67-1		
PFTeDA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	376-06-7		
PFTTrDA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	72629-94-8		
PFUnA	ND	ng/L	21.8	1	06/12/24 06:52	06/13/24 18:39	2058-94-8		
Surrogates									
13C4-PFBA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C5-PFPeA (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C3-PFBS (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C24:2FTS (S)	65	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C3HFPO-DA (S)	85	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C4-PFHpA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C3-PFHxS (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C26:2FTS (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C8-PFOA (S)	107	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C8-PFOS (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C9-PFNA (S)	115	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ9-0-240523		Lab ID: 10694182022		Collected: 05/23/24 15:25		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178 Initial Volume/Weight: 22.884 mL Final Volume/Weight: 1 mL Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)	106	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C28:2FTS (S)	89	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
d3-MeFOSAA (S)	75	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C7-PFUDa (S)	104	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C8-PFOSA (S)	78	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
d5-EtFOSAA (S)	81	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C2-PFDoA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
d3-NMeFOSA (S)	54	%.	10-150	1	06/12/24 06:52	06/13/24 18:39			
d7-NMeFOSE (S)	65	%.	10-150	1	06/12/24 06:52	06/13/24 18:39			
13C2-PFTA (S)	95	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
d9-NEtFOSE (S)	65	%.	10-150	1	06/12/24 06:52	06/13/24 18:39			
d5-NEtFOSA (S)	47	%.	10-150	1	06/12/24 06:52	06/13/24 18:39			
13C2PFHxDA (S)	90	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			
13C5-PFHxA (S)	103	%.	25-150	1	06/12/24 06:52	06/13/24 18:39			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK01-0-240523 **Lab ID:** 10694182023 **Collected:** 05/23/24 14:10 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 258.401 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11Cl-PF3OUdS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	763051-92-9	
4:2 FTS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	757124-72-4	
6:2 FTS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	27619-97-2	
8:2 FTS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	39108-34-4	
9Cl-PF3ONS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	756426-58-1	
ADONA	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	919005-14-4	
HFPO-DA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	13252-13-6	
NEtFOSAA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	2991-50-6	
NEtFOSA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	4151-50-2	
NEtFOSE	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	1691-99-2	
NMeFOSAA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	2355-31-9	
NMeFOSA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	31506-32-8	
NMeFOSE	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	24448-09-7	
PFBS	4.4	ng/L	1.7	1	06/12/24 06:52	06/13/24 18:46	375-73-5	
PFDA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	335-76-2	
PFHxA	5.1	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	307-24-4	
PFBA	8.4	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	375-22-4	
PFDS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	335-77-3	
PFDoS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	79780-39-5	
PFHpS	ND	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	375-92-8	
PFNS	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	68259-12-1	
PFOSA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	754-91-6	
PFPeA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	2706-90-3	
PFPeS	6.6	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	2706-91-4	
PFDoA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	307-55-1	
PFHpA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	375-85-9	
PFHxS	86.3	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	355-46-4	
PFNA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	375-95-1	
PFOS	34.8	ng/L	1.8	1	06/12/24 06:52	06/13/24 18:46	1763-23-1	
PFOA	6.5	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	335-67-1	
PFTeDA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	376-06-7	
PFTTrDA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	72629-94-8	
PFUnA	ND	ng/L	1.9	1	06/12/24 06:52	06/13/24 18:46	2058-94-8	
Surrogates								
13C4-PFBA (S)	87	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		1M
13C5-PFPeA (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C3-PFBS (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C24:2FTS (S)	63	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C3HFPO-DA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C4-PFHpA (S)	109	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C3-PFHxS (S)	111	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C26:2FTS (S)	75	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C8-PFOA (S)	114	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C8-PFOS (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK01-0-240523 **Lab ID:** 10694182023 **Collected:** 05/23/24 14:10 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 258.401 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	120	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C6-PFDA (S)	116	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C28:2FTS (S)	88	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
d3-MeFOSAA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C7-PFUdA (S)	108	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C8-PFOSA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
d5-EtFOSAA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C2-PFDoA (S)	105	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
d3-NMeFOSA (S)	13	%.	10-150	1	06/12/24 06:52	06/13/24 18:46		
d7-NMeFOSE (S)	67	%.	10-150	1	06/12/24 06:52	06/13/24 18:46		
13C2-PFTA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
d9-NEtFOSE (S)	56	%.	10-150	1	06/12/24 06:52	06/13/24 18:46		
d5-NEtFOSA (S)	9	%.	10-150	1	06/12/24 06:52	06/13/24 18:46		S0
13C2PFHxDA (S)	63	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		
13C5-PFHxA (S)	111	%.	25-150	1	06/12/24 06:52	06/13/24 18:46		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK03-DB-240523 **Lab ID:** 10694182024 **Collected:** 05/23/24 15:05 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 125.369 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	3.7	1	06/12/24 06:52	06/13/24 18:53	763051-92-9	
4:2 FTS	ND	ng/L	3.7	1	06/12/24 06:52	06/13/24 18:53	757124-72-4	
6:2 FTS	ND	ng/L	3.8	1	06/12/24 06:52	06/13/24 18:53	27619-97-2	
8:2 FTS	ND	ng/L	3.8	1	06/12/24 06:52	06/13/24 18:53	39108-34-4	
9CI-PF3ONS	ND	ng/L	3.7	1	06/12/24 06:52	06/13/24 18:53	756426-58-1	
ADONA	ND	ng/L	3.8	1	06/12/24 06:52	06/13/24 18:53	919005-14-4	
HFPO-DA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	13252-13-6	
NEtFOSAA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	2991-50-6	
NEtFOSA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	4151-50-2	
NEtFOSE	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	1691-99-2	
NMeFOSAA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	2355-31-9	
NMeFOSA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	31506-32-8	
NMeFOSE	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	24448-09-7	
PFBS	ND	ng/L	3.5	1	06/12/24 06:52	06/13/24 18:53	375-73-5	
PFDA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	335-76-2	
PFHxA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	307-24-4	
PFBA	13.1	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	375-22-4	
PFDS	ND	ng/L	3.8	1	06/12/24 06:52	06/13/24 18:53	335-77-3	
PFDoS	ND	ng/L	3.9	1	06/12/24 06:52	06/13/24 18:53	79780-39-5	
PFHpS	ND	ng/L	3.8	1	06/12/24 06:52	06/13/24 18:53	375-92-8	
PFNS	ND	ng/L	3.8	1	06/12/24 06:52	06/13/24 18:53	68259-12-1	
PFOSA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	754-91-6	
PFPeA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	2706-90-3	
PFPeS	ND	ng/L	3.7	1	06/12/24 06:52	06/13/24 18:53	2706-91-4	
PFDoA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	307-55-1	
PFHpA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	375-85-9	
PFHxS	37.9	ng/L	3.6	1	06/12/24 06:52	06/13/24 18:53	355-46-4	
PFNA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	375-95-1	
PFOS	39.7	ng/L	3.7	1	06/12/24 06:52	06/13/24 18:53	1763-23-1	
PFOA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	335-67-1	
PFTeDA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	376-06-7	
PFTrDA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	72629-94-8	
PFUnA	ND	ng/L	4.0	1	06/12/24 06:52	06/13/24 18:53	2058-94-8	
Surrogates								
13C4-PFBA (S)	79	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C5-PFPeA (S)	80	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C3-PFBS (S)	94	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C24:2FTS (S)	77	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C3HFPO-DA (S)	79	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C4-PFHpA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C3-PFHxS (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C26:2FTS (S)	89	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C8-PFOA (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C8-PFOS (S)	98	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK03-DB-240523 **Lab ID:** 10694182024 **Collected:** 05/23/24 15:05 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 125.369 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	102	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C6-PFDA (S)	110	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C28:2FTS (S)	99	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
d3-MeFOSAA (S)	66	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C7-PFUdA (S)	97	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C8-PFOSA (S)	70	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
d5-EtFOSAA (S)	64	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C2-PFDoA (S)	86	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
d3-NMeFOSA (S)	52	%.	10-150	1	06/12/24 06:52	06/13/24 18:53		
d7-NMeFOSE (S)	52	%.	10-150	1	06/12/24 06:52	06/13/24 18:53		
13C2-PFTA (S)	73	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
d9-NEtFOSE (S)	48	%.	10-150	1	06/12/24 06:52	06/13/24 18:53		
d5-NEtFOSA (S)	46	%.	10-150	1	06/12/24 06:52	06/13/24 18:53		
13C2PFHxDA (S)	67	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		
13C5-PFHxA (S)	96	%.	25-150	1	06/12/24 06:52	06/13/24 18:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK02-0-240523 **Lab ID:** 10694182025 **Collected:** 05/23/24 14:25 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 241.314 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:29	763051-92-9	
4:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:29	757124-72-4	
6:2 FTS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	27619-97-2	
8:2 FTS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	39108-34-4	
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:29	756426-58-1	
ADONA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	919005-14-4	
HFPO-DA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	13252-13-6	
NEtFOSAA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	2991-50-6	
NEtFOSA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	4151-50-2	
NEtFOSE	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	1691-99-2	
NMeFOSAA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	2355-31-9	
NMeFOSA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	31506-32-8	
NMeFOSE	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	24448-09-7	
PFBS	ND	ng/L	1.8	1	06/12/24 16:44	06/13/24 23:29	375-73-5	
PFDA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	335-76-2	
PFHxA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	307-24-4	
PFBA	6.9	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	375-22-4	
PFDS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	335-77-3	
PFDoS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	79780-39-5	
PFHpS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	375-92-8	
PFNS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:29	68259-12-1	
PFOSA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	754-91-6	
PFPeA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	2706-90-3	
PFPeS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:29	2706-91-4	
PFDoA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	307-55-1	
PFHpA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	375-85-9	
PFHxS	25.1	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:29	355-46-4	
PFNA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	375-95-1	
PFOS	12.8	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:29	1763-23-1	
PFOA	2.4	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	335-67-1	
PFTeDA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	376-06-7	
PFTTrDA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	72629-94-8	
PFUnA	ND	ng/L	2.1	1	06/12/24 16:44	06/13/24 23:29	2058-94-8	
Surrogates								
13C4-PFBA (S)	79	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		1M
13C5-PFPeA (S)	84	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C3-PFBS (S)	95	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C24:2FTS (S)	63	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C3HFPO-DA (S)	84	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C4-PFHpA (S)	99	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C3-PFHxS (S)	98	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C26:2FTS (S)	64	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C8-PFOA (S)	99	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C8-PFOS (S)	94	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK02-0-240523 **Lab ID:** 10694182025 **Collected:** 05/23/24 14:25 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 241.314 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	103	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C6-PFDA (S)	106	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C28:2FTS (S)	94	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
d3-MeFOSAA (S)	89	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C7-PFUdA (S)	94	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C8-PFOSA (S)	39	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
d5-EtFOSAA (S)	89	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C2-PFDoA (S)	86	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
d3-NMeFOSA (S)	1	%.	10-150	1	06/12/24 16:44	06/13/24 23:29		S0
d7-NMeFOSE (S)	14	%.	10-150	1	06/12/24 16:44	06/13/24 23:29		
13C2-PFTA (S)	75	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
d9-NEtFOSE (S)	13	%.	10-150	1	06/12/24 16:44	06/13/24 23:29		
d5-NEtFOSA (S)	2	%.	10-150	1	06/12/24 16:44	06/13/24 23:29		S0
13C2PFHxDA (S)	54	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		
13C5-PFHxA (S)	99	%.	25-150	1	06/12/24 16:44	06/13/24 23:29		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK03-0-240523 **Lab ID:** 10694182026 **Collected:** 05/23/24 15:00 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 48.181 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11Cl-PF3OUdS	ND	ng/L	9.8	1	06/12/24 16:44	06/13/24 23:36	763051-92-9	
4:2 FTS	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:36	757124-72-4	
6:2 FTS	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:36	27619-97-2	
8:2 FTS	ND	ng/L	10.0	1	06/12/24 16:44	06/13/24 23:36	39108-34-4	
9Cl-PF3ONS	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:36	756426-58-1	
ADONA	ND	ng/L	9.8	1	06/12/24 16:44	06/13/24 23:36	919005-14-4	
HFPO-DA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	13252-13-6	
NEtFOSAA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	2991-50-6	
NEtFOSA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	4151-50-2	
NEtFOSE	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	1691-99-2	
NMeFOSAA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	2355-31-9	
NMeFOSA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	31506-32-8	
NMeFOSE	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	24448-09-7	
PFBS	ND	ng/L	9.2	1	06/12/24 16:44	06/13/24 23:36	375-73-5	
PFDA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	335-76-2	
PFHxA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	307-24-4	
PFBA	12.0	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	375-22-4	
PFDS	ND	ng/L	10.0	1	06/12/24 16:44	06/13/24 23:36	335-77-3	
PFDoS	ND	ng/L	10.1	1	06/12/24 16:44	06/13/24 23:36	79780-39-5	
PFHpS	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:36	375-92-8	
PFNS	ND	ng/L	10	1	06/12/24 16:44	06/13/24 23:36	68259-12-1	
PFOSA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	754-91-6	
PFPeA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	2706-90-3	
PFPeS	ND	ng/L	9.8	1	06/12/24 16:44	06/13/24 23:36	2706-91-4	
PFDoA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	307-55-1	
PFHpA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	375-85-9	
PFHxS	38.1	ng/L	9.4	1	06/12/24 16:44	06/13/24 23:36	355-46-4	
PFNA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	375-95-1	
PFOS	37.1	ng/L	9.6	1	06/12/24 16:44	06/13/24 23:36	1763-23-1	
PFOA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	335-67-1	
PFTeDA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	376-06-7	
PFTTrDA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	72629-94-8	
PFUnA	ND	ng/L	10.4	1	06/12/24 16:44	06/13/24 23:36	2058-94-8	
Surrogates								
13C4-PFBA (S)	77	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		1M
13C5-PFPeA (S)	80	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C3-PFBS (S)	87	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C24:2FTS (S)	54	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C3HFPO-DA (S)	82	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C4-PFHpA (S)	89	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C3-PFHxS (S)	87	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C26:2FTS (S)	64	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C8-PFOA (S)	90	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C8-PFOS (S)	93	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK03-0-240523 **Lab ID:** 10694182026 **Collected:** 05/23/24 15:00 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 48.181 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	95	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C6-PFDA (S)	93	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C28:2FTS (S)	63	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
d3-MeFOSAA (S)	80	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C7-PFUdA (S)	91	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C8-PFOSA (S)	66	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
d5-EtFOSAA (S)	80	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C2-PFDoA (S)	90	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
d3-NMeFOSA (S)	8	%.	10-150	1	06/12/24 16:44	06/13/24 23:36		S0
d7-NMeFOSE (S)	42	%.	10-150	1	06/12/24 16:44	06/13/24 23:36		
13C2-PFTA (S)	84	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
d9-NEtFOSE (S)	41	%.	10-150	1	06/12/24 16:44	06/13/24 23:36		
d5-NEtFOSA (S)	7	%.	10-150	1	06/12/24 16:44	06/13/24 23:36		S0
13C2PFHxDA (S)	73	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		
13C5-PFHxA (S)	89	%.	25-150	1	06/12/24 16:44	06/13/24 23:36		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK04-0-240523 **Lab ID:** 10694182027 **Collected:** 05/23/24 14:45 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW								
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178								
Initial Volume/Weight: 247.109 mL Final Volume/Weight: 1 mL								
Pace Analytical Services - Minneapolis								
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	763051-92-9	
4:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	757124-72-4	
6:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	27619-97-2	
8:2 FTS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	39108-34-4	
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	756426-58-1	
ADONA	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	919005-14-4	
HFPO-DA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	13252-13-6	
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	2991-50-6	
NEtFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	4151-50-2	
NEtFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	1691-99-2	
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	2355-31-9	
NMeFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	31506-32-8	
NMeFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	24448-09-7	
PFBS	2.3	ng/L	1.8	1	06/12/24 16:44	06/13/24 23:43	375-73-5	
PFDA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	335-76-2	
PFHxA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	307-24-4	
PFBA	9.0	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	375-22-4	
PFDS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	335-77-3	
PFDoS	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	79780-39-5	
PFHpS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	375-92-8	
PFNS	ND	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	68259-12-1	
PFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	754-91-6	
PFPeA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	2706-90-3	
PFPeS	2.0	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	2706-91-4	
PFDoA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	307-55-1	
PFHpA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	375-85-9	
PFHxS	30.0	ng/L	1.8	1	06/12/24 16:44	06/13/24 23:43	355-46-4	
PFNA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	375-95-1	
PFOS	9.2	ng/L	1.9	1	06/12/24 16:44	06/13/24 23:43	1763-23-1	
PFOA	2.5	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	335-67-1	
PFTeDA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	376-06-7	
PFTTrDA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	72629-94-8	
PFUnA	ND	ng/L	2.0	1	06/12/24 16:44	06/13/24 23:43	2058-94-8	
Surrogates								
13C4-PFBA (S)	88	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		1M
13C5-PFPeA (S)	94	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C3-PFBS (S)	106	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C24:2FTS (S)	58	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C3HFPO-DA (S)	98	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C4-PFHpA (S)	107	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C3-PFHxS (S)	108	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C26:2FTS (S)	68	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C8-PFOA (S)	109	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C8-PFOS (S)	105	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-SW-CREEK04-0-240523 **Lab ID:** 10694182027 **Collected:** 05/23/24 14:45 **Received:** 05/23/24 18:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 247.109 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C9-PFNA (S)	115	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C6-PFDA (S)	118	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C28:2FTS (S)	114	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
d3-MeFOSAA (S)	90	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C7-PFUdA (S)	105	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C8-PFOSA (S)	30	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
d5-EtFOSAA (S)	91	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C2-PFDoA (S)	97	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
d3-NMeFOSA (S)	0	%.	10-150	1	06/12/24 16:44	06/13/24 23:43		S0
d7-NMeFOSE (S)	6	%.	10-150	1	06/12/24 16:44	06/13/24 23:43		S0
13C2-PFTA (S)	80	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
d9-NEtFOSE (S)	5	%.	10-150	1	06/12/24 16:44	06/13/24 23:43		S0
d5-NEtFOSA (S)	0	%.	10-150	1	06/12/24 16:44	06/13/24 23:43		S0
13C2PFHxDA (S)	37	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		
13C5-PFHxA (S)	109	%.	25-150	1	06/12/24 16:44	06/13/24 23:43		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ0-0-240523		Lab ID: 10694182028		Collected: 05/23/24 09:25		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 50.663 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
11CI-PF3OUdS	ND	ng/L	9.3	1	06/12/24 16:44	06/13/24 23:51	763051-92-9		
4:2 FTS	ND	ng/L	9.2	1	06/12/24 16:44	06/13/24 23:51	757124-72-4		
6:2 FTS	ND	ng/L	9.4	1	06/12/24 16:44	06/13/24 23:51	27619-97-2		
8:2 FTS	ND	ng/L	9.5	1	06/12/24 16:44	06/13/24 23:51	39108-34-4		
9CI-PF3ONS	ND	ng/L	9.2	1	06/12/24 16:44	06/13/24 23:51	756426-58-1		
ADONA	ND	ng/L	9.3	1	06/12/24 16:44	06/13/24 23:51	919005-14-4		
HFPO-DA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	13252-13-6		
NEtFOSAA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	2991-50-6		
NEtFOSA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	4151-50-2		
NEtFOSE	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	1691-99-2		
NMeFOSAA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	2355-31-9		
NMeFOSA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	31506-32-8		
NMeFOSE	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	24448-09-7		
PFBS	ND	ng/L	8.7	1	06/12/24 16:44	06/13/24 23:51	375-73-5		
PFDA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	335-76-2		
PFHxA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	307-24-4		
PFBA	10.2	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	375-22-4		
PFDS	ND	ng/L	9.5	1	06/12/24 16:44	06/13/24 23:51	335-77-3		
PFDoS	ND	ng/L	9.6	1	06/12/24 16:44	06/13/24 23:51	79780-39-5		
PFHpS	ND	ng/L	9.4	1	06/12/24 16:44	06/13/24 23:51	375-92-8		
PFNS	ND	ng/L	9.5	1	06/12/24 16:44	06/13/24 23:51	68259-12-1		
PFOSA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	754-91-6		
PFPeA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	2706-90-3		
PFPeS	ND	ng/L	9.3	1	06/12/24 16:44	06/13/24 23:51	2706-91-4		
PFDoA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	307-55-1		
PFHpA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	375-85-9		
PFHxS	15.2	ng/L	9.0	1	06/12/24 16:44	06/13/24 23:51	355-46-4		
PFNA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	375-95-1		
PFOS	ND	ng/L	9.1	1	06/12/24 16:44	06/13/24 23:51	1763-23-1		
PFOA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	335-67-1		
PFTeDA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	376-06-7		
PFTrDA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	72629-94-8		
PFUnA	ND	ng/L	9.9	1	06/12/24 16:44	06/13/24 23:51	2058-94-8		
Surrogates									
13C4-PFBA (S)	88	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			1M
13C5-PFPeA (S)	97	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C3-PFBS (S)	102	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C24:2FTS (S)	39	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C3HFPO-DA (S)	98	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C4-PFHpA (S)	101	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C3-PFHxS (S)	102	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C26:2FTS (S)	47	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C8-PFOA (S)	101	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C8-PFOS (S)	102	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			
13C9-PFNA (S)	110	%.	25-150	1	06/12/24 16:44	06/13/24 23:51			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ0-0-240523 Lab ID: 10694182028 Collected: 05/23/24 09:25 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 50.663 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	103	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
13C28:2FTS (S)	53	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
d3-MeFOSAA (S)	79	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
13C7-PFUDa (S)	100	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
13C8-PFOSA (S)	79	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
d5-EtFOSAA (S)	80	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
13C2-PFDoA (S)	105	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
d3-NMeFOSA (S)	11	%.	10-150	1	06/12/24 16:44	06/13/24 23:51		
d7-NMeFOSE (S)	59	%.	10-150	1	06/12/24 16:44	06/13/24 23:51		
13C2-PFTA (S)	96	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
d9-NEtFOSE (S)	55	%.	10-150	1	06/12/24 16:44	06/13/24 23:51		
d5-NEtFOSA (S)	7	%.	10-150	1	06/12/24 16:44	06/13/24 23:51		S0
13C2PFHxDA (S)	82	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		
13C5-PFHxA (S)	100	%.	25-150	1	06/12/24 16:44	06/13/24 23:51		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ10-0-240523		Lab ID: 10694182029		Collected: 05/23/24 14:30		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 51.34 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	9.2	1	06/12/24 16:44	06/13/24 23:58	763051-92-9		
4:2 FTS	ND	ng/L	9.1	1	06/12/24 16:44	06/13/24 23:58	757124-72-4		
6:2 FTS	ND	ng/L	9.3	1	06/12/24 16:44	06/13/24 23:58	27619-97-2		
8:2 FTS	ND	ng/L	9.4	1	06/12/24 16:44	06/13/24 23:58	39108-34-4		
9CI-PF3ONS	ND	ng/L	9.1	1	06/12/24 16:44	06/13/24 23:58	756426-58-1		
ADONA	ND	ng/L	9.2	1	06/12/24 16:44	06/13/24 23:58	919005-14-4		
HFPO-DA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	13252-13-6		
NEtFOSAA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	2991-50-6		
NEtFOSA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	4151-50-2		
NEtFOSE	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	1691-99-2		
NMeFOSAA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	2355-31-9		
NMeFOSA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	31506-32-8		
NMeFOSE	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	24448-09-7		
PFBS	11.1	ng/L	8.6	1	06/12/24 16:44	06/13/24 23:58	375-73-5		
PFDA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	335-76-2		
PFHxA	20.1	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	307-24-4		
PFBA	32.8	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	375-22-4		
PFDS	ND	ng/L	9.4	1	06/12/24 16:44	06/13/24 23:58	335-77-3		
PFDoS	ND	ng/L	9.4	1	06/12/24 16:44	06/13/24 23:58	79780-39-5		
PFHpS	ND	ng/L	9.3	1	06/12/24 16:44	06/13/24 23:58	375-92-8		
PFNS	ND	ng/L	9.3	1	06/12/24 16:44	06/13/24 23:58	68259-12-1		
PFOSA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	754-91-6		
PFPeA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	2706-90-3		
PFPeS	18.6	ng/L	9.2	1	06/12/24 16:44	06/13/24 23:58	2706-91-4		
PFDoA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	307-55-1		
PFHpA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	375-85-9		
PFHxS	361	ng/L	8.9	1	06/12/24 16:44	06/13/24 23:58	355-46-4		
PFNA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	375-95-1		
PFOS	13.7	ng/L	9.0	1	06/12/24 16:44	06/13/24 23:58	1763-23-1		
PFOA	33.0	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	335-67-1		
PFTeDA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	376-06-7		
PFTrDA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	72629-94-8		
PFUnA	ND	ng/L	9.7	1	06/12/24 16:44	06/13/24 23:58	2058-94-8		
Surrogates									
13C4-PFBA (S)	90	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		1M	
13C5-PFPeA (S)	93	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C3-PFBS (S)	102	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C24:2FTS (S)	64	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C3HFPO-DA (S)	87	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C4-PFHpA (S)	105	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C3-PFHxS (S)	104	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C26:2FTS (S)	84	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C8-PFOA (S)	106	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C8-PFOS (S)	106	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			
13C9-PFNA (S)	110	%.	25-150	1	06/12/24 16:44	06/13/24 23:58			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-GW-PZ10-0-240523		Lab ID: 10694182029		Collected: 05/23/24 14:30		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 51.34 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)		104	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
13C28:2FTS (S)		78	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
d3-MeFOSAA (S)		79	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
13C7-PFUDa (S)		101	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
13C8-PFOSA (S)		33	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
d5-EtFOSAA (S)		81	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
13C2-PFDoA (S)		85	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
d3-NMeFOSA (S)		0	%.	10-150	1	06/12/24 16:44	06/13/24 23:58		S0
d7-NMeFOSE (S)		5	%.	10-150	1	06/12/24 16:44	06/13/24 23:58		S0
13C2-PFTA (S)		42	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		
d9-NEtFOSE (S)		6	%.	10-150	1	06/12/24 16:44	06/13/24 23:58		S0
d5-NEtFOSA (S)		0	%.	10-150	1	06/12/24 16:44	06/13/24 23:58		S0
13C2PFHxDA (S)		6	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		S0
13C5-PFHxA (S)		104	%.	25-150	1	06/12/24 16:44	06/13/24 23:58		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-W-FB1-FB-240523		Lab ID: 10694182030		Collected: 05/23/24 09:25		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 254.725 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
11CI-PF3OUdS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:05	763051-92-9		
4:2 FTS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:05	757124-72-4		
6:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	27619-97-2		
8:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:05	756426-58-1		
ADONA	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	24448-09-7		
PFBS	ND	ng/L	1.7	1	06/12/24 16:44	06/14/24 00:05	375-73-5		
PFDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	335-76-2		
PFHxA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	307-24-4		
PFBA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	375-22-4		
PFDS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	335-77-3		
PFDoS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	79780-39-5		
PFHpS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	375-92-8		
PFNS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:05	68259-12-1		
PFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	754-91-6		
PFPeA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	2706-90-3		
PFPeS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:05	2706-91-4		
PFDoA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	307-55-1		
PFHpA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	375-85-9		
PFHxS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:05	355-46-4		
PFNA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	375-95-1		
PFOS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:05	1763-23-1		
PFOA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	335-67-1		
PFTeDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	376-06-7		
PFTrDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	72629-94-8		
PFUnA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:05	2058-94-8		
Surrogates									
13C4-PFBA (S)	105	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			1M
13C5-PFPeA (S)	108	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C3-PFBS (S)	106	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C24:2FTS (S)	47	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C3HFPO-DA (S)	96	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C4-PFHpA (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C3-PFHxS (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C26:2FTS (S)	52	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C8-PFOA (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C8-PFOS (S)	99	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			
13C9-PFNA (S)	111	%.	25-150	1	06/12/24 16:44	06/14/24 00:05			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-W-FB1-FB-240523 Lab ID: 10694182030 Collected: 05/23/24 09:25 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 254.725 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	112	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
13C28:2FTS (S)	155	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		S3
d3-MeFOSAA (S)	86	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
13C7-PFUDa (S)	102	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
13C8-PFOSA (S)	85	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
d5-EtFOSAA (S)	86	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
13C2-PFDoA (S)	102	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
d3-NMeFOSA (S)	37	%.	10-150	1	06/12/24 16:44	06/14/24 00:05		
d7-NMeFOSE (S)	80	%.	10-150	1	06/12/24 16:44	06/14/24 00:05		
13C2-PFTA (S)	97	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
d9-NEtFOSE (S)	79	%.	10-150	1	06/12/24 16:44	06/14/24 00:05		
d5-NEtFOSA (S)	35	%.	10-150	1	06/12/24 16:44	06/14/24 00:05		
13C2PFHxDA (S)	77	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		
13C5-PFHxA (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:05		

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-W-EB1-EB-240523		Lab ID: 10694182031		Collected: 05/23/24 09:20		Received: 05/23/24 18:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Initial Volume/Weight: 253.773 mL Final Volume/Weight: 1 mL									
Pace Analytical Services - Minneapolis									
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	763051-92-9		
4:2 FTS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:12	757124-72-4		
6:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	27619-97-2		
8:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:12	756426-58-1		
ADONA	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	24448-09-7		
PFBS	ND	ng/L	1.7	1	06/12/24 16:44	06/14/24 00:12	375-73-5		
PFDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	335-76-2		
PFHxA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	307-24-4		
PFBA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	375-22-4		
PFDS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	335-77-3		
PFDoS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	79780-39-5		
PFHpS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	375-92-8		
PFNS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	68259-12-1		
PFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	754-91-6		
PFPeA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	2706-90-3		
PFPeS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:12	2706-91-4		
PFDoA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	307-55-1		
PFHpA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	375-85-9		
PFHxS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:12	355-46-4		
PFNA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	375-95-1		
PFOS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:12	1763-23-1		
PFOA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	335-67-1		
PFTeDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	376-06-7		
PFTrDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	72629-94-8		
PFUnA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:12	2058-94-8		
Surrogates									
13C4-PFBA (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:12		1M	
13C5-PFPeA (S)	110	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C3-PFBS (S)	108	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C24:2FTS (S)	48	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C3HFPO-DA (S)	101	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C4-PFHpA (S)	106	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C3-PFHxS (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C26:2FTS (S)	54	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C8-PFOA (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C8-PFOS (S)	104	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C9-PFNA (S)	111	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-W-EB1-EB-240523		Lab ID: 10694182031		Collected: 05/23/24 09:20		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178 Initial Volume/Weight: 253.773 mL Final Volume/Weight: 1 mL Pace Analytical Services - Minneapolis							
Surrogates									
13C6-PFDA (S)	116	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			S3
13C28:2FTS (S)	221	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
d3-MeFOSAA (S)	91	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C7-PFUDa (S)	102	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C8-PFOSA (S)	86	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
d5-EtFOSAA (S)	93	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C2-PFDoA (S)	99	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
d3-NMeFOSA (S)	18	%.	10-150	1	06/12/24 16:44	06/14/24 00:12			
d7-NMeFOSE (S)	77	%.	10-150	1	06/12/24 16:44	06/14/24 00:12			
13C2-PFTA (S)	102	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
d9-NEtFOSE (S)	69	%.	10-150	1	06/12/24 16:44	06/14/24 00:12			
d5-NEtFOSA (S)	16	%.	10-150	1	06/12/24 16:44	06/14/24 00:12			
13C2PFHxDA (S)	69	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			
13C5-PFHxA (S)	107	%.	25-150	1	06/12/24 16:44	06/14/24 00:12			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-W-TB1-TB-240523		Lab ID: 10694182032		Collected: 05/23/24 00:00		Received: 05/23/24 18:00		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW		Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178							
		Initial Volume/Weight: 248.242 mL Final Volume/Weight: 1 mL							
		Pace Analytical Services - Minneapolis							
11CI-PF3OUdS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	763051-92-9		
4:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	757124-72-4		
6:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	27619-97-2		
8:2 FTS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	39108-34-4		
9CI-PF3ONS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	756426-58-1		
ADONA	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	919005-14-4		
HFPO-DA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	13252-13-6		
NEtFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	2991-50-6		
NEtFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	4151-50-2		
NEtFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	1691-99-2		
NMeFOSAA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	2355-31-9		
NMeFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	31506-32-8		
NMeFOSE	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	24448-09-7		
PFBS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:20	375-73-5		
PFDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	335-76-2		
PFHxA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	307-24-4		
PFBA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	375-22-4		
PFDS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	335-77-3		
PFDoS	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	79780-39-5		
PFHpS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	375-92-8		
PFNS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	68259-12-1		
PFOSA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	754-91-6		
PFPeA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	2706-90-3		
PFPeS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	2706-91-4		
PFDoA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	307-55-1		
PFHpA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	375-85-9		
PFHxS	ND	ng/L	1.8	1	06/12/24 16:44	06/14/24 00:20	355-46-4		
PFNA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	375-95-1		
PFOS	ND	ng/L	1.9	1	06/12/24 16:44	06/14/24 00:20	1763-23-1		
PFOA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	335-67-1		
PFTeDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	376-06-7		
PFTTrDA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	72629-94-8		
PFUnA	ND	ng/L	2.0	1	06/12/24 16:44	06/14/24 00:20	2058-94-8		
Surrogates									
13C4-PFBA (S)	109	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C5-PFPeA (S)	113	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C3-PFBS (S)	111	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C24:2FTS (S)	52	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C3HFPO-DA (S)	98	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C4-PFHpA (S)	109	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C3-PFHxS (S)	110	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C26:2FTS (S)	54	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C8-PFOA (S)	108	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C8-PFOS (S)	97	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			
13C9-PFNA (S)	110	%.	25-150	1	06/12/24 16:44	06/14/24 00:20			

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ANALYTICAL RESULTS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Sample: MEWI-W-TB1-TB-240523 Lab ID: 10694182032 Collected: 05/23/24 00:00 Received: 05/23/24 18:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Initial Volume/Weight: 248.242 mL Final Volume/Weight: 1 mL

Pace Analytical Services - Minneapolis

Surrogates

13C6-PFDA (S)	108	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
13C28:2FTS (S)	147	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
d3-MeFOSAA (S)	75	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
13C7-PFUDa (S)	87	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
13C8-PFOSA (S)	87	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
d5-EtFOSAA (S)	79	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
13C2-PFDoA (S)	83	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
d3-NMeFOSA (S)	66	%.	10-150	1	06/12/24 16:44	06/14/24 00:20		
d7-NMeFOSE (S)	82	%.	10-150	1	06/12/24 16:44	06/14/24 00:20		
13C2-PFTA (S)	81	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
d9-NEtFOSE (S)	82	%.	10-150	1	06/12/24 16:44	06/14/24 00:20		
d5-NEtFOSA (S)	69	%.	10-150	1	06/12/24 16:44	06/14/24 00:20		
13C2PFHxDA (S)	66	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		
13C5-PFHxA (S)	109	%.	25-150	1	06/12/24 16:44	06/14/24 00:20		

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

QC Batch: 947068

Analysis Method: ENV-SOP-MIN4-0178

QC Batch Method: ENV-SOP-MIN4-0178

Analysis Description: WI ID NPW

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10694182001, 10694182002, 10694182003, 10694182004

METHOD BLANK: 4955031

Matrix: Water

Associated Lab Samples: 10694182001, 10694182002, 10694182003, 10694182004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	ND	1.8	05/31/24 07:32	
4:2 FTS	ng/L	ND	1.8	05/31/24 07:32	
6:2 FTS	ng/L	ND	1.9	05/31/24 07:32	
8:2 FTS	ng/L	ND	1.9	05/31/24 07:32	
9CI-PF3ONS	ng/L	ND	1.8	05/31/24 07:32	
ADONA	ng/L	ND	1.8	05/31/24 07:32	
HFPO-DA	ng/L	ND	2.0	05/31/24 07:32	
NEtFOSA	ng/L	ND	2.0	05/31/24 07:32	
NEtFOSAA	ng/L	ND	2.0	05/31/24 07:32	
NEtFOSE	ng/L	ND	2.0	05/31/24 07:32	
NMeFOSA	ng/L	ND	2.0	05/31/24 07:32	
NMeFOSAA	ng/L	ND	2.0	05/31/24 07:32	
NMeFOSE	ng/L	ND	2.0	05/31/24 07:32	
PFBA	ng/L	ND	2.0	05/31/24 07:32	
PFBS	ng/L	ND	1.7	05/31/24 07:32	
PFDA	ng/L	ND	2.0	05/31/24 07:32	
PFDoA	ng/L	ND	2.0	05/31/24 07:32	
PFDoS	ng/L	ND	1.9	05/31/24 07:32	
PFDS	ng/L	ND	1.9	05/31/24 07:32	
PFHpA	ng/L	ND	2.0	05/31/24 07:32	
PFHpS	ng/L	ND	1.9	05/31/24 07:32	
PFHxA	ng/L	ND	2.0	05/31/24 07:32	
PFHxS	ng/L	ND	1.8	05/31/24 07:32	
PFNA	ng/L	ND	2.0	05/31/24 07:32	
PFNS	ng/L	ND	1.9	05/31/24 07:32	
PFOA	ng/L	ND	2.0	05/31/24 07:32	
PFOS	ng/L	ND	1.8	05/31/24 07:32	
PFOSA	ng/L	ND	2.0	05/31/24 07:32	
PFPeA	ng/L	ND	2.0	05/31/24 07:32	
PFPeS	ng/L	ND	1.8	05/31/24 07:32	
PFTeDA	ng/L	ND	2.0	05/31/24 07:32	
PFTTrDA	ng/L	ND	2.0	05/31/24 07:32	
PFUnA	ng/L	ND	2.0	05/31/24 07:32	
13C2-PFDoA (S)	%.	95	25-150	05/31/24 07:32	
13C2-PFTA (S)	%.	84	25-150	05/31/24 07:32	
13C24:2FTS (S)	%.	87	25-150	05/31/24 07:32	
13C26:2FTS (S)	%.	87	25-150	05/31/24 07:32	
13C28:2FTS (S)	%.	96	25-150	05/31/24 07:32	
13C2PFHxDA (S)	%.	63	25-150	05/31/24 07:32	
13C3-PFBS (S)	%.	100	25-150	05/31/24 07:32	

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

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

METHOD BLANK: 4955031

Matrix: Water

Associated Lab Samples: 10694182001, 10694182002, 10694182003, 10694182004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C3-PFHxS (S)	%.	101	25-150	05/31/24 07:32	
13C3HFPO-DA (S)	%.	104	25-150	05/31/24 07:32	
13C4-PFBA (S)	%.	98	25-150	05/31/24 07:32	
13C4-PFHpA (S)	%.	98	25-150	05/31/24 07:32	
13C5-PFHxA (S)	%.	100	25-150	05/31/24 07:32	
13C5-PFPeA (S)	%.	101	25-150	05/31/24 07:32	
13C6-PFDA (S)	%.	100	25-150	05/31/24 07:32	
13C7-PFUDa (S)	%.	95	25-150	05/31/24 07:32	
13C8-PFOA (S)	%.	99	25-150	05/31/24 07:32	
13C8-PFOS (S)	%.	98	25-150	05/31/24 07:32	
13C8-PFOSA (S)	%.	86	25-150	05/31/24 07:32	
13C9-PFNA (S)	%.	96	25-150	05/31/24 07:32	
d3-MeFOSAA (S)	%.	82	25-150	05/31/24 07:32	
d3-NMeFOSA (S)	%.	26	20-150	05/31/24 07:32	
d5-EtFOSAA (S)	%.	87	25-150	05/31/24 07:32	
d5-NEtFOSA (S)	%.	26	20-150	05/31/24 07:32	
d7-NMeFOSE (S)	%.	79	20-150	05/31/24 07:32	
d9-NEtFOSE (S)	%.	77	20-150	05/31/24 07:32	

LABORATORY CONTROL SAMPLE & LCSD: 4955032

4955033

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11CI-PF3OUdS	ng/L	3.7	3.2	3.5	86	92	50-150	11	30	
4:2 FTS	ng/L	3.7	3.3	3.4	90	89	50-150	3	30	
6:2 FTS	ng/L	3.7	3.4	3.7	92	95	50-150	7	30	
8:2 FTS	ng/L	3.8	4.2	3.4	112	88	50-150	20	30	
9CI-PF3ONS	ng/L	3.7	3.3	3.3	89	87	50-150	2	30	
ADONA	ng/L	3.7	3.4	3.5	93	91	50-150	1	30	
HFPO-DA	ng/L	3.9	3.7	3.6	94	90	50-150	1	30	
NEtFOSA	ng/L	3.9	3.7	3.4	96	84	50-150	8	30	
NEtFOSAA	ng/L	3.9	3.4	3.3	86	82	50-150	1	30	
NEtFOSE	ng/L	3.9	3.9	3.7	100	91	50-150	6	30	
NMeFOSA	ng/L	3.9	3.6	3.5	91	86	50-150	2	30	
NMeFOSAA	ng/L	3.9	3.8	3.9	98	95	50-150	1	30	
NMeFOSE	ng/L	3.9	3.7	3.7	95	90	50-150	2	30	
PFBA	ng/L	3.9	3.7	3.7	94	91	50-150	0	30	
PFBS	ng/L	3.5	3.3	3.3	94	91	50-150	0	30	
PFDA	ng/L	3.9	3.6	3.7	92	92	50-150	3	30	
PFDoA	ng/L	3.9	3.5	3.6	89	87	50-150	2	30	
PFDoS	ng/L	3.8	3.2	3.4	83	85	50-150	6	30	
PFDS	ng/L	3.8	3.0	3.9	79	99	50-150	27	30	
PFHpA	ng/L	3.9	3.6	3.7	91	90	50-150	3	30	
PFHpS	ng/L	3.7	3.3	3.4	88	86	50-150	2	30	
PFHxA	ng/L	3.9	3.7	3.6	93	89	50-150	0	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

LABORATORY CONTROL SAMPLE & LCSD: 4955032			4955033							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFHxS	ng/L	3.6	3.3	3.3	91	89	50-150	1	30	
PFNA	ng/L	3.9	3.5	3.6	89	88	50-150	3	30	
PFNS	ng/L	3.8	3.2	3.6	85	92	50-150	12	30	
PFOA	ng/L	3.9	3.5	3.7	90	90	50-150	3	30	
PFOS	ng/L	3.6	3.5	3.7	96	99	50-150	7	30	
PFOSA	ng/L	3.9	3.9	3.8	100	93	50-150	3	30	
PFPeA	ng/L	3.9	3.7	3.7	96	91	50-150	1	30	
PFPeS	ng/L	3.7	3.6	3.5	98	91	50-150	3	30	
PFTeDA	ng/L	3.9	3.5	3.6	88	87	50-150	3	30	
PFTTrDA	ng/L	3.9	3.5	3.7	91	92	50-150	5	30	
PFUnA	ng/L	3.9	3.3	3.6	84	87	50-150	7	30	
13C2-PFDoA (S)	%				101	95	25-150			
13C2-PFTA (S)	%				85	90	25-150			
13C24:2FTS (S)	%				84	84	25-150			
13C26:2FTS (S)	%				82	79	25-150			
13C28:2FTS (S)	%				68	84	25-150			
13C2PFHxDA (S)	%				61	70	25-150			
13C3-PFBS (S)	%				98	94	25-150			
13C3-PFHxS (S)	%				94	92	25-150			
13C3HFPO-DA (S)	%				99	96	25-150			
13C4-PFBA (S)	%				93	93	25-150			
13C4-PFHpA (S)	%				94	93	25-150			
13C5-PFHxA (S)	%				97	94	25-150			
13C5-PFPeA (S)	%				96	94	25-150			
13C6-PFDA (S)	%				95	94	25-150			
13C7-PFUdA (S)	%				97	92	25-150			
13C8-PFOA (S)	%				95	92	25-150			
13C8-PFOS (S)	%				98	91	25-150			
13C8-PFOSA (S)	%				78	74	25-150			
13C9-PFNA (S)	%				95	94	25-150			
d3-MeFOSAA (S)	%				77	76	25-150			
d3-NMeFOSA (S)	%				56	12	20-150			S0
d5-EtFOSAA (S)	%				82	85	25-150			
d5-NEtFOSA (S)	%				51	9	20-150			S0
d7-NMeFOSE (S)	%				80	66	20-150			
d9-NEtFOSE (S)	%				78	62	20-150			

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

QC Batch:	950057	Analysis Method:	ENV-SOP-MIN4-0178
QC Batch Method:	ENV-SOP-MIN4-0178	Analysis Description:	WI ID NPW
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 10694182005, 10694182006, 10694182007, 10694182008, 10694182009, 10694182011, 10694182012, 10694182013, 10694182014, 10694182015, 10694182016, 10694182017, 10694182018, 10694182019, 10694182020, 10694182021, 10694182022, 10694182023, 10694182024

METHOD BLANK: 4968868

Matrix: Water

Associated Lab Samples: 10694182005, 10694182006, 10694182007, 10694182008, 10694182009, 10694182011, 10694182012, 10694182013, 10694182014, 10694182015, 10694182016, 10694182017, 10694182018, 10694182019, 10694182020, 10694182021, 10694182022, 10694182023, 10694182024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	ND	1.8	06/13/24 15:49	
4:2 FTS	ng/L	ND	1.8	06/13/24 15:49	
6:2 FTS	ng/L	ND	1.9	06/13/24 15:49	
8:2 FTS	ng/L	ND	1.9	06/13/24 15:49	
9CI-PF3ONS	ng/L	ND	1.8	06/13/24 15:49	
ADONA	ng/L	ND	1.8	06/13/24 15:49	
HFPO-DA	ng/L	ND	1.9	06/13/24 15:49	
NEtFOSA	ng/L	ND	1.9	06/13/24 15:49	
NEtFOSAA	ng/L	ND	1.9	06/13/24 15:49	
NEtFOSE	ng/L	ND	1.9	06/13/24 15:49	
NMeFOSA	ng/L	ND	1.9	06/13/24 15:49	
NMeFOSAA	ng/L	ND	1.9	06/13/24 15:49	
NMeFOSE	ng/L	ND	1.9	06/13/24 15:49	
PFBA	ng/L	ND	1.9	06/13/24 15:49	
PFBS	ng/L	ND	1.7	06/13/24 15:49	
PFDA	ng/L	ND	1.9	06/13/24 15:49	
PFDoA	ng/L	ND	1.9	06/13/24 15:49	
PFDoS	ng/L	ND	1.9	06/13/24 15:49	
PFDS	ng/L	ND	1.9	06/13/24 15:49	
PFHpA	ng/L	ND	1.9	06/13/24 15:49	
PFHpS	ng/L	ND	1.9	06/13/24 15:49	
PFHxA	ng/L	ND	1.9	06/13/24 15:49	
PFHxS	ng/L	ND	1.8	06/13/24 15:49	
PFNA	ng/L	ND	1.9	06/13/24 15:49	
PFNS	ng/L	ND	1.9	06/13/24 15:49	
PFOA	ng/L	ND	1.9	06/13/24 15:49	
PFOS	ng/L	ND	1.8	06/13/24 15:49	
PFOSA	ng/L	ND	1.9	06/13/24 15:49	
PFPeA	ng/L	ND	1.9	06/13/24 15:49	
PFPeS	ng/L	ND	1.8	06/13/24 15:49	
PFTeDA	ng/L	ND	1.9	06/13/24 15:49	
PFTTrDA	ng/L	ND	1.9	06/13/24 15:49	
PFUnA	ng/L	ND	1.9	06/13/24 15:49	
13C2-PFDoA (S)	%	111	25-150	06/13/24 15:49	
13C2-PFTA (S)	%	103	25-150	06/13/24 15:49	
13C24:2FTS (S)	%	95	25-150	06/13/24 15:49	
13C26:2FTS (S)	%	98	25-150	06/13/24 15:49	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

METHOD BLANK: 4968868

Matrix: Water

Associated Lab Samples: 10694182005, 10694182006, 10694182007, 10694182008, 10694182009, 10694182011, 10694182012, 10694182013, 10694182014, 10694182015, 10694182016, 10694182017, 10694182018, 10694182019, 10694182020, 10694182021, 10694182022, 10694182023, 10694182024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C28:2FTS (S)	%.	104	25-150	06/13/24 15:49	
13C2PFHxDA (S)	%.	74	25-150	06/13/24 15:49	
13C3-PFBS (S)	%.	110	25-150	06/13/24 15:49	
13C3-PFHxS (S)	%.	108	25-150	06/13/24 15:49	
13C3HFPO-DA (S)	%.	98	25-150	06/13/24 15:49	
13C4-PFBA (S)	%.	106	25-150	06/13/24 15:49	
13C4-PFHpA (S)	%.	109	25-150	06/13/24 15:49	
13C5-PFHxA (S)	%.	110	25-150	06/13/24 15:49	
13C5-PFPeA (S)	%.	111	25-150	06/13/24 15:49	
13C6-PFDA (S)	%.	114	25-150	06/13/24 15:49	
13C7-PFUDa (S)	%.	107	25-150	06/13/24 15:49	
13C8-PFOA (S)	%.	112	25-150	06/13/24 15:49	
13C8-PFOS (S)	%.	106	25-150	06/13/24 15:49	
13C8-PFOSA (S)	%.	93	25-150	06/13/24 15:49	
13C9-PFNA (S)	%.	115	25-150	06/13/24 15:49	
d3-MeFOSAA (S)	%.	99	25-150	06/13/24 15:49	
d3-NMeFOSA (S)	%.	54	20-150	06/13/24 15:49	
d5-EtFOSAA (S)	%.	100	25-150	06/13/24 15:49	
d5-NEtFOSA (S)	%.	56	20-150	06/13/24 15:49	
d7-NMeFOSE (S)	%.	98	20-150	06/13/24 15:49	
d9-NEtFOSE (S)	%.	94	20-150	06/13/24 15:49	

LABORATORY CONTROL SAMPLE & LCSD: 4968869

4968870

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11CI-PF3OUdS	ng/L	3.7	3.1	3.2	84	86	50-150	5	30	
4:2 FTS	ng/L	3.6	3.1	3.2	85	87	50-150	4	30	
6:2 FTS	ng/L	3.7	3.0	3.2	80	85	50-150	9	30	
8:2 FTS	ng/L	3.7	3.4	2.9	91	76	50-150	16	30	
9CI-PF3ONS	ng/L	3.6	3.2	3.1	88	82	50-150	4	30	
ADONA	ng/L	3.7	3.2	3.2	88	85	50-150	0	30	
HFPO-DA	ng/L	3.9	3.5	3.6	89	90	50-150	3	30	
NEtFOSA	ng/L	3.9	3.3	3.5	84	88	50-150	7	30	
NEtFOSAA	ng/L	3.9	3.3	3.4	85	86	50-150	4	30	
NEtFOSE	ng/L	3.9	3.4	3.5	88	87	50-150	1	30	
NMeFOSA	ng/L	3.9	3.4	3.9	88	97	50-150	13	30	
NMeFOSAA	ng/L	3.9	3.6	3.3	93	83	50-150	9	30	
NMeFOSE	ng/L	3.9	3.4	3.1	88	79	50-150	9	30	
PFBA	ng/L	3.9	3.3	3.4	85	85	50-150	2	30	
PFBS	ng/L	3.4	3.0	3.0	88	86	50-150	1	30	
PFDA	ng/L	3.9	3.2	3.3	83	83	50-150	2	30	
PFDaA	ng/L	3.9	3.3	3.4	86	84	50-150	0	30	

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

LABORATORY CONTROL SAMPLE & LCSD: 4968869			4968870							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFDoS	ng/L	3.8	2.9	3.3	78	84	50-150	11	30	
PFDS	ng/L	3.8	2.8	3.4	74	87	50-150	19	30	
PFHpA	ng/L	3.9	3.4	3.3	86	82	50-150	3	30	
PFHpS	ng/L	3.7	3.3	3.3	89	88	50-150	1	30	
PFHxA	ng/L	3.9	3.5	3.4	89	85	50-150	2	30	
PFHxS	ng/L	3.6	3.0	3.1	85	84	50-150	0	30	
PFNA	ng/L	3.9	3.2	3.2	81	81	50-150	3	30	
PFNS	ng/L	3.7	3.1	3.5	82	90	50-150	13	30	
PFOA	ng/L	3.9	3.4	3.5	86	87	50-150	4	30	
PFOS	ng/L	3.6	3.3	3.4	91	91	50-150	3	30	
PFOSA	ng/L	3.9	3.3	3.5	85	88	50-150	7	30	
PFPeA	ng/L	3.9	3.4	3.3	88	84	50-150	3	30	
PFPoS	ng/L	3.7	3.1	3.0	84	81	50-150	2	30	
PFTeDA	ng/L	3.9	3.4	3.2	87	80	50-150	6	30	
PFTTrDA	ng/L	3.9	3.2	3.3	81	84	50-150	5	30	
PFUnA	ng/L	3.9	3.3	3.3	85	84	50-150	1	30	
13C2-PFDoS (S)	%				106	105	25-150			
13C2-PFTA (S)	%				98	103	25-150			
13C24:2FTS (S)	%				97	94	25-150			
13C26:2FTS (S)	%				102	92	25-150			
13C28:2FTS (S)	%				95	104	25-150			
13C2PFHxDA (S)	%				75	89	25-150			
13C3-PFBS (S)	%				108	108	25-150			
13C3-PFHxS (S)	%				110	108	25-150			
13C3HFPO-DA (S)	%				94	94	25-150			
13C4-PFBA (S)	%				101	100	25-150			
13C4-PFHpA (S)	%				107	107	25-150			
13C5-PFHxA (S)	%				107	105	25-150			
13C5-PFPeA (S)	%				107	105	25-150			
13C6-PFDA (S)	%				114	110	25-150			
13C7-PFUDa (S)	%				108	103	25-150			
13C8-PFOA (S)	%				110	108	25-150			
13C8-PFOS (S)	%				106	101	25-150			
13C8-PFOSA (S)	%				92	87	25-150			
13C9-PFNA (S)	%				116	112	25-150			
d3-MeFOSAA (S)	%				102	96	25-150			
d3-NMeFOSA (S)	%				64	50	20-150			
d5-EtFOSAA (S)	%				102	94	25-150			
d5-NEtFOSA (S)	%				67	52	20-150			
d7-NMeFOSE (S)	%				95	86	20-150			
d9-NEtFOSE (S)	%				94	85	20-150			

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

QC Batch: 950058 Analysis Method: ENV-SOP-MIN4-0178
QC Batch Method: ENV-SOP-MIN4-0178 Analysis Description: WI ID NPW
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10694182025, 10694182026, 10694182027, 10694182028, 10694182029, 10694182030, 10694182031, 10694182032

METHOD BLANK: 4968876

Matrix: Water

Associated Lab Samples: 10694182025, 10694182026, 10694182027, 10694182028, 10694182029, 10694182030, 10694182031, 10694182032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	ND	1.9	06/13/24 23:07	
4:2 FTS	ng/L	ND	1.9	06/13/24 23:07	
6:2 FTS	ng/L	ND	1.9	06/13/24 23:07	
8:2 FTS	ng/L	ND	2.0	06/13/24 23:07	
9CI-PF3ONS	ng/L	ND	1.9	06/13/24 23:07	
ADONA	ng/L	ND	1.9	06/13/24 23:07	
HFPO-DA	ng/L	ND	2.0	06/13/24 23:07	
NEtFOSA	ng/L	ND	2.0	06/13/24 23:07	
NEtFOSAA	ng/L	ND	2.0	06/13/24 23:07	
NEtFOSE	ng/L	ND	2.0	06/13/24 23:07	
NMeFOSA	ng/L	ND	2.0	06/13/24 23:07	
NMeFOSAA	ng/L	ND	2.0	06/13/24 23:07	
NMeFOSE	ng/L	ND	2.0	06/13/24 23:07	
PFBA	ng/L	ND	2.0	06/13/24 23:07	
PFBS	ng/L	ND	1.8	06/13/24 23:07	
PFDA	ng/L	ND	2.0	06/13/24 23:07	
PFDoA	ng/L	ND	2.0	06/13/24 23:07	
PFDoS	ng/L	ND	2.0	06/13/24 23:07	
PFDS	ng/L	ND	2.0	06/13/24 23:07	
PFHpA	ng/L	ND	2.0	06/13/24 23:07	
PFHpS	ng/L	ND	1.9	06/13/24 23:07	
PFHxA	ng/L	ND	2.0	06/13/24 23:07	
PFHxS	ng/L	ND	1.9	06/13/24 23:07	
PFNA	ng/L	ND	2.0	06/13/24 23:07	
PFNS	ng/L	ND	2.0	06/13/24 23:07	
PFOA	ng/L	ND	2.0	06/13/24 23:07	
PFOS	ng/L	ND	1.9	06/13/24 23:07	
PFOSA	ng/L	ND	2.0	06/13/24 23:07	
PFPeA	ng/L	ND	2.0	06/13/24 23:07	
PFPeS	ng/L	ND	1.9	06/13/24 23:07	
PFTeDA	ng/L	ND	2.0	06/13/24 23:07	
PFTTrDA	ng/L	ND	2.0	06/13/24 23:07	
PFUnA	ng/L	ND	2.0	06/13/24 23:07	
13C2-PFDoA (S)	%.	111	25-150	06/13/24 23:07	
13C2-PFTA (S)	%.	104	25-150	06/13/24 23:07	
13C24:2FTS (S)	%.	73	25-150	06/13/24 23:07	
13C26:2FTS (S)	%.	72	25-150	06/13/24 23:07	
13C28:2FTS (S)	%.	83	25-150	06/13/24 23:07	
13C2PFHxDA (S)	%.	80	25-150	06/13/24 23:07	

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

METHOD BLANK: 4968876

Matrix: Water

Associated Lab Samples: 10694182025, 10694182026, 10694182027, 10694182028, 10694182029, 10694182030, 10694182031, 10694182032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C3-PFBS (S)	%.	116	25-150	06/13/24 23:07	
13C3-PFHxS (S)	%.	114	25-150	06/13/24 23:07	
13C3HFPO-DA (S)	%.	109	25-150	06/13/24 23:07	
13C4-PFBA (S)	%.	114	25-150	06/13/24 23:07	
13C4-PFHpA (S)	%.	116	25-150	06/13/24 23:07	
13C5-PFHxA (S)	%.	115	25-150	06/13/24 23:07	
13C5-PFPeA (S)	%.	118	25-150	06/13/24 23:07	
13C6-PFDA (S)	%.	119	25-150	06/13/24 23:07	
13C7-PFUDa (S)	%.	110	25-150	06/13/24 23:07	
13C8-PFOA (S)	%.	118	25-150	06/13/24 23:07	
13C8-PFOS (S)	%.	110	25-150	06/13/24 23:07	
13C8-PFOSA (S)	%.	98	25-150	06/13/24 23:07	
13C9-PFNA (S)	%.	123	25-150	06/13/24 23:07	
d3-MeFOSAA (S)	%.	101	25-150	06/13/24 23:07	
d3-NMeFOSA (S)	%.	48	20-150	06/13/24 23:07	
d5-EtFOSAA (S)	%.	110	25-150	06/13/24 23:07	
d5-NEtFOSA (S)	%.	41	20-150	06/13/24 23:07	
d7-NMeFOSE (S)	%.	99	20-150	06/13/24 23:07	
d9-NEtFOSE (S)	%.	94	20-150	06/13/24 23:07	

LABORATORY CONTROL SAMPLE & LCSD: 4968877

4968878

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11CI-PF3OUdS	ng/L	3.8	3.2	3.4	84	88	50-150	6	30	
4:2 FTS	ng/L	3.7	3.3	3.4	88	89	50-150	3	30	
6:2 FTS	ng/L	3.8	3.8	3.7	100	97	50-150	1	30	
8:2 FTS	ng/L	3.8	3.7	3.8	98	97	50-150	1	30	
9CI-PF3ONS	ng/L	3.7	3.1	3.2	83	84	50-150	2	30	
ADONA	ng/L	3.8	3.5	3.4	93	90	50-150	2	30	
HFPO-DA	ng/L	4	3.6	3.7	90	91	50-150	3	30	
NEtFOSA	ng/L	4	3.3	3.9	83	97	50-150	17	30	
NEtFOSAA	ng/L	4	3.4	3.2	85	79	50-150	6	30	
NEtFOSE	ng/L	4	3.4	3.3	86	81	50-150	5	30	
NMeFOSA	ng/L	4	3.8	3.3	96	83	50-150	13	30	
NMeFOSAA	ng/L	4	3.5	3.8	88	93	50-150	7	30	
NMeFOSE	ng/L	4	3.7	3.4	94	83	50-150	11	30	
PFBA	ng/L	4	3.4	3.6	86	88	50-150	5	30	
PFBS	ng/L	3.5	3.1	3.1	88	87	50-150	1	30	
PFDA	ng/L	4	3.3	3.6	84	89	50-150	7	30	
PFDoA	ng/L	4	3.4	3.4	85	85	50-150	2	30	
PFDoS	ng/L	3.9	2.5	2.7	64	68	50-150	8	30	
PFDS	ng/L	3.8	3.3	3.2	85	82	50-150	2	30	
PFHpA	ng/L	4	3.5	3.4	88	85	50-150	1	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

LABORATORY CONTROL SAMPLE & LCSD: 4968877			4968878							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFHpS	ng/L	3.8	3.2	3.5	85	90	50-150	7	30	
PFHxA	ng/L	4	3.6	3.6	91	89	50-150	0	30	
PFHxS	ng/L	3.6	3.2	3.2	87	87	50-150	2	30	
PFNA	ng/L	4	3.5	3.4	88	84	50-150	3	30	
PFNS	ng/L	3.8	3.1	3.2	83	83	50-150	2	30	
PFOA	ng/L	4	3.6	3.5	89	86	50-150	3	30	
PFOS	ng/L	3.7	3.4	3.5	92	94	50-150	4	30	
PFOSA	ng/L	4	3.5	3.7	89	91	50-150	3	30	
PFPeA	ng/L	4	3.5	3.5	88	86	50-150	1	30	
PFPeS	ng/L	3.7	3.2	3.2	85	85	50-150	1	30	
PFTeDA	ng/L	4	3.4	3.5	86	87	50-150	3	30	
PFTrDA	ng/L	4	3.3	3.4	83	83	50-150	2	30	
PFUnA	ng/L	4	3.3	3.5	83	87	50-150	6	30	
13C2-PFDoA (S)	%				118	105	25-150			
13C2-PFTA (S)	%				106	91	25-150			
13C24:2FTS (S)	%				75	70	25-150			
13C26:2FTS (S)	%				70	64	25-150			
13C28:2FTS (S)	%				75	79	25-150			
13C2PFHxDA (S)	%				86	65	25-150			
13C3-PFBS (S)	%				119	108	25-150			
13C3-PFHxS (S)	%				120	108	25-150			
13C3HFPO-DA (S)	%				109	100	25-150			
13C4-PFBA (S)	%				114	107	25-150			
13C4-PFHpA (S)	%				118	108	25-150			
13C5-PFHxA (S)	%				116	107	25-150			
13C5-PFPeA (S)	%				119	111	25-150			
13C6-PFDA (S)	%				121	110	25-150			
13C7-PFUDa (S)	%				116	104	25-150			
13C8-PFOA (S)	%				117	110	25-150			
13C8-PFOS (S)	%				117	104	25-150			
13C8-PFOSA (S)	%				99	72	25-150			
13C9-PFNA (S)	%				121	114	25-150			
d3-MeFOSAA (S)	%				101	96	25-150			
d3-NMeFOSA (S)	%				54	2	20-150			S0
d5-EtFOSAA (S)	%				102	99	25-150			
d5-NEtFOSA (S)	%				48	2	20-150			S0
d7-NMeFOSE (S)	%				99	32	20-150			
d9-NEtFOSE (S)	%				95	30	20-150			

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

QC Batch: 951340

Analysis Method: ENV-SOP-MIN4-0178

QC Batch Method: ENV-SOP-MIN4-0178

Analysis Description: WI ID NPW

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10694182010

METHOD BLANK: 4975499

Matrix: Water

Associated Lab Samples: 10694182010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	ND	1.8	06/24/24 14:33	
4:2 FTS	ng/L	ND	1.8	06/24/24 14:33	
6:2 FTS	ng/L	ND	1.8	06/24/24 14:33	
8:2 FTS	ng/L	ND	1.9	06/24/24 14:33	
9CI-PF3ONS	ng/L	ND	1.8	06/24/24 14:33	
ADONA	ng/L	ND	1.8	06/24/24 14:33	
HFPO-DA	ng/L	ND	1.9	06/24/24 14:33	
NEtFOSA	ng/L	ND	1.9	06/24/24 14:33	
NEtFOSAA	ng/L	ND	1.9	06/24/24 14:33	
NEtFOSE	ng/L	ND	1.9	06/24/24 14:33	
NMeFOSA	ng/L	ND	1.9	06/24/24 14:33	
NMeFOSAA	ng/L	ND	1.9	06/24/24 14:33	
NMeFOSE	ng/L	ND	1.9	06/24/24 14:33	
PFBA	ng/L	ND	1.9	06/24/24 14:33	
PFBS	ng/L	ND	1.7	06/24/24 14:33	
PFDA	ng/L	ND	1.9	06/24/24 14:33	
PFDoA	ng/L	ND	1.9	06/24/24 14:33	
PFDoS	ng/L	ND	1.9	06/24/24 14:33	
PFDS	ng/L	ND	1.9	06/24/24 14:33	
PFHpA	ng/L	ND	1.9	06/24/24 14:33	
PFHpS	ng/L	ND	1.8	06/24/24 14:33	
PFHxA	ng/L	ND	1.9	06/24/24 14:33	
PFHxS	ng/L	ND	1.8	06/24/24 14:33	
PFNA	ng/L	ND	1.9	06/24/24 14:33	
PFNS	ng/L	ND	1.9	06/24/24 14:33	
PFOA	ng/L	ND	1.9	06/24/24 14:33	
PFOS	ng/L	ND	1.8	06/24/24 14:33	
PFOSA	ng/L	ND	1.9	06/24/24 14:33	
PFPeA	ng/L	ND	1.9	06/24/24 14:33	
PFPeS	ng/L	ND	1.8	06/24/24 14:33	
PFTeDA	ng/L	ND	1.9	06/24/24 14:33	
PFTTrDA	ng/L	ND	1.9	06/24/24 14:33	
PFUnA	ng/L	ND	1.9	06/24/24 14:33	
13C2-PFDoA (S)	%.	122	25-150	06/24/24 14:33	
13C2-PFTA (S)	%.	93	25-150	06/24/24 14:33	
13C24:2FTS (S)	%.	130	25-150	06/24/24 14:33	
13C26:2FTS (S)	%.	112	25-150	06/24/24 14:33	
13C28:2FTS (S)	%.	141	25-150	06/24/24 14:33	
13C2PFHxDA (S)	%.	23	25-150	06/24/24 14:33	S0
13C3-PFBS (S)	%.	121	25-150	06/24/24 14:33	

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

METHOD BLANK: 4975499

Matrix: Water

Associated Lab Samples: 10694182010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C3-PFHxS (S)	%.	124	25-150	06/24/24 14:33	
13C3HFPO-DA (S)	%.	116	25-150	06/24/24 14:33	
13C4-PFBA (S)	%.	138	25-150	06/24/24 14:33	
13C4-PFHpA (S)	%.	128	25-150	06/24/24 14:33	
13C5-PFHxA (S)	%.	141	25-150	06/24/24 14:33	
13C5-PFPeA (S)	%.	136	25-150	06/24/24 14:33	
13C6-PFDA (S)	%.	139	25-150	06/24/24 14:33	
13C7-PFUDa (S)	%.	131	25-150	06/24/24 14:33	
13C8-PFOA (S)	%.	137	25-150	06/24/24 14:33	
13C8-PFOS (S)	%.	118	25-150	06/24/24 14:33	
13C8-PFOSA (S)	%.	81	25-150	06/24/24 14:33	
13C9-PFNA (S)	%.	136	25-150	06/24/24 14:33	
d3-MeFOSAA (S)	%.	127	25-150	06/24/24 14:33	
d3-NMeFOSA (S)	%.	2	20-150	06/24/24 14:33	S0
d5-EtFOSAA (S)	%.	136	25-150	06/24/24 14:33	
d5-NEtFOSA (S)	%.	1	20-150	06/24/24 14:33	S0
d7-NMeFOSE (S)	%.	21	20-150	06/24/24 14:33	
d9-NEtFOSE (S)	%.	16	20-150	06/24/24 14:33	S0

LABORATORY CONTROL SAMPLE & LCSD: 4975500

4975501

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11CI-PF3OUdS	ng/L	3.7	3.7	3.6	101	97	50-150	4	30	
4:2 FTS	ng/L	3.6	3.4	3.6	93	99	50-150	6	30	
6:2 FTS	ng/L	3.7	3.4	4.1	92	112	50-150	19	30	
8:2 FTS	ng/L	3.7	4.0	4.3	109	116	50-150	6	30	
9CI-PF3ONS	ng/L	3.6	3.6	3.7	100	102	50-150	2	30	
ADONA	ng/L	3.7	3.2	3.3	88	90	50-150	3	30	
HFPO-DA	ng/L	3.9	3.6	3.9	93	100	50-150	7	30	
NEtFOSA	ng/L	3.9	2.8	ND	74	0	50-150		30	L2
NEtFOSAA	ng/L	3.9	3.4	3.7	89	95	50-150	7	30	
NEtFOSE	ng/L	3.9	3.2	4.3	83	111	50-150	28	30	
NMeFOSA	ng/L	3.9	4.4	2.8	114	72	50-150	45	30	R1
NMeFOSAA	ng/L	3.9	3.3	3.6	85	92	50-150	8	30	
NMeFOSE	ng/L	3.9	3.3	3.5	85	90	50-150	6	30	
PFBA	ng/L	3.9	3.3	3.4	84	89	50-150	5	30	
PFBS	ng/L	3.4	3.0	3.2	87	93	50-150	7	30	
PFDA	ng/L	3.9	3.5	3.6	90	94	50-150	4	30	
PFDaA	ng/L	3.9	3.4	3.5	87	89	50-150	3	30	
PFDoS	ng/L	3.8	3.1	3.0	83	80	50-150	4	30	
PFDS	ng/L	3.7	2.9	3.4	77	91	50-150	17	30	
PFHpA	ng/L	3.9	3.4	3.5	88	91	50-150	3	30	
PFHpS	ng/L	3.7	3.2	3.3	87	90	50-150	3	30	
PFHxA	ng/L	3.9	3.4	3.7	89	95	50-150	6	30	

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QUALITY CONTROL DATA

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

LABORATORY CONTROL SAMPLE & LCSD: 4975500

4975501

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFHxS	ng/L	3.5	3.0	3.2	83	90	50-150	7	30	
PFNA	ng/L	3.9	3.2	3.4	82	88	50-150	6	30	
PFNS	ng/L	3.7	3.4	3.3	92	89	50-150	3	30	
PFOA	ng/L	3.9	3.5	3.6	91	92	50-150	2	30	
PFOS	ng/L	3.6	3.5	3.2	98	90	50-150	9	30	
PFOSA	ng/L	3.9	3.6	3.9	92	102	50-150	10	30	
PFPeA	ng/L	3.9	3.4	3.6	89	94	50-150	5	30	
PFPeS	ng/L	3.6	3.1	3.2	86	89	50-150	3	30	
PFTeDA	ng/L	3.9	3.3	3.5	86	90	50-150	4	30	
PFTTrDA	ng/L	3.9	3.3	3.4	86	88	50-150	2	30	
PFUnA	ng/L	3.9	3.3	3.7	86	96	50-150	11	30	
13C2-PFDoA (S)	%				126	129	25-150			
13C2-PFTA (S)	%				122	106	25-150			
13C24:2FTS (S)	%				137	182	25-150			S0
13C26:2FTS (S)	%				140	170	25-150			S0
13C28:2FTS (S)	%				125	158	25-150			S0
13C2PFHxDA (S)	%				73	47	25-150			
13C3-PFBS (S)	%				121	123	25-150			
13C3-PFHxS (S)	%				123	121	25-150			
13C3HFPO-DA (S)	%				116	115	25-150			
13C4-PFBA (S)	%				142	144	25-150			
13C4-PFHpA (S)	%				140	141	25-150			
13C5-PFHxA (S)	%				139	138	25-150			
13C5-PFPeA (S)	%				138	142	25-150			
13C6-PFDA (S)	%				133	136	25-150			
13C7-PFUdA (S)	%				137	132	25-150			
13C8-PFOA (S)	%				141	140	25-150			
13C8-PFOS (S)	%				115	115	25-150			
13C8-PFOSA (S)	%				89	56	25-150			
13C9-PFNA (S)	%				140	138	25-150			
d3-MeFOSAA (S)	%				133	130	25-150			
d3-NMeFOSA (S)	%				2	0	20-150			S0
d5-EtFOSAA (S)	%				135	126	25-150			
d5-NEtFOSA (S)	%				1	0	20-150			S0
d7-NMeFOSE (S)	%				45	15	20-150			S0
d9-NEtFOSE (S)	%				42	11	20-150			S0

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QUALIFIERS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10694182

[1] The quality system for Pace Analytical Services, LLC in Minneapolis, MN (Pace-MN) has been audited and was found to be in conformance with ISO/IEC 17025:2017 by an independent assessment (A2LA Certificate # 2926). The PFAS test results in non-drinking water for this project are not covered by this accreditation.

Pace-MN maintains accreditation with the state of Wisconsin for their isotope dilution analysis as defined in ENV-SOP-MIN4-0178 under certificate number 999407970. All of the test results for this project are covered by the Wisconsin accreditation.

SAMPLE QUALIFIERS

Sample: 10694182010

[1] RX at 25 mls

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

ANALYTE QUALIFIERS

1M	All narrated results associated with this sample confirmed through secondary analysis.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: E24-0277 3M Menomonie GW PFAS-Revised Report

Pace Project No.: 10694182

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10694182001	MEWI-GW-MW3-0-240522	ENV-SOP-MIN4-0178	947068	ENV-SOP-MIN4-0178	948794
10694182002	MEWI-GW-MW3-DB-240522	ENV-SOP-MIN4-0178	947068	ENV-SOP-MIN4-0178	948794
10694182003	MEWI-GW-MW5-0-240523	ENV-SOP-MIN4-0178	947068	ENV-SOP-MIN4-0178	948794
10694182004	MEWI-GW-MW8-0-240523	ENV-SOP-MIN4-0178	947068	ENV-SOP-MIN4-0178	948794
10694182005	MEWI-GW-MW9-0-240522	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182006	MEWI-GW-MW10-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182007	MEWI-GW-MW11-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182008	MEWI-GW-MW12-0-240522	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182009	MEWI-GW-MW4D-0-240522	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182010	MEWI-GW-MW5D-0-240523	ENV-SOP-MIN4-0178	951340	ENV-SOP-MIN4-0178	952961
10694182011	MEWI-GW-MW9D-0-240522	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182012	MEWI-GW-MW12D-0-240522	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182013	MEWI-GW-PZ1-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182014	MEWI-GW-PZ2-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182015	MEWI-GW-PZ3-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182016	MEWI-GW-PZ3-DB-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182017	MEWI-GW-PZ4-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182018	MEWI-GW-PZ5-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182019	MEWI-GW-PZ6-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182020	MEWI-GW-PZ7-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182021	MEWI-GW-PZ8-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182022	MEWI-GW-PZ9-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182023	MEWI-SW-CREEK01-0-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182024	MEWI-SW-CREEK03-DB-240523	ENV-SOP-MIN4-0178	950057	ENV-SOP-MIN4-0178	951395
10694182025	MEWI-SW-CREEK02-0-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182026	MEWI-SW-CREEK03-0-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182027	MEWI-SW-CREEK04-0-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182028	MEWI-GW-PZ0-0-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182029	MEWI-GW-PZ10-0-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182030	MEWI-W-FB1-FB-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182031	MEWI-W-EB1-EB-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402
10694182032	MEWI-W-TB1-TB-240523	ENV-SOP-MIN4-0178	950058	ENV-SOP-MIN4-0178	951402

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WO#: 10694182



Pace® Pace Analytical Minnesota 1700 Elm Street, Suite 200 Minneapolis, MN 55414		Chain-of-Custody Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields				
Company Name: 3M Environmental Street Address: 3M Center, 260-05-N-17, Saint Paul, MN 55144-1000		Contact/Report To: Amanda Albrecht Phone #: 651-736-9414 E-Mail: aalbrecht2@mnm.com Cc E-Mail:				
Customer Project #: 117-001312-24002.03 Project Name: E24-0277 3M Menominee GW PFAS Investigation		Invoice To: Amanda Albrecht Invoice E-Mail: aalbrecht2@mnm.com Purchase Order # (if applicable): Quote #:				
Site Collection Info/Facility ID (as applicable):		County / State origin of sample(s): Minnesota				
Time Zone Collected: [] AK [] PT [] MT [] CT [] ET		Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [] No				
Data Deliverables: [] Level II [] Level III [] Level IV [] EQUIS [] Other		Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other Date Results Requested: standard Analysis: Field Filtered (if applicable): [] Yes [] No				
* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Biossavy (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CX), Leachate (LL), Biosolid (BS), Other (OT)		Field Filtered (if applicable): [] Yes [] No				
Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date Time	Collected or Composite End Date Time	# Cont.	Res. Chlorine Results Units
MEWI-GW-MW3-0-240522	WT	6	5/22/24 14:50	5/22/24 14:55	2	
MEWI-GW-MW3-DB-240522	WT			5/22/24 14:55	2	
MEWI-GW-MW5-0-240523	WT			5/23/24 8:05	2	
MEWI-GW-MW8-0-240523	WT			5/23/24 10:00	2	
MEWI-GW-MW9-0-240522	WT			5/22/24 12:45	2	
MEWI-GW-MW10-0-240523	WT			5/23/24 13:25	2	
MEWI-GW-MW11-0-240523	WT			5/23/24 11:20	2	
MEWI-GW-MW12-0-240522	WT			5/22/24 10:20	2	
MEWI-GW-MW4D-0-240522	WT			5/22/24 16:15	2	
MEWI-GW-MW5D-0-240523	WT			5/23/24 8:15	2	

Additional Instructions from Pace®:

Relinquished by/Company: (Signature) Katie Pers / Tetra	Date/Time: 5/23/24
Relinquished by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:

Collected By: Connor Lauzon
Signature: Connor Lauzon

Received by/Company: (Signature)
Received by/Company: (Signature)
Received by/Company: (Signature)
Received by/Company: (Signature)

Date/Time: 5/23/24 1800

Trading Number:

Delivered by: [] In-Person [] Courier
[] FedEx [] UPS [] Other

Page: 1 of 4

3.0 12.2 12.2 12.2

Pace® Location Requested (City/State): Pace Analytical Minnesota 1700 Elm Street, Suite 200 Minneapolis, MN 55414		Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields					
Company Name: 3M Environmental		Contact/Report To: Amanda Albrecht					
Street Address: 3M Center, 260-05-N-17, Saint Paul, MN 551441000		Phone #: 651-736-9414 E-Mail: aalbrecht2@mmm.com					
Customer Project #: 117-001312-24062.03		Cc E-Mail:					
Project Name: E24-0277 3M Menominee GW PFAS Investigation		Invoice To: Amanda Albrecht Invoice E-Mail: aalbrecht2@mmm.com					
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):					
		Quote #:					
Time Zone Collected: [] AK [] PT [] MT [] CT [] ET		County / State origin of sample(s): Minnesota					
Data Deliverables:		Reportable: [] Yes [] No					
[] Level II [] Level III [] Level IV		Rush (Pre-approval required):					
[] EQUIS		[] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other _____					
[] Other _____		Date Results Requested:					
* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)		Analysis:					
Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Collected or Composite End Date	# Cont.	Res. Chlorine Results	Units
MEWI-GW-MW9D-0-240522	WT	G		5/22/24 12:40	2		
MEWI-GW-MW12D-0-240522	WT			5/22/24 10:30	2		
MEWI-GW-PZ1-0-240523	WT			5/23/24 09:40	2		
MEWI-GW-PZ2-0-240523	WT			12:55	2		
MEWI-GW-PZ3-0-240523	WT			13:10	2		
MEWI-GW-PZ3-DB-240523	WT			13:10	2		
MEWI-GW-PZ4-0-240523	WT			13:35	2		
MEWI-GW-PZ5-0-240523	WT			13:40	2		
MEWI-GW-PZ6-0-240523	WT			14:00	2		
MEWI-GW-PZ7-0-240523	WT			14:15	2		
Additional Instructions from Pace®:							
Collected By: Gray Wiernow				Signature:			
Received by Company (Signature):				Received by Company (Signature):			
Date/Time: 5/23/24				Date/Time:			
Relinquished by Company (Signature):				Relinquished by Company (Signature):			
Date/Time:				Date/Time:			
Relinquished by Company (Signature):				Relinquished by Company (Signature):			
Date/Time:				Date/Time:			

[illegible]

CHAIN-OF-CUSTODY Analytical Request Document

IN-OF-CUSTODY Analytical Request Document
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

[illegible]

ENV-FRM-MIN4-0150 v17_Sample Condition Upon Receipt

CLIENT NAME: 3M PROJECT #: WO# : 10694182

CARRIER: ☒ Client ☐ Commercial ☐ FedEx ☐ Pace
☐ Speedee ☐ UPS ☐ USPS

WO# : 10694182

PM: CT1 Due Date: 06/17/24
 CLIENT: 3M ENV

TRACKING NUMBER: _____ ☐ See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present: ☐ YES ☒ NO Seals Intact: ☐ YES ☒ NO Biological Tissue Frozen: ☐ YES ☐ NO ☒ N/A
 Packing Material: ☐ Bubble Bags ☒ Bubble Wrap ☐ None ☐ Other Temp Blank: ☒ YES ☐ NO Type of Ice: ☐ Blue ☐ Dry ☒ Wet
 Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235)
☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252 (1710) ☐ Melted ☐ None

Did Samples Originate in West Virginia: ☐ YES ☒ NO Were All Container Temps taken: ☐ YES ☐ NO ☒ N/A
 Correction Factor: 0.5 Cooler Temp Read w/Temp Blank: 3.3/2.5 °C Average Corrected Temp (no Temp Blank Only): _____ °C
 Cooler Temp Corrected w/Temp Blank: 3.8/2.0 °C
 NOTE: Temp should be above freezing to 6°C. ☐ See Exceptions Form ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: ☒ N/A - Water Sample/Other (describe): _____ Initials & Date of Person Examining Contents: mdz 5/23/24
 Did Samples originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: ☐ YES ☐ NO
 Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO
 NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one): ☐ DULUTH ☒ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)								
Chain of Custody Present and Filled Out?	☒	☐	☐	1.								
Chain of Custody Relinquished?	☒	☐	☐	2.								
Sampler Name and/or Signature on COC?	☒	☐	☐	3.								
Samples Arrived within Hold Time?	☒	☐	☐	4. If Fecal: ☐ <8 hrs ☐ >8 hr, <24 hr ☐ No								
Short Hold Time Analysis (<72 hr)?	☐	☒	☐	5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/E. coli ☐ Other: _____								
Rush Turn Around Time Requested?	☐	☒	☐	6.								
Sufficient Sample Volume?	☒	☐	☐	7.								
Correct Containers Used?	☒	☐	☐	8.								
- Pace Containers Used?	☒	☐	☐									
Containers Intact?	☒	☐	☐	9.								
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☒	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO								
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11. Matrix: ☐ Oil ☐ Soil ☒ Water ☐ Other	☒	☐	☐	11. If NO, write ID/Date/Time of container below: ☐ See Exceptions form ENV-FRM-MIN4-0142								
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS	☐	☐	☒	12. Sample #: ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ NaOH ☐ Zinc Acetate Positive for Residual Chlorine: ☐ YES ☐ NO pH Paper Lot # <table border="1"> <tr> <th>Residual Chlorine</th> <th>0-6 Roll</th> <th>0-6 Strip</th> <th>0-14 Strip</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> ☐ See Exceptions form ENV-FRM-MIN4-0142	Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip				
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip									
NOTE: If adding preservation to the container, verify with the PM first. Clients may require adding preservative to the field and equipment blanks when this occurs.												
Headspace in Methyl Mercury Container?	☐	☐	☒	13.								
Extra labels present on soil VOA or WIDRO containers?	☐	☐	☒	14.								
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☒	☐ See Exceptions form ENV-FRM-MIN4-0140								
Trip Blanks Present?	☐	☐	☒	15.								
Trip Blank Custody Seals Present?	☐	☐	☒	Pace Trip Blank Lot # (if purchased): _____								

CLIENT NOTIFICATION / RESOLUTION

FIELD DATA REQUIRED: ☐ YES ☐ NO

Person Contacted: _____ Date & Time: _____

Comments / Resolution: _____

Project Manager Review: Carolynne Trout

Date: 5/24/24

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

Labeled By: mdz Line: 1

Appendix F

QA/QC Analysis

Appendix X - QA/QC Analysis
3M Facility
Menomonie, WI

		Perfluoroalkyl Carboxylates/Carboxylic Acids (PFCA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA/PFUdA)	Perfluorododecanoic acid (PFDoA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoroalkyl Sulfonates/Sulfonic Acids (PFSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoronone sulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorododecanesulfonic acid (PFDoS)	Perfluoroalkane Sulfonamides / Sulfonamidoacetic Acids, Sulfonamidoethanols (FASA)	Perfluorooctane sulfonamide (PFOSA)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-ethyl perfluorooctane sulfonamide (NEFOSA)	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-ethyl perfluorooctane sulfonamidoacetic acid (NEFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (NMeFOSE)	N-ethyl perfluorooctane sulfonamidoethanol (NEFOSE)	Fluorotelomer Substances (FTS)	4:2 Fluorotelomer sulfonic acid (4:2FTS)	6:2 Fluorotelomer sulfonic acid (6:2FTS)	8:2 Fluorotelomer sulfonic acid (8:2FTS)	Replacement Chemicals	Hexafluoropropylene oxide dimer acid (HFPO-DA)	4,8-Dioxa-3H-perfluorononanioic acid (ADONA)	9-chlorohexadecafluoro-3-oxanona-ne-1-sulfonic acid (9Cl-PF3ONS)	11-chloroicosafafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUkS)	Combined PFOA and PFOS
Units		ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
DHS Recommended ES		10,000	--	150,000	--	20	30	300	3,000	500	--	10,000		450,000	--	40	--	--	20	--	--	--		20	--	20	--	20	--	20		--	--	--		300	3,000			
DHS Recommended PAL		2,000	--	30,000	--	2	3	60	600	100	--	2,000		90,000	--	4	--	--	2	--	--	--		2	--	2	--	2	--	2		--	--	--		30	600			
MW-3	5/22/2024	3.9	1.9 U	2.2	1.9 U	11.5	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U		2.5	2.4	66.6	4.5	134	1.8 U	1.8 U	1.8 U		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U		1.8 U	1.8 U	1.8 U		1.9 U	1.8 U	1.8 U	1.8 U	145.5
	5/22/2024*	3.9	2 U	2.1	2 U	10.8	2 U	2 U	2 U	2 U	2 U	2 U	2 U		2.6	2.3	66.8	4.2	132	1.9 U	1.9 U	1.9 U		2 U	2 U	2 U	2 U	2 U	2 U	2 U		1.8 U	1.9 U	1.9 U		2 U	1.9 U	1.8 U	1.8 U	142.8
	RPD	0.0%		4.7%		6.3%									3.9%	4.3%	0.3%	6.9%	1.5%																					
PZ-3	5/23/2024	62.9	52.7	225	43	89.4	20.1 U	20.1 U	20.1 U	20.1 U	20.1 U	20.1 U	20.1 U		111	275	1080	50	1610	19.3 U	19.4 U	19.5 U		20.1 U	20.1 U	20.1 U	20.1 U	20.1 U	20.1 U	20.1 U		18.8 U	19.1 U	19.4 U		20.1 U	19 U	18.7 U	18.9 U	1699
	5/23/2024*	131	76.8	290	55.5	184	19.6 U	19.6 U	19.6 U	19.6 U	19.6 U	19.6 U	19.6 U		121	264	1220	70.2	1580	18.8 U	18.9 U	19 U		19.6 U	19.6 U	19.6 U	19.6 U	19.6 U	19.6 U	19.6 U		18.3 U	18.6 U	18.9 U		19.6 U	18.5 U	18.2 U	18.4 U	1764
	RPD	70.2%	37.2%	25.2%	25.4%	69.2%									8.6%	4.1%	12.2%	33.6%	1.9%																					
Creek03	5/23/2024	12	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U		9.2 U	9.8 U	38.1	9.9 U	37.1	10 U	10 U	10.1 U		10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U	10.4 U		9.7 U	9.9 U	10 U		10.4 U	9.8 U	9.7 U	9.8 U	37.1
	5/23/2024*	13.1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U		3.5 U	3.7 U	37.9	3.8 U	39.7	3.8 U	3.8 U	3.9 U		4 U	4 U	4 U	4 U	4 U	4 U	4 U		3.7 U	3.8 U	3.8 U		4 U	3.8 U	3.7 U	3.7 U	39.7
	RPD	8.8%															0.5%		6.8%																					

- Notes:
- PFAS laboratory analysis was completed utilizing EPA Method 537.1 Modified
 - ng/L = nanogram per liter
 - = Criteria Not Established
 - Bold** values signify a detection
 - Shading** indicates concentration exceeds the DHS proposed enforcement standard
 - U = Not detected above laboratory reporting limit