

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 Open 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.

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

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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 Dunn	First Terry	MI	Organization/ Business Name WI Dept. of Adm. - Div. of Facilities & Transportation
Mailing Address 201 E Washington Avenue		City Madison	State WI
			ZIP Code 53703
Phone # (include area code) (608) 516-6573	Fax # (include area code)	Email terry.dunn@wisconsin.gov	

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:

Contact Information (to be contacted with questions about this request)

Select if same as requester

Contact Last Name Dunn	First Terry	MI	Organization/ Business Name WI Dept. of Adm. - Div. of Facilities & Transportation
Mailing Address 201 E Washington Avenue		City Madison	State WI
			ZIP Code 53703
Phone # (include area code) (608) 516-6573	Fax # (include area code)	Email terry.dunn@wisconsin.gov	

Environmental Consultant (if applicable)

Contact Last Name Tierney	First Raymond	MI	Organization/ Business Name SCS Engineers
Mailing Address 2830 Dairy Drive		City Madison	State WI
			ZIP Code 53718
Phone # (include area code) (608) 957-4225	Fax # (include area code) (608) 224-2839	Email rtierney@scsengineers.com	

Section 2. Property Information

Property Name Hill Farms Heating Plant	FID No. (if known)
BRRTS No. (if known) 03-13-590436	Parcel Identification Number 251/0709-173-0099-2
Street Address 4622 University Avenue	City Madison
	State WI
	ZIP Code 53703
County Dane	Municipality where the Property is located <input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village of Madison
	Property is composed of: <input checked="" type="radio"/> Single tax parcel <input type="radio"/> Multiple tax parcels
	Property Size Acres 5

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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).

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Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form.

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]**

"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/Igu.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: _____

Date of Collection: 09/28/2022

- 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: _____

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?

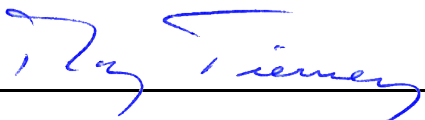
- Yes - Date (if known): _____
- No

Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at:
dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf.

Section 7. Certification by the Person who completed this form

- I am the person submitting this request (requester)
- I prepared this request for: Terry Dunn
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

5/15/2023

Date Signed

PG, Vice President

Title

(608) 957-4225

Telephone Number (include area code)

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

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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

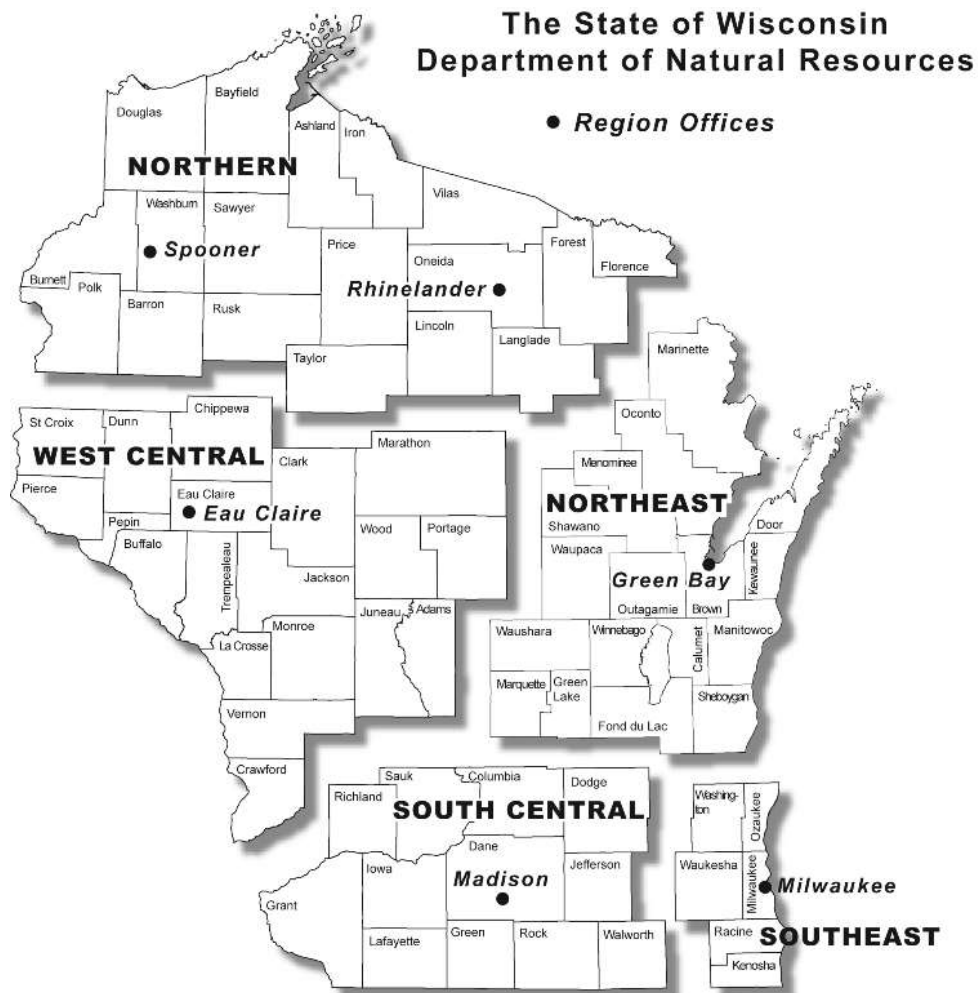
Attn: RR Program Assistant
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg WI 53711

DNR SOUTHEAST REGION

Attn: RR Program Assistant
Department of Natural Resources
2300 North Martin Luther King Drive
Milwaukee WI 53212

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? <input type="radio"/> Yes <input type="radio"/> No	Fee Amount \$	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		

May 15, 2023
File No. 25221165.00

Mr. Luke Lampo
Wisconsin Department of Natural Resources
Department of Remediation and Redevelopment – South Central Region
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711

Subject: Site Investigation Report
Hill Farms Heating Plant
4622 University Avenue, Madison, Wisconsin 53705
WDNR BRRTS #03-13-590436

Dear Mr. Lampo:

SCS Engineers (SCS) prepared this Site Investigation Report for the Hill Farms Heating Plant property (Subject Property) located at 4622 University Avenue in Madison, Wisconsin (**Figure 1**). SCS was retained by the Wisconsin Department of Administration – Division of Facilities and Transportation Services to conduct a Phase 1 Environmental Site Assessment (ESA) prior to the demolition of the Heating Plant on the Subject Property. In response to concerns identified in the Phase 1 ESA, SCS performed a soil investigation to address potential concerns identified on the Subject Property that specifically focused in areas of subsurface work as part of the Heating Plant demolition.

The Subject Property has a history of petroleum releases; however, no petroleum impacts were identified during the investigations. Elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) were identified in shallow non-native soils in limited extents near the Heating Plant. Per-and polyfluoroalkyl substances (PFAS) were detected in soils within the vicinity of a dumpster fire that occurred in September 2017.

The purpose of the investigation was to evaluate the degree and extent of PAH and PFAS contamination, and to assess residual petroleum impacts in areas of former petroleum use. No petroleum impacts were observed. Based on the limited extents of PAH contamination and low-level concentrations of a limited number of detected PFAS compounds, SCS requests the Wisconsin Department of Natural Resources (WDNR) review the Site Investigation Report and determine No Further Action is required at the Subject Property. A \$1,050 payment of WDNR Technical Review Fee will be sent to the WDNR under separate cover.



Luke Lampo
May 15, 2023
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If you have any questions regarding this Site Investigation Report, please contact Ray Tierney at (608) 957-4225 or rtierney@scsengineers.com.

Sincerely,



Jackie Rennebohm
Project Geologist
SCS Engineers



Ray Tierney, PG
Vice President
SCS Engineers

JR/TJK/REO/RT

cc: Terry Dunn, Wisconsin Department of Administration (WDOA) – Division of Facilities & Transportation Services
Ted Crawford, WDOA, Division of Facilities & Transportation Services
Steve Wenzel, WDOA, Division of Facilities & Transportation Services
Bob Shipley, BWZ Architects

Encl. Site Investigation Report

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Site Investigation Report

Hill Farms Heating Plant
4622 University Avenue
Madison, Wisconsin 53705

Prepared for:

Wisconsin Department of Administration
Division of Facilities & Transportation Services
101 E. Wilson Street
Madison, Wisconsin 53703

SCS ENGINEERS

25221165.00 | May 15, 2023

2830 Dairy Drive
Madison, WI 53718-6751
608-224-2830

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Appendices

Appendix A Deed

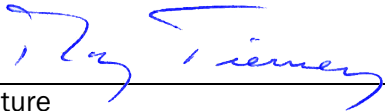
Appendix B Soil Boring Logs and Borehole Abandonment Forms

Appendix C Laboratory Analytical Reports

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CERTIFICATIONS

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



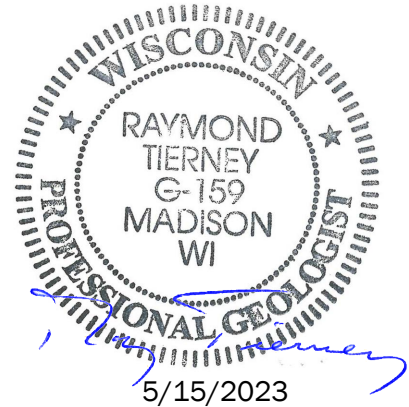
Signature

PG, Vice President

Title

May 15, 2023

Date



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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of the investigation was to evaluate the degree and extent of polycyclic aromatic hydrocarbons (PAHs) and per-and polyfluoroalkyl substances (PFAS) contamination and to assess residual petroleum impacts in areas of former petroleum use on the Subject Property. The investigation was related to the proposed demolition of the former power plant at the Subject Property.

1.2 LOCATION AND PROJECT INFORMATION

1. Site Owner: Department of Administration – Division of Facilities & Transportation
201 E Washington Avenue
Madison, Wisconsin 53703
Terry Dunn
Terry.dunn@wisconsin.gov
608-516-6573
2. Site Address: 4622 University Avenue
Madison, Wisconsin 53703
3. Site Location (**Figure 1**): SE ¼ of the SW ¼ of Section 17, Township 07N, Range 09E
Dane County
X Coordinate (WTM91): 564,206.2
Y Coordinate (WTM91): 289,430.9
4. Environmental Consultant: SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751
Phone: 608-224-2830
Fax: 608-224-2839
5. Project Hydrogeologist: Jackie Rennebohm, SCS Engineers
jrennebohm@scsengineers.com
608-381-9188
6. Project Manager: Ray Tierney, PG, SCS Engineers
rtierney@scsengineers.com
608-957-4225
7. Project Director: Ray Tierney, PG, SCS Engineers
8. BRRTS #: 03-13-590436
9. WDNR Contact: Luke Lampo
Luke.lampo@wisconsin.gov
(608) 206-5809

2.0 SITE BACKGROUND

2.1 SITE LOCATION AND FEATURES

The Subject Property is located in a residential and commercial area on the west side of Madison, Wisconsin, in Section 17, Township 07 North, Range 09 East (**Figure 1**). The State of Wisconsin Department of Administration (DOA) owns and manages the Subject Property. The Wisconsin Department of Justice (DOJ), Wisconsin DOA, and Wisconsin Technical College System (WTCS) occupy the Property. The Subject Property deed is included in **Appendix A**. A Certified Survey Map (CSM) of the Subject Property is unavailable online as the Subject Property is owned by a government agency. A representative from DOA is searching for a copy of the most recent CSM; if found, it will be provided.

The Subject Property is approximately 4.56 acres and consists of a rectangular office building (Office Building) oriented east and west, a heating plant building (Heating Plant) with a smoke stack, and is otherwise nearly covered with asphalt parking, with some green space along the southern and northern Subject Property boundaries and landscaped areas. The Office Building has three stories with two partially underground levels and consists of three buildings – D, E, and L totaling approximately 260,219 gross square feet (GSF). A detailed site map of the northern half of the Subject Property is included as **Figure 2a**.

Building D is occupied by the DOJ Madison Crime Lab, the WTCS offices are located in Building E, and Building L is used as storage space by the Wisconsin DOJ and Wisconsin DOA Records Center.

The Heating Plant is located along the northern Subject Property line, in approximately the middle of the Subject Property, and occupies approximately 19,200 GSF. The Heating Plant has multiple different levels and platforms that weave around former coal burning equipment, boilers, and other equipment used to generate steam.

2.2 SITE HISTORY AND CURRENT STATUS

The Subject Property was originally farmland with a farmhouse and outbuildings present at the southeast corner. In 1961, the Wisconsin DOA developed the current Subject Property. The Wisconsin DOJ Crime Lab, Wisconsin DOA Mail, and Transportation Services, Wisconsin State Laboratory of Hygiene (WSLH) Soils and Forage Analysis, Wisconsin DOA Microfilm Lab, State Records Center, and WTCS currently occupy the Office Building. Historically the Office Building was used by the Wisconsin DOT, Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), and Wisconsin Department of Revenue (DOR).

The Heating Plant originally provided heat to the Office Building and a second State of Wisconsin office building southwest of the Subject Property across University Avenue, the Hill Farms office building. In 2018, the Hill Farms office building was demolished and since then, the Heating Plant has been solely used to heat the Office Building. An alternate heating plant was constructed for the Office Building in 2021 and 2022, and the Heating Plant is set to be demolished in 2023.

2.3 REGIONAL SOILS, GEOLOGY, AND HYDROGEOLOGY

The Subject Property is located approximately 906 feet above mean sea level. The Subject Property slopes steeply from University Avenue to the northern property boundary, however, the general topographic gradient is towards the east. The Subject Property is situated near the edge of the most

recent glaciation in Wisconsin. The local topographic landscape in the vicinity of the Subject Property is heavily influenced by glaciation.

Soil in the vicinity of the Subject Property are mapped as Batavia, McHenry, and Dodge Silt Loam. These soils have moderate infiltration rates, are well drained, and have a low to high potential to corrode uncoated steel (SCS, 2022 and USDA NRCS, 2023).

Well construction forms for water supply wells installed in the vicinity of the Subject Property show clay and sand overlying dolomite and sandstone bedrock. The top of bedrock is present at depths ranging from approximately 12 to 24 feet below ground surface (bgs) and is from the Trempealeau and Tunnel City Groups (WGNHS, 2013).

Two monitoring wells were installed on the Subject Property as part of previous leaking underground storage tank (LUST) investigations in the early 1990s. The water table is present in sandstone bedrock at depths from 40 to 45 feet bgs. Regional groundwater flow is estimated to the north towards Lake Mendota (SCS, 2022).

Groundwater flow, horizontal and vertical hydraulic gradients, and hydraulic conductivity testing were recently assessed at the Hilldale Shopping Mall (Hilldale Shopping Center BRRTS case), approximately 890 feet southwest of the Property. Groundwater flow was measured to the northeast with a horizontal hydraulic gradient of approximately 0.002. The average vertical hydraulic gradient is downward at 8×10^{-3} . Hydraulic conductivity testing was performed in a monitoring well screened in the uppermost unit of sandstone bedrock near the north end of the Hilldale Shopping Mall property. Results indicate hydraulic conductivities of approximately 3.77×10^{-3} centimeters per second (cm/s) to 5.99×10^{-3} cm/s (GZA, 2023).

According to the Wisconsin Department of Natural Resources (WDNR) Well Driller Viewer database, several well construction reports for potable wells from the late 1930s and 1940s are shown within the vicinity of the Subject Property, however, the homes/businesses are served with municipal water; these wells were likely abandoned. The closest City of Madison municipal supply well, Unit Well #14, is approximately 3,200 feet southwest of the Subject Property.

2.4 PREVIOUS INVESTIGATIONS

Previous investigations conducted on the Subject Property include the following:

Wisconsin Department of Revenue, BRRTS# 03-13-001132

Petroleum impacted soils were identified following the removal of a 10,000-gallon unleaded gasoline underground storage tank (UST) and two dispensing pumps that were located southeast of the Heating Plant (**Figure 2b**). Site investigation activities included soil and groundwater sampling and remedial excavations. The WDNR closed the case in September 1999 with residual petroleum contamination and a deed restriction requiring remediation of impacted soil if encountered in the future.

Wisconsin DOA Hill Farms Heating Plant, BRRTS #03-13-208083

One 30,000-gallon and one 40,000-gallon #2 fuel oil USTs were removed from the Subject Property in 1996; the USTs were located west of the Heating Plant (**Figure 2b**). Petroleum contaminated soils were identified during the UST closure. Site investigation activities included soil and groundwater sampling and a remedial excavation. The WDNR closed the case in 2006 without requiring land use restrictions or engineering controls, though limited residual soil impacts were present.

SCS Engineers Phase 1 ESA – March 2022

SCS completed a Phase 1 ESA for the Subject Property in March 2022. The Phase 1 ESA identified the following recognized environmental conditions (RECs) on the Subject Property:

1. ***The presence of residual petroleum impacted soil and subsequent land use restrictions following the closure and removal of a 10,000-gallon gasoline underground storage tank (UST) [BRRTS #03-13-001132].*** Petroleum impacts were identified during the closure and removal of a 10,000-gallon gasoline UST in 1991 southeast of the Heating Plant. Impacted soils were excavated however, excavation confirmation samples indicated some remaining impacted soils at depth. Groundwater samples collected in the assumed downgradient direction of the former UST detected lead at a concentration equal to the Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit (PAL) in one sample. The WDNR deemed the remedial investigation satisfactory and closed the leaking underground storage tank (LUST) case with a deed restriction requiring remediation of impacted soil if encountered in the future. The residual impacted soils and related land use restrictions are considered a CREC, which is a REC.
2. ***The historical presence of additional USTs, including a 2,000-gallon leaded gasoline UST registered on the Property, and as many as two additional unregistered UST of unknown size and contents. A lack of tank records and closure assessments cannot rule out potential petroleum impacts to the subsurface related to these tanks.*** Database records indicate a 2,000-gallon leaded gasoline tank was reportedly removed from the Property in 1971 and documentation of its removal is unavailable. Construction plans from 1966 identify a gasoline UST to be removed and replaced in conjunction with the construction of Building L. These references may indicate the presence of between one and three USTs, none of which have tank closure assessment information, and may have related petroleum impacts present in the subsurface.
3. ***The lack of records and likely historical use of fuel oil on the Property.*** A farmhouse was present on the Property from the early 1900s through the 1950s, which includes an era when fuel oil was a common source of heat. Fuel oil tanks of that era were not commonly registered and therefore records are limited by default. Use of fuel oil for heating that farmhouse may have resulted in petroleum releases to the subsurface that have not been assessed. The building is no longer present, but no redevelopment has been completed in that area.
4. ***Presence and use of a hydraulic lift on the Property.*** A hydraulic lift was observed within a loading dock at the northwest corner of Building D. The hydraulic oil reservoir appeared to be below ground. Potential releases could occur from underground hydraulic oil reservoirs.

The Phase 1 ESA also identified the following historical REC and potential risk:

Historical RECs

1. ***A former LUST case related to two large USTs used for heating plant fuel [BRRTS #03-13-208083].*** Soil impacts were identified during the removal of the USTs in 1996, and a remedial excavation was completed, though limited petroleum impacts were identified in soil in one confirmation sample. Follow-up investigation did not identify soil and groundwater impacts. Commerce closed the LUST case without use restrictions.

Additional Potential Risk

Potential risk of PFAS impacts to the subsurface. The City of Madison Fire Department provided a record of a fire that occurred on the Property at 4630 University Avenue address. The record indicates a dumpster fire occurred on September 1, 2017 near loading docks. The fire was contained to the metal dumpster and put out with 2-gallons of foam and 600-gallons of water. The fire suppression foam may have contained per-and polyfluoroalkyl substance (PFAS) as the City of Madison Fire Department began using non-PFAS containing foam in 2019.

SCS Engineers Phase 2 ESA – April 2022

In response to the results of the Phase 1 ESA, SCS performed a Phase 2 ESA to address the RECs identified on the Subject Property, specifically focusing on RECs within the vicinity of subsurface work required for the Heating Plant upgrades. Phase 2 consisted of drilling borings GP1 through GP8 (**Figure 2b**) and collection of soil samples for a combination of PAHs, PFAS, petroleum volatile organic compounds (PVOCs), lead, and naphthalene.

Borings GP1 and GP2 focused on the area of potential PFAS impacts from firefighting foam used during a dumpster fire response in 2017 (**Figure 4**). Boring GP3 was installed in the vicinity of former heating oil USTs and petroleum impacted soils that were removed in 1996. Borings GP4 through GP7 focused on the area of a former gasoline UST and residual petroleum contaminated soils. Boring GP8 was installed in the vicinity of a UST identified on construction plans from 1966 without documentation of its removal.

The results of the Phase 2 ESA include the following:

- No petroleum impacts to soil were identified in the field and laboratory results.
- Non-native fill soil was observed at all boring locations and generally consists of silt with varying amounts of clay, sand, and gravel. It ranges in thickness from approximately 5 to 12 feet.
- A small amount of coal and/or cinders was observed in shallow fill soils in borings GP2, GP3, and GP4, at depths between 0.5 to 3.5 feet bgs.
- PAHs were detected in boring GP3 at concentrations in excess of the groundwater and residential direct contact NR 720 Residual Contaminant Levels (RCLs), but below the industrial direct contact RCLs.
- PFAS were detected in shallow soils at boring GP1 and GP2. The detected PFAS include:
 - Perfluoropentanoic acid (PFPeA) at 0.10 µg/kg in GP1 and at 0.17 µg/kg in GP2.
 - Perfluoroheptanoic acid (PFHpA) at 0.10 µg/kg in GP2.
 - Perfluorooctanesulfonic acid (PFOS) at 0.16 µg/kg in GP2.
 - 6:2 Fluorotelomer sulfonic acid (6:2 FTS) at 2.3 µg/kg in GP1.

On behalf of DOA, SCS submitted a Notification for Hazardous Substance Discharge Form and a copy of the Phase 2 Environmental Site Assessment Report to the WDNR on August 8, 2022. On August 23, 2023, the WDNR issued a responsible party letter to DOA and opened Hill Farms Heating Plant BRRTS case No. 03-13-590436.

3.0 SITE INVESTIGATION UPDATE

Follow up site investigation work included additional soil sampling to define the horizontal and vertical extents of PFAS and additional sampling for PAHs if non-native soils containing coal and/or cinders were encountered. Our discussion of the updated investigation will focus on work completed after the August 2022 notification to the WDNR.

The installation of groundwater monitoring wells at the Subject Property would be difficult and costly due to shallow bedrock (approximately 10 to 15 feet bgs) and deep water table within bedrock (approximately 40 to 45 feet bgs). SCS proposed to first identify if PFAS compounds moved vertically through the soil column by testing soils above the top of bedrock. On approximately September 14, 2023, SCS discussed the proposed investigation with the WDNR project manager whom agreed on the approach.

3.1 METHODS

On September 28, 2022, SCS geologist, Mrs. Jackie Rennebohm, oversaw the drilling of seven direct-push soil borings (GP9 through GP15) at the Subject Property. The boring locations are shown on **Figure 2b**. On-site Environmental Services, Inc. of Sun Prairie, Wisconsin provided drilling services. SCS also collected a shallow soil sample adjacent to Manhole #15, the outfall of the storm sewer line that runs near the location of the dumpster fire (**Figure 2a**).

The borings were located within areas to assess the horizontal and vertical extent of PAH and PFAS impacts and in areas where soil may need to be excavated during construction activities. SCS re-sampled deeper soils at borings GP13 and GP14 in the locations where PFAS were detected in shallow soil (GP1 and GP2) in April 2022.

On-site Environmental Services, Inc. decontaminated their drilling equipment prior to sampling each boring. After decontamination and prior to drilling, SCS collected a field blank by running PFAS free water through a drilling rod. The equipment blank was collected to indicate if the drilling equipment contained PFAS.

Borings GP9, GP10, GP11, GP13, and GP14 were advanced to 15 feet bgs using a Geoprobe™ drill rig. Borings GP12 and GP15 were planned to extend to 15 feet bgs but hit refusal (shallow bedrock) between 13 and 14 feet bgs. Boring logs were completed for each boring and site soils were classified following the Unified Soil Classification System (USCS) and screened with a photoionization detector (PID). Soil borings were immediately abandoned following NR 141 Wisconsin Administrative Code.

One soil sample was collected from each boring for laboratory analysis of PFAS and were submitted to Pace Analytical (Pace) of Green Bay, Wisconsin. Soils were analyzed for PAHs from borings GP12, GP14, and GP15. The soil sample collected adjacent to Manhole #15 was analyzed for PFAS. Soil cuttings were thin spread on-site.

3.2 FINDINGS

Boring locations are shown on **Figure 2b** and soil boring logs and borehole abandonment forms are included in **Appendix B**.

Laboratory analytical reports for soil samples are included in **Appendix C**. Laboratory analytical results and applicable WDNR standards for PVOCs and Lead are summarized in **Table 1**, PAH results are summarized in **Table 2**, and PFAS results are summarized in **Table 3**.

The estimated extent of soil concentrations greater than WDNR standards is shown on **Figure 3**. The locations of PFAS detections in soil are shown on **Figure 4**. A geologic cross-section is provided as **Figure 5**.

3.2.1 Subject Property Soils, Geology, and Hydrogeology

Soils observed on the Subject Property generally consist of varying thicknesses of clay, silt, silty sand, and poorly graded sand overlying weathered dolomite bedrock. No petroleum odors, stains, or other indications of a release were observed in the soil borings. Non-native fill soils were observed in all borings that extended to depths between 2.5 to 5.5 feet bgs. SCS observed dull, black, sand and gravel up to 2-inches thick immediately below the asphalt surface cover in borings GP9, GP14, and GP15. The dull, black sand and gravel appeared to represent crushed asphalt rather than coal or cinders. Groundwater was not encountered during the investigation and is estimated to be greater than 40 feet bgs.

3.2.2 Soil Analytical Results and Discussion

PAHs

PAHs have only been detected above NR 720 groundwater pathway and non-industrial direct contact RCLs in one boring (GP3) (**Figure 3**) located immediately adjacent to the closed former fuel oil UST soil excavation area [BRRTS #03-13-208083]. The soil sample at GP3 was collected from non-native fill soils that contained a small amount of coal and/or cinders. The PAHs detected at GP3 may be related to the presence of coal and/or cinders in this location. The area surrounding GP-3 is paved with asphalt.

PAHs were not detected in soil in borings GP4, GP12, GP14, and GP15 with the exception of several low-level detections, all of which are estimated detections below the laboratory limit of quantitation (J Flagged) (**Table 2**).

PFAS

PFAS were detected in shallow soils at boring GP1 and GP2 in the Phase 2 ESA. In subsequent soil sampling, PFAS were detected in two additional borings, GP12 and GP14. PFAS were not detected in borings GP9, GP10, GP11, GP13, and GP15.

Boring GP13 was installed adjacent to boring GP1, where two PFAS compounds were detected in soil from 4.5 feet bgs. The sample from boring GP13 was collected at 14.5 feet bgs.

Four PFAS compounds were detected in boring GP14. Boring GP14 was installed adjacent to GP2, where three PFAS compounds were detected in soil from 4 feet bgs. The sample from boring GP14 was collected at 14.5 feet bgs. The below table summarizes the PFAS detections in borings in the immediate area of the dumpster fire (**Table 3**).

PFAS	GP1 (4.5 feet)	GP13 (14.5 feet)	GP2 (4 feet)	GP14 (14.5 feet)
Perfluorobutanoic acid (PFBA)	Estimated Detection	Not Detected	Estimated Detection	Not Detected
Perfluoropentanoic acid (PFPeA)	Detected	Not Detected	Detected	Detected
Perfluorohexanoic acid (PFHxA)	Estimated Detection	Not Detected	Estimated Detection	Detected
Perfluoroheptanoic acid (PFHpA)	Estimated Detection	Not Detected	Detected	Detected
Perfluorooctanesulfonic acid (PFOS)	Not Detected	Not Detected	Detected	Not Detected
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Detected	Not Detected	Not Detected	Detected

One PFAS compound, perfluorooctanesulfonic acid (PFOS), was detected in GP12 at 0.078 µg/kg at a depth of 3 feet bgs.

Soil from borings GP9, GP10, and GP11 were collected between 9 to 11 feet below surface and the sample GP15 was collected at 3 feet bgs. Borings GP9, GP10, and GP11 are located in the estimated downgradient direction of the 2017 dumpster fire (**Figure 4**), the lack of PFAS detections suggest impacts from the dumpster fire are limited in extent.

Five PFAS compounds were detected in boring HA-1 Outfall, the shallow soil sample collected adjacent to a storm sewer offsite near the northeast corner of the Subject Property (**Figure 2a**). The storm sewer is located in a low spot and receives storm water run-off from multiple properties. Four of the five detected compounds in HA-1 Outfall were not detected in samples collected from the Subject Property, suggesting those compounds are likely coming from off-site sources.

The PFOA and PFOS concentrations did not exceed their established direct contact NR 720 RCLs (**Table 3**).

The location of PFAS detections in soil is show on **Figure 4**, the extent of impacts from foam used to suppress a dumpster fire in 2017 appears to be limited in extent to the vicinity of GP1, GP2, GP12, and GP14.

4.0 VAPOR INTRUSION SCREENING

Per WDNR guidance document Pub-RR-800, the potential for vapor intrusion can be screened out based on the following factors:

- There is no evidence of free-phase petroleum product that would be capable of off-gassing vapors.
- Petroleum-impacted soil with the potential for off-gassing vapors was not identified within 5-feet of the building foundations.
- Benzene was not identified in groundwater at levels in excess of 1,000 micrograms per liter (µg/L).

- The contaminants of concern at the Subject Property include PAHs and PFAS, which are not capable of off-gassing vapors. Certain PFAS compounds can off-gas if present in extreme temperatures, for example during thermal remediation. These temperatures are not expected to be present on the Subject Property.

5.0 CONCLUSIONS

SCS performed a site investigation to evaluate the extent of petroleum, PAH and PFAS impacts to soils on the Subject Property. PAHs and PFAS were detected in soil in April 2022 during a Phase 2 ESA to address RECs identified on the Subject Property, specifically focusing on RECs in the vicinity of subsurface work required for the Heating Plant upgrades.

The following conclusions are based on the results of this assessment:

Petroleum:

- No petroleum impacts to soil were identified in the field and laboratory results.

PAHs:

- Non-native fill soil was observed at all boring locations and generally consists of silt with varying amounts of clay, sand, and gravel. It ranges in thickness from approximately 5 to 12 feet.
- Debris that appeared to consist of a mixture of coal and/or cinders was observed in shallow fill soils in borings GP2, GP3, GP4, GP9, GP14, and GP15. The non-native fill materials with coal and/or cinders were observed in these borings at depths between 0.5 to 4 feet below surface and appears to be sporadic in extent.
- PAHs were only detected above NR 720 groundwater pathway and non-industrial direct contact RCLs in one boring, GP3. The PAH concentrations in GP3 appear to be associated with fill soils containing coal and/or cinders.
- The areas of observed non-native fill with coal and/or cinders are capped by impervious asphalt pavement, which serves as a cap providing protection of direct contact concerns and minimization of surface water infiltration. If non-native fill soils containing coal and/or cinders are exposed during Heating Plant upgrade work, the soils will be managed appropriately, likely landfill disposal.

PFAS:

- Several low-level concentrations of select PFAS compounds were detected in soil near the southwest corner of the Heating Plant and near the northeast corner of the Subject Property (**Figure 4**). The most likely source of the PFAS identified near the southwest corner of the Heating Plant is from foam used to suppress a dumpster fire that occurred in September 2017. The dumpster fire response used two gallons of foam and 600-gallons of water.
- Four of the five PFAS compounds detected in boring HA-1 Outfall were not detected in any other boring on the Subject Property. The PFAS detections at HA-1 Outfall are likely unrelated to the foam used to put out the dumpster fire and rather from off-site sources.

- Borings GP13 and GP14 were drilled adjacent to GP1 and GP2 to assess the vertical migration of PFAS identified in shallow soils at GP1 and GP2. Very low concentrations of PFAS were only detected in one of the two deeper samples suggesting vertical migration of PFAS is likely limited in extent.
- PFAS were not detected in deeper soils in the estimated downgradient direction of the dumpster fire further confirming the impact from foam used in the dumpster fire is limited in extent.
- None of the detected PFAS compounds exceeds the two established NR 720 direct contact RCLs for PFAS.
- There are no established NR 720 groundwater protective RCLs for PFAS. There is no NR 140 Enforcement standard for PFAS compounds in groundwater. The concentrations of PFAS detected in soil were well below 1 µg/kg, with the exception of 6:2 FTS which was detected at 2.3 µg/kg.
- The areas of observed PFAS on the Hill Farms Power Plant property are capped by impervious asphalt pavement, which serves as a cap providing protection of direct contact concerns and minimization of surface water infiltration. If soils from the areas where PFAS were detected are excavated in the future, the soils will be managed appropriately.

With the exception of shallow fill soils at boring location GP-3, which are capped by an impervious surface, there are no other NR 720 RCL exceedances on the Subject Property. The low-level on-site detected PFAS concentrations are limited in extent to the area near the dumpster fire (**Figure 4**). For the above-mentioned reasons, SCS requests the WDNR make a No Further Action determination with respect to the Subject Property.

6.0 EMERGING CONTAMINANTS

In addition to the PFAS investigation described above, the Subject Property was evaluated for the use of and potential impacts to the subsurface pertaining to 1,4-dioxane. Based on the historical use of the Subject Property as a State Office Building, with coal and natural gas generation, it is unlike that subsurface impacts from 1,4-dioxane is a concern since chlorinated solvents were not likely used on the Subject Property.

7.0 REFERENCES

GZA GeoEnvironmental, Inc. (GZA), 2023, Site Investigation and Remedial Action Documentation Report, Former Hilldale Cleaners, Hilldale Mall Property, 702 North Midvale Boulevard, Madison, Wisconsin, January 17, 2023.

Ian T. Cousins, Jana H. Johansson, Matthew E. Salter, Bo Sha, and Martin Scheringer, Outside the Safe Operating Space of New Planetary Boundary for Per-and Polyfluoroalkyl Substances (PFAS), Environmental Science & Technology 2022 56 (16), 11172-11179

DOI: 10.1021/acs.est.2c02765

<https://pubs.acs.org/doi/10.1021/acs.est.2c02765?fig=fig1&ref=pdf>

Interstate Technology Regulatory Council (ITRC), Aqueous Film-Forming Foam (AFFF), April 2020
https://pfas-1.itrcweb.org/fact_sheets_page/PFAS_Fact_Sheet_AFFF_April2020.pdf

ITRC, PFAS Home Webpage, External Data Tables, “Fact Sheets” PFAS Water and Soil Regulatory and Guidance Values Excel Table”, June 2022 <https://pfas-1.itrcweb.org/>

Michigan Department of Environment, Great Lakes, and Energy, Michigan PFAS Action Response Team, Firefighting Foam and PFAS, September 30, 2020
<https://www.michigan.gov/pfasresponse/0,9038,7-365-86514-496805--,00.html>

SCS Engineers (SCS), 2022, Phase 1 Environmental Site Assessment Report, Hill Farms Heating Plant, 4622 University Avenue, Madison, Wisconsin, March 16, 2022.

SCS, 2022, Phase 2 Environmental Site Assessment Report, Hill Farms Heating Plant, 4622 University Avenue, Madison, Wisconsin, May 4, 2022.

United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Web Soil Survey website <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Wisconsin Department of Natural Resources, Environmental Cleanup & Brownfields Redevelopment, BRRTS on the Web, Hilldale Shopping Center Case Files
<https://dnr.wi.gov/botw/GetActivityDetail.do?detailSeqNo=523602>

Wisconsin Department of Natural Resources Well Driller Viewer Database,
https://dnrmaps.wi.gov/H5/?viewer=Well_Driller_Viewer

Wisconsin Geological and Natural History Survey, 2013, B.A. Brown, K. Massie-Ferch, and R.M. Peters, Preliminary Bedrock Geology of Dane County, Wisconsin, 2013.

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Tables

- 1 Soil Analytical Results Summary – PVOCs and Lead
- 2 Soil Analytical Results Summary – PAHs
- 3 Soil Analytical Results Summary – PFAS

Table 1. Soil Analytical Results Summary - PVOCs and Lead
Hill Farms Heating Plant / SCS Engineers Project #25221165.00
 (Results are in µg/kg, except where noted otherwise)

Sample	Date	Depth (feet)	PID (ppm)	Lab Notes	Benzene	Ethylbenzene	Toluene	Xylenes	1,2,4-TMB	1,3,5-TMB	1,2,4- & 1,3,5-TMB Combined	MTBE	Naphthalene	Lead (mg/kg)	Other VOCs
GP-3	4/6/2022	8	9.3	--	<14.5	<14.5	<15.4	<44.1	<18.2	<19.7	<37.9	<17.9	NA	NA	NA
GP-4	4/6/2022	3.5	4.5	--	<13.2	<13.2	<14.0	<40.1	<16.6	<17.9	<34.5	<16.3	NA	NA	NA
GP-5	4/6/2022	4	4.9	--	<14.1	<14.1	<14.9	<42.7	<17.6	<19.0	<36.6	<17.4	<18.4	2.0 J	NA
GP-6	4/6/2022	14	4.4	--	<18.8	<18.8	<20.0	<57.2	<23.6	<25.5	<49.1	<23.3	<24.7	<3.8 D3	NA
GP-7	4/6/2022	11	5.0	--	<13.8	<13.8	<14.6	<41.7	<17.2	<18.6	<35.8	<17.0	<18.0	3.9 J,D3	NA
GP-8	4/6/2022	12	8.2	--	<13.5	<13.5	<14.3	<40.8	<16.9	<18.2	<35.1	<16.6	<17.6	1.6 J	NA
Trip Blank	4/6/2022	--	--	--	<11.9	<11.9	<12.6	<36.1	<14.9	<16.1	<31.0	<14.7	NA	NA	NA
NR 720 Groundwater Pathway RCLs with a Wisconsin-Default Dilution Factor of 2					5.1	1,570	1,107.2	3,960	(a)		1,378.7	27	658.2	27	
NR 720 Non-Industrial Direct Contact RCLs					1,600	8,020	818,000	260,000	219,000	182,000	NE	63,800	5,520	400	
NR 720 Industrial Direct Contact RCLs					7,070	35,400	818,000	260,000	219,000	182,000	NE	282,000	24,100	800	
CAS No.					71-43-2	100-41-4	108-88-3	1330-20-7	95-63-6	108-67-8	--	1634-04-4	91-20-3	7439-92-1	

Abbreviations:

µg/kg = micrograms per kilogram or parts per billion (ppb)
 mg/kg - milligrams per kilogram or parts per million (ppm)
 CAS No. = Chemical Abstracts Service Number
 PVOCs = Petroleum Volatile Organic Compounds

PID = Photoionization Detector
 ppm = parts per million
 RCLs = Residual Contaminant Levels

MTBE = Methyl-tert-butyl ether
 TMB = Trimethylbenzene
 VOCs = Volatile Organic Compounds

NA = Not Analyzed
 NE = No Standard Established
 -- = Not Applicable

Notes:

Bold+underlined values exceed an NR 720 RCL, as of December 2018.

(a) NR 720 Groundwater Pathway RCLs for 1,2,4 and 1,3,5 Trimethylbenzene Combined = 1,378.7

Laboratory Notes/Qualifiers:

D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
 J = Estimated concentration at or above the Limit of Detection and below the Limit of Quantitation.

Created by: LMH Date: 4/20/2022
 Last revision by: LMH Date: 4/20/2022
 Checked by: REO Date: 4/21/2022
 Proj Mgr QA/QC: RT Date: 5/4/2022

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Table 2. Soil Analytical Results Summary - PAHs
Hill Farms Heating Plant / SCS Engineers Project #25221165.00
 (Results are in µg/kg, except where noted otherwise)

Sample	Date	Depth (feet)	Lab Notes	Acenaph-thene	Acenaph-thylene	Anthracene	Benzo(a) anthracene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Benzo(a) pyrene	Benzo(ghi) perylene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	Naphthalene	Phenanthrene	Pyrene
GP-3	4/6/2022	2.5	--	<46.3	<45.0	89.4 J	658	<u>1,360</u>	667	<u>994</u>	867	<u>1,100</u>	181 J	1,980	<42.8	673	<52.1	<52.2	<34.8	639	1,570
GP-4	4/6/2022	3.5	--	<2.3	<2.2	<2.2	13.1 J	23.8	9.6 J	14.6 J	12.9 J	23.8	3.2 J	19.2	<2.1	6.7 J	15.2 J	17.2 J	9.3 J	20.1	16.4 J
GP-12	9/28/2022	3.0	--	<2.4	<2.3	<2.3	<2.4	6.4 J	3.5 J	<2.1	3.4 J	11.6 J	<2.5	11.2 J	<2.2	<3.8	<2.7	<2.7	2.4 J	5.3 J	9.5 J
GP-14	9/28/2022	1.0	--	<2.3	<2.3	<2.2	<2.3	4.2 J	<2.3	<2.0	<3.2	6.1 J	<2.5	4.9 J	<2.2	<3.8	<2.6	<2.6	<1.8	3.5 J	5.1 J
GP-15	9/28/2022	3.0	--	<2.4	<2.3	<2.3	<2.4	<2.6	<2.4	<2.1	<3.2	<3.5	<2.6	<2.2	<2.2	<3.8	<2.7	<2.7	<1.8	11.1 J	<2.7
NR 720 Groundwater Pathway RCLs with a Wisconsin-Default Dilution Factor of 2				NE	NE	196,949.2	NE	478.1	NE	470	NE	144.2	NE	88,877.8	14,829.9	NE	NE	NE	658.2	NE	54,545.5
NR 720 Non-Industrial Direct Contact RCLs				3,590,000	NE	17,900,000	1,140	1,150	11,500	115	NE	115,000	115	2,390,000	2,390,000	1,150	17,600	239,000	5,520	NE	1,790,000
NR 720 Industrial Direct Contact RCLs				45,200,000	NE	100,000,000	20,800	21,100	211,000	2,110	NE	2,110,000	2,110	30,100,000	30,100,000	21,100	72,700	3,010,000	24,100	NE	22,600,000
CAS No.				83-32-9	208-96-8	120-12-7	56-55-3	205-99-2	207-08-9	50-32-8	191-24-2	218-01-9	53-70-3	206-44-0	86-73-7	193-39-5	90-12-0	91-57-6	91-20-3	85-01-8	129-00-0

Abbreviations:

µg/kg = micrograms per kilogram or parts per billion (ppb)
 PAHs = Polynuclear Aromatic Hydrocarbons

-- = Not Applicable
 RCLs = Residual Contaminant Levels

NE = No Standard Established
 WDNR = Wisconsin Department of Natural Resources

CAS No. = Chemical Abstracts Service Number

Notes:

Bold+underlined values meet or exceed an NR 720 RCL, as of December 2018.

Results that are below the laboratory limit of quantitation (J flagged) are not considered RCL exceedances under NR 720.07(2)(c)

Laboratory Notes/Qualifiers:

J = Estimated concentration at or above the Limit of Detection and below the Limit of Quantitation.

Created by: LMH Date: 4/20/2022
 Last revision by: JR Date: 11/22/2022
 Checked by: BLR Date: 11/23/2022
 Proj Mgr QA/QC: RT Date: 11/30/2022

I:\25221165.00\Data and Calculations\Tables\[2_Soil_PAHs.xlsx]Soil PAHs

Table 3. Soil Analytical Results Summary - PFAS
Hill Farms Heating Plant / SCS Engineers Project #25221165.00
 (Results are in µg/kg, except where otherwise noted)

Free Acid Name		Perfluorobutanoic acid	Perfluoropentanoic acid	Perfluorohexanoic acid	Perfluoroheptanoic acid	Perfluorooctanoic acid	Perfluorononanoic acid	Perfluorodecanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	Perfluorobutanesulfonic acid
Acronym and CAS #		PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDoA	PFTrIA	PFTeA	PFBS
Sample (Depth in feet)	Date	375-22-4	2706-90-3	307-24-4	375-85-9	335-67-1	375-95-1	335-76-2	2058-94-8	307-55-1	72629-94-8	376-06-7	375-73-5
GP-1 (4.5)	4/6/2022	0.033 J	0.10	0.051 J	0.040 J	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.02
GP-2 (4)	4/6/2022	0.065 J	0.17	0.082 J	0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.02
GP-9 (9)	9/28/2022	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.042
GP-10 (10)	9/28/2022	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.040
GP-11 (11)	9/28/2022	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.042
GP-12 (3)	9/28/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.043
GP-13 (14.5)	9/28/2022	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.042
GP-14 (14.5)	9/28/2022	<0.048	0.17	0.17	0.180	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.042
GP-15 (3)	9/28/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.044
HA-1 Outfall (1)	9/28/2022	<0.044	<0.044	<0.044	<0.044	0.12	0.063	0.069	<0.044	<0.044	<0.044	<0.044	<0.039
Equipment Blank (ng/L)	4/6/2022	<0.44	<0.43	<0.43	<0.54	<0.58	<0.73	<0.56	<0.53	<0.48	<0.61	<0.47	<0.47
Equipment Blank (ng/L)	9/28/2022	4.4	<1.8	<1.8	<1.8	95	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.6
NR 720 Non-Industrial Direct Contact RCL		NE	NE	NE	NE	1,260	NE	NE	NE	NE	NE	NE	1,260,000
NR 720 Industrial Direct Contact RCL		NE	NE	NE	NE	16,400	NE	NE	NE	NE	NE	NE	16,400,000

Table 3. Soil Analytical Results Summary - PFAS
Hill Farms Heating Plant / SCS Engineers Project #25221165.00
 (Results are in µg/kg, except where otherwise noted)

Free Acid Name		Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid	Perfluoroheptanesulfonic acid	Perfluorooctanesulfonic acid	Perfluoronanesulfonic acid	Perfluorodecane sulfonic acid	Perfluorooctanesulfonamide	2-(N-Methylperfluorooctanesulfonamido) acetic acid	2-(N-Ethylperfluorooctanesulfonamido) acetic acid	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid
Acronym and CAS #		PFPeS	PFHxS	PFHpS	PFOS	PFNS	PFDS	FOSA	N-MeFOSAA	N-EtFOSAA	4:2 FTS	6:2 FTS
Sample (Depth in feet)	Date	2706-91-4	355-46-4	375-92-8	1763-23-1	68259-12-1	335-77-3	754-91-6	2355-31-9	2991-50-6	757124-72-4	27619-97-2
GP-1 (4.5)	4/6/2022	<0.01	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.03	2.3
GP-2 (4)	4/6/2022	<0.01	<0.02	<0.02	0.16	<0.01	<0.02	<0.02	<0.02	<0.02	<0.03	<0.03
GP-9 (9)	9/28/2022	<0.044	<0.043	<0.045	<0.044	<0.045	<0.045	<0.047	<0.047	<0.047	<0.044	<0.045
GP-10 (10)	9/28/2022	<0.042	<0.041	<0.043	<0.042	<0.043	<0.044	<0.045	<0.045	<0.045	<0.042	<0.043
GP-11 (11)	9/28/2022	<0.044	<0.043	<0.045	<0.044	<0.045	<0.046	<0.047	<0.047	<0.047	<0.044	<0.045
GP-12 (3)	9/28/2022	<0.046	<0.044	<0.046	0.078	<0.047	<0.047	<0.049	<0.049	<0.049	<0.045	<0.046
GP-13 (14.5)	9/28/2022	<0.045	<0.043	<0.045	<0.044	<0.046	<0.046	<0.048	<0.048	<0.048	<0.045	<0.045
GP-14 (14.5)	9/28/2022	<0.045	<0.044	<0.045	<0.044	<0.046	<0.046	<0.048	<0.048	<0.048	<0.045	0.11
GP-15 (3)	9/28/2022	<0.046	<0.045	<0.047	<0.046	<0.047	<0.047	<0.049	<0.049	<0.049	<0.046	<0.047
HA-1 Outfall (1)	9/28/2022	<0.041	<0.040	<0.042	0.44	<0.042	0.055	<0.044	<0.044	<0.044	<0.041	<0.042
Equipment Blank (ng/L)	4/6/2022	<0.47	<0.50	<0.41	<0.54	<0.44	<0.44	<0.81	<0.43	<0.55	<0.55	<0.64
Equipment Blank (ng/L)	9/28/2022	<1.7	<1.7	<1.7	<1.7	<1.8	<1.8	<1.8	<1.8	<1.8	<1.7	<1.7
NR 720 Non-Industrial Direct Contact RCL		NE	NE	NE	1,260	NE	NE	NE	NE	NE	NE	NE
NR 720 Industrial Direct Contact RCL		NE	NE	NE	16,400	NE	NE	NE	NE	NE	NE	NE

Table 3. Soil Analytical Results Summary - PFAS
Hill Farms Heating Plant / SCS Engineers Project #25221165.00
 (Results are in µg/kg, except where otherwise noted)

Free Acid Name		8:2 Fluorotelomer sulfonic acid	N-Ethylperfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	Perfluorododecanesulfonic acid	N-Methylperfluorooctanesulfonamidoethanol	N-Ethylperfluorooctanesulfonamidoethanol	Perfluoro(2-(6-chlorohexyl)oxy)ethanesulfonic acid	Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	2-[(8-Chloro-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-hexadecafluorooctyl)oxy]-1,1,2,2-tetrafluoroethanesulfonic acid	DONA
Acronym and CAS #		8:2 FTS	N-EtFOSA	N-MeFOSA	PFDoS	N-MeFOSE	N-EtFOSE	F-53B Major	GenX	F-53B Minor	DONA
Sample (Depth in feet)	Date	39108-34-4	4151-50-2	31506-32-8	79780-39-5	24448-09-7	1691-99-2	756426-58-1	13252-13-6	763051-92-9	919005-14-4
GP-1 (4.5)	4/6/2022	<0.02	<0.02	<0.02	<0.03	<0.02	<0.02	<0.01	<0.03	<0.01	<0.03
GP-2 (4)	4/6/2022	<0.02	<0.02	<0.02	<0.03	<0.02	<0.02	<0.01	<0.02	<0.01	<0.03
GP-9 (9)	9/28/2022	<0.045	<0.047	<0.047	<0.046	<0.047	<0.047	<0.044	<0.047	<0.044	<0.044
GP-10 (10)	9/28/2022	<0.043	<0.045	<0.045	<0.044	<0.045	<0.045	<0.042	<0.045	<0.042	<0.043
GP-11 (11)	9/28/2022	<0.045	<0.047	<0.047	<0.046	<0.047	<0.047	<0.044	<0.047	<0.045	<0.045
GP-12 (3)	9/28/2022	<0.047	<0.049	<0.049	<0.047	<0.049	<0.049	<0.045	<0.049	<0.046	<0.046
GP-13 (14.5)	9/28/2022	<0.046	<0.048	<0.048	<0.046	<0.048	<0.048	<0.045	<0.048	<0.045	<0.045
GP-14 (14.5)	9/28/2022	<0.046	<0.048	<0.048	<0.046	<0.048	<0.048	<0.045	<0.048	<0.045	<0.045
GP-15 (3)	9/28/2022	<0.047	<0.049	<0.049	<0.048	<0.049	<0.049	<0.046	<0.049	<0.046	<0.046
HA-1 Outfall (1)	9/28/2022	<0.042	<0.044	<0.044	<0.042	<0.044	<0.044	<0.041	<0.044	<0.041	<0.041
Equipment Blank (ng/L)	4/6/2022	<0.65	<0.60	<0.50	<0.45	<0.33	<0.49	<0.30	<0.52	<0.43	<0.51
Equipment Blank (ng/L)	9/28/2022	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.7	<1.8	<1.7	5.8
NR 720 Non-Industrial Direct Contact RCL		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NR 720 Industrial Direct Contact RCL		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Abbreviations:

µg/kg = micrograms per kilogram or parts per billion (ppb)
 CAS No. = Chemical Abstracts Service Number

ng/L = nanograms per liter or parts per trillion (pt)
 -- = Not Applicable NE = Not Established

Laboratory Notes/Qualifiers:

J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ).

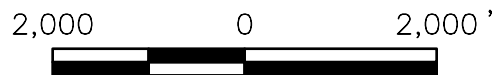
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Last revision by:	JR	Date:	4/25/2023
Checked by:	TJK	Date:	4/26/2023
Proj Mgr QA/QC:	RT	Date:	4/26/2023

Figures


- 1 Site Location
- 2a Site Plan
- 2b Detailed Site Plan
- 3 Soil Contamination
- 4 PFAS Detections
- 5 Geologic Cross-Section A-A'



USGS THE NATIONAL MAP
AUGUST 2021



SCALE: 1" = 1,500,000'

CLIENT	 STATE OF WISCONSIN DEPARTMENT OF ADMINISTRATION 101 E. WILSON STREET MADISON, WI 53703		SITE	HILL FARMS HEATING PLANT 4622 UNIVERSITY AVENUE MADISON, WI 53705		ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830		FIGURE	1
	PROJECT NO.	25221165.00		DRAWN BY:	AA		ENGINEER	SCS ENGINEERS		2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830
DRAWN:	02/01/2022	CHECKED BY:	JR							
REVISED:	02/01/2022	APPROVED BY:	JR 2/1/2022							

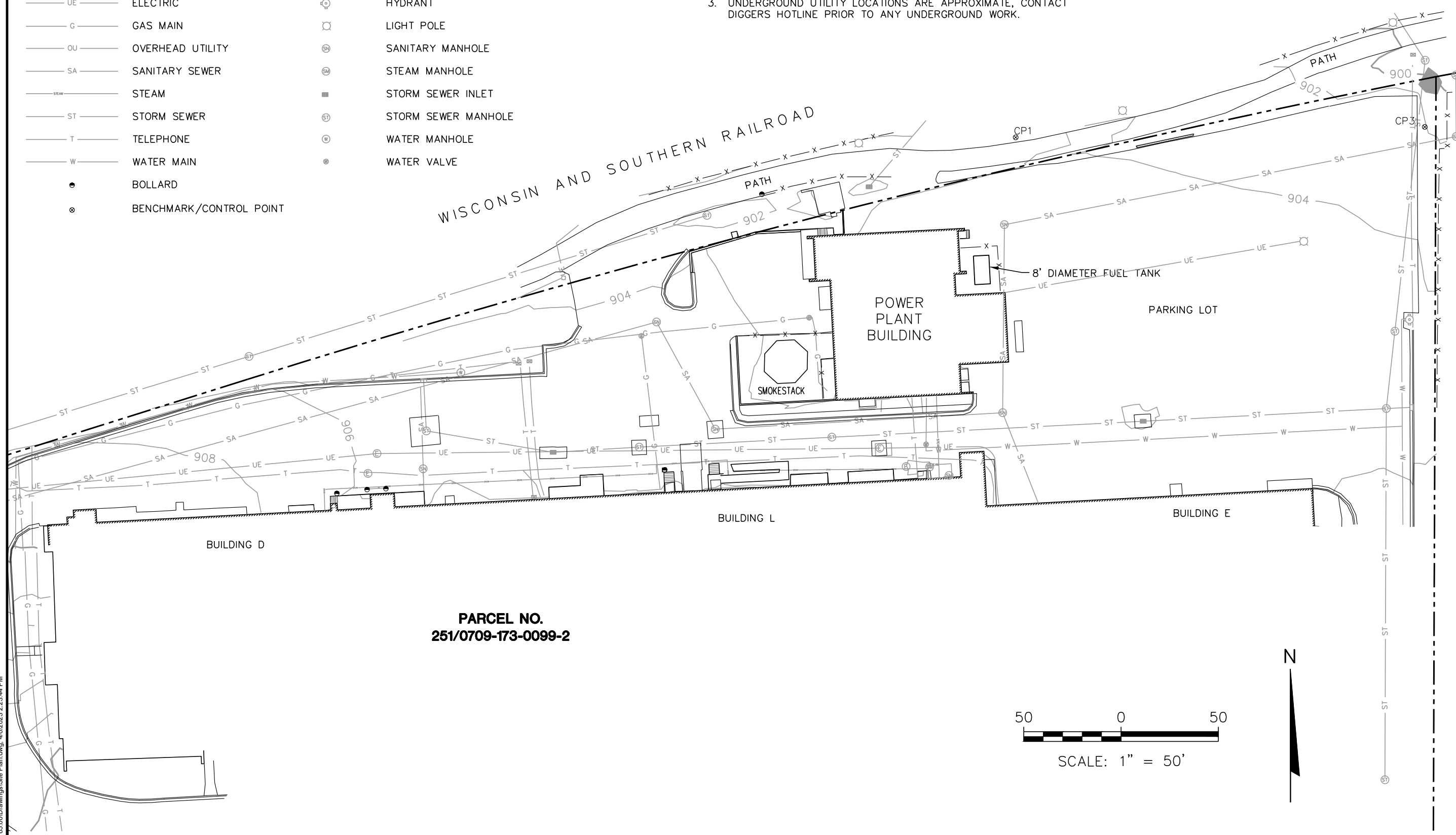
LEGEND

— — — — —	PROPERTY LINE	⊕	ELECTRIC MANHOLE
— x — x — x —	FENCE	⊙	GAS VALVE
— — — — —	GUARD RAIL	⊞	HANDHOLD
— UE —	ELECTRIC	⊕	HYDRANT
— G —	GAS MAIN	⊙	LIGHT POLE
— OU —	OVERHEAD UTILITY	⊞	SANITARY MANHOLE
— SA —	SANITARY SEWER	⊞	STEAM MANHOLE
— SEW —	STEAM	■	STORM SEWER INLET
— ST —	STORM SEWER	⊞	STORM SEWER MANHOLE
— T —	TELEPHONE	⊕	WATER MANHOLE
— W —	WATER MAIN	⊙	WATER VALVE
●	BOLLARD		
⊗	BENCHMARK/CONTROL POINT		

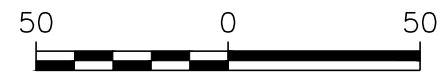
NOTES:

1. BASE MAP FROM BURSE SURVEYING & ENGINEERING SURVEYS DATED DECEMBER 2, 5, AND 23, 2019. PROVIDED BY BWZ ARCHITECTS.
2. SURVEY PROVIDED IN DANE COUNTY COORDINATE SYSTEM. ELEVATIONS BASED ON NAVD 88 DATUM.
3. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE, CONTACT DIGGERS HOTLINE PRIOR TO ANY UNDERGROUND WORK.

WISCONSIN AND SOUTHERN RAILROAD



PARCEL NO.
251/0709-173-0099-2



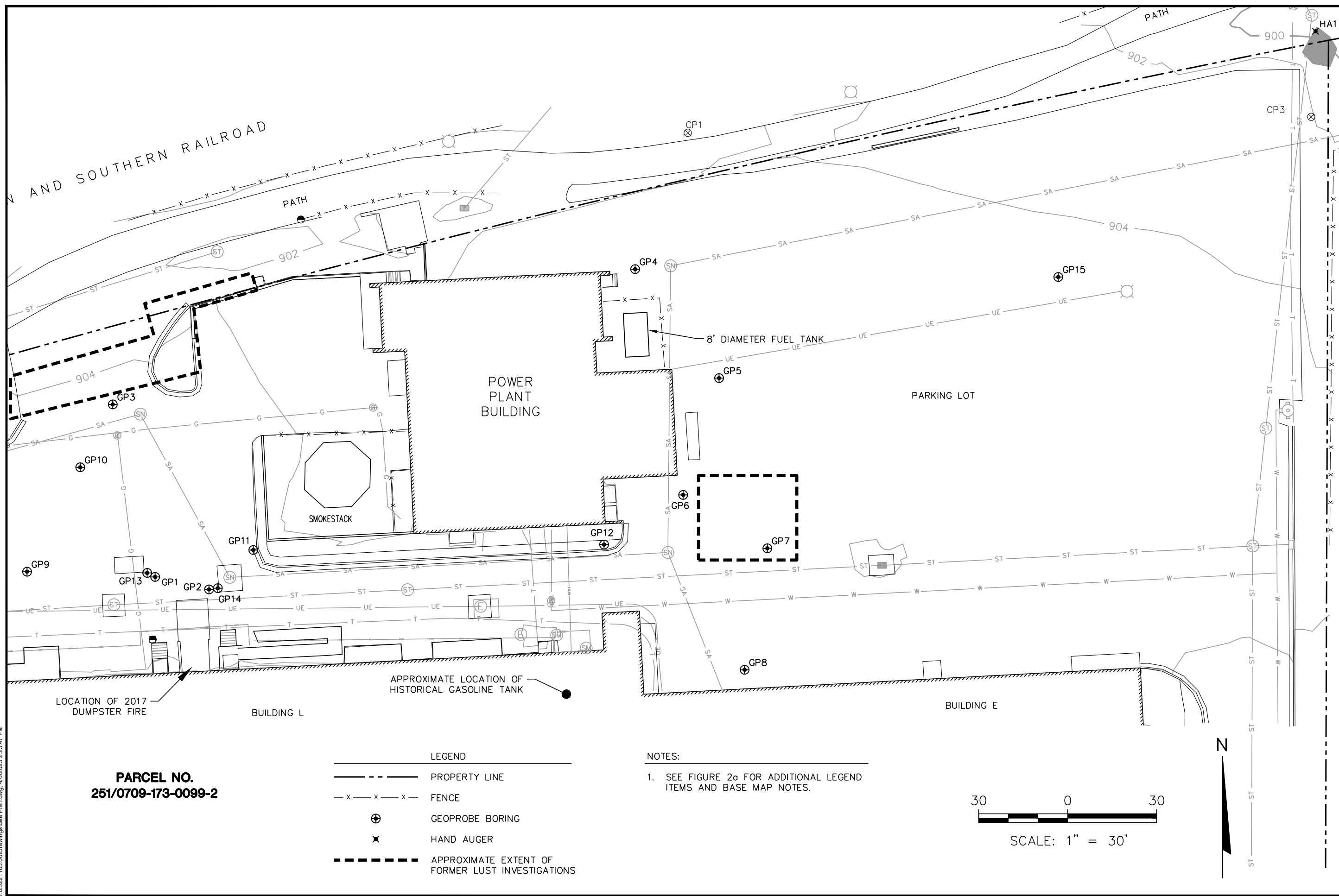
SCALE: 1" = 50'



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CLIENT WISCONSIN DEPARTMENT OF ADMINISTRATION 101 E. WILSON STREET MADISON, WI 53703	PROJECT NO.	25221165.00	ENGINEER KP	FIGURE 2a
	DRAWN:	03/20/2023		
SITE HILL FARMS HEATING PLANT 4622 UNIVERSITY AVENUE MADISON, WISCONSIN	CHECKED BY:	JR, 4/18/2023	SCS ENGINEERS 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830	
	APPROVED BY:	RT, 5/15/2023		

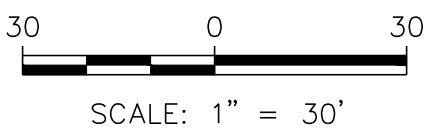
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251/0709-173-0099-2

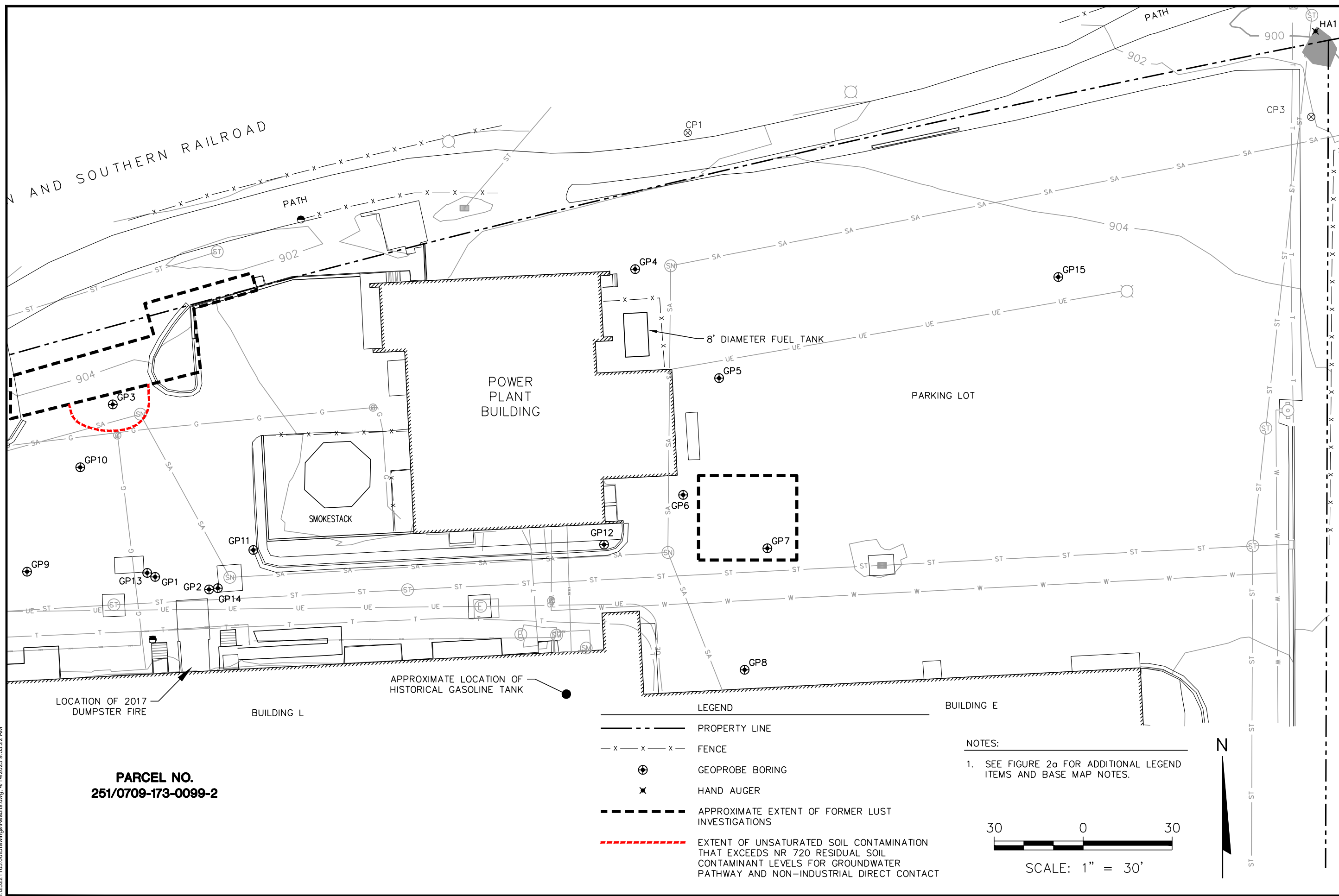
LEGEND	
	PROPERTY LINE
	FENCE
	GEOPROBE BORING
	HAND AUGER
	APPROXIMATE EXTENT OF FORMER LUST INVESTIGATIONS

NOTES:
1. SEE FIGURE 2a FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.



CLIENT WISCONSIN DEPARTMENT OF ADMINISTRATION 101 E. WILSON STREET MADISON, WI 53703	SITE	HILL FARMS HEATING PLANT 4622 UNIVERSITY AVENUE MADISON, WISCONSIN		ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE	2b
		PROJECT NO.	25221165.00			DRAWN BY:	KP
		DATE:	03/20/2023	CHECKED BY:	JR, 4/18/2023		
		REVISED:	04/06/2023	APPROVED BY:	RT, 5/15/2023		
DETAILED SITE PLAN							

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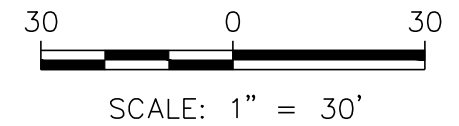


PARCEL NO.
251/0709-173-0099-2

- LEGEND**
- — — — — PROPERTY LINE
 - x - x - x - FENCE
 - ⊕ GEOPROBE BORING
 - × HAND AUGER
 - - - - - APPROXIMATE EXTENT OF FORMER LUST INVESTIGATIONS
 - - - - - EXTENT OF UNSATURATED SOIL CONTAMINATION THAT EXCEEDS NR 720 RESIDUAL SOIL CONTAMINANT LEVELS FOR GROUNDWATER PATHWAY AND NON-INDUSTRIAL DIRECT CONTACT

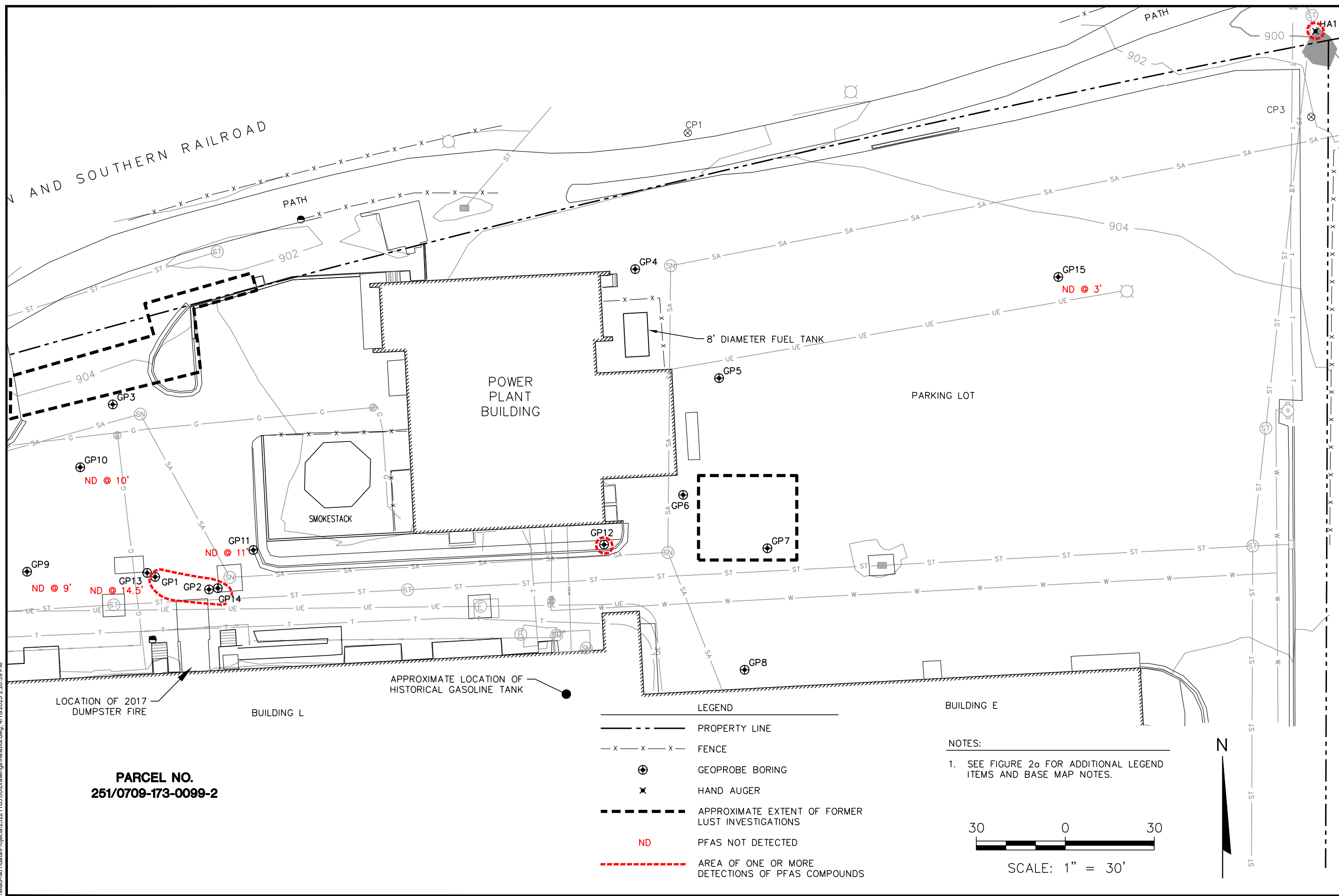
NOTES:

- SEE FIGURE 2a FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.



CLIENT WISCONSIN DEPARTMENT OF ADMINISTRATION 101 E. WILSON STREET MADISON, WI 53703	SITE HILL FARMS HEATING PLANT 4622 UNIVERSITY AVENUE MADISON, WISCONSIN	ENGINEER SOIL CONTAMINATION	FIGURE	3
			SCS ENGINEERS 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830	
PROJECT NO.	25221165.00	DRAWN BY:	KP	
DRAWN:	04/14/2023	CHECKED BY:	JR, 4/18/2023	
REVISED:	04/14/2023	APPROVED BY:	RT, 5/15/2023	

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PARCEL NO.
251/0709-173-0099-2

- LEGEND
- PROPERTY LINE
 - x - x - x - FENCE
 - ⊕ GEOPROBE BORING
 - × HAND AUGER
 - - - - - APPROXIMATE EXTENT OF FORMER LUST INVESTIGATIONS
 - ND PFAS NOT DETECTED
 - - - - - AREA OF ONE OR MORE DETECTIONS OF PFAS COMPOUNDS

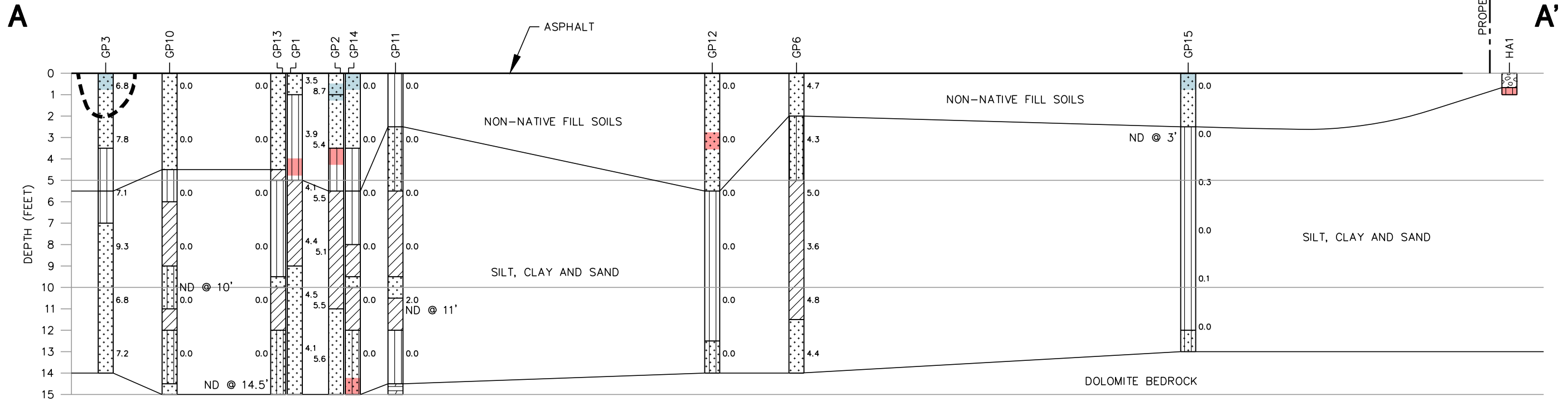
NOTES:

- SEE FIGURE 2a FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.

SCALE: 1" = 30'

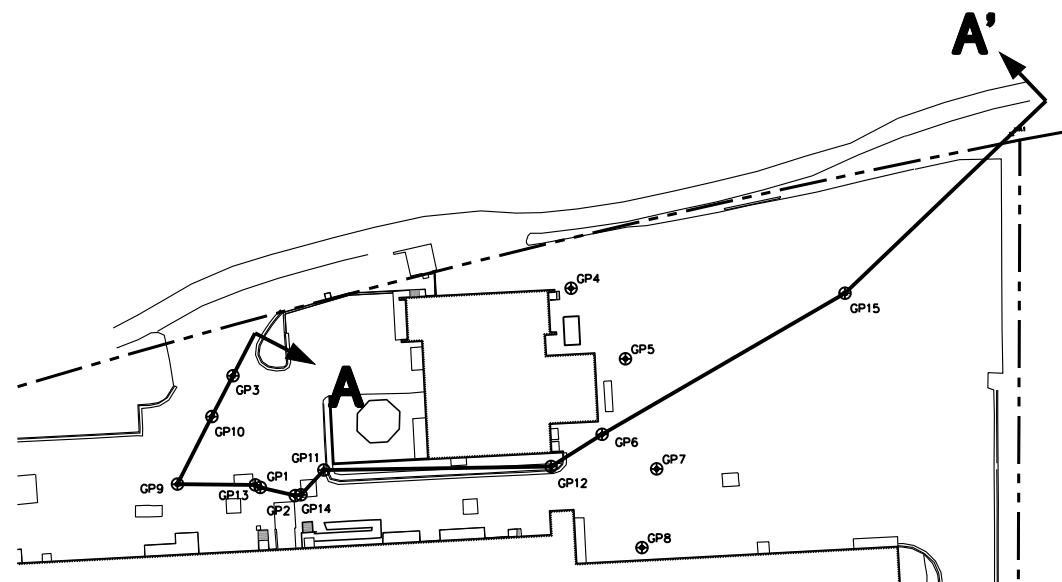


CLIENT WISCONSIN DEPARTMENT OF ADMINISTRATION 101 E. WILSON STREET MADISON, WI 53703	PROJECT NO.	25221165.00	ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE	4
	DRAWN BY:	04/14/2023			HILL FARMS HEATING PLANT 4622 UNIVERSITY AVENUE MADISON, WISCONSIN	PFAS DETECTIONS
	CHECKED BY:	04/18/2023				
	APPROVED BY:	04/18/2023				
	DRAWN BY:	KP				
	CHECKED BY:	JR, 4/18/2023				
	APPROVED BY:	RT, 5/15/2023				



- LEGEND**
- SAND, POORLY GRADED, LITTLE OR NO FINES (SP)
 - SILT (ML)
 - LEAN CLAY (CL)
 - GRAVEL, POORLY GRADED, LITTLE OR NO FINES (GP)
 - SILTY SAND (SM)
 - DOLOMITE
 - 25 FLAME IONIZATION DETECTOR READING
 - ND @ 10' PFAS NOT DETECTED
 - AREA OF ONE OF MORE DETECTIONS OF PFAS COMPOUNDS
 - DEBRIS CONTAINING CINDERS AND OR COAL OBSERVED
 - EXTENT OF UNSATURATED SOIL CONTAMINATION THAT EXCEEDS NR 720 RESIDUAL SOIL CONTAMINATION LEVELS FOR GROUNDWATER PATHWAY AND NON-INDUSTRIAL DIRECT CONTACT

0 40
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 5'
 VERTICAL EXAGGERATION = 8X



GEOLOGIC CROSS SECTION LOCATION MAP
 SCALE: 1" = 100'

\\Mad-fs1\data\Projects\25221165.00\Drawings\Section.dwg, 4/18/2023 2:55:44 PM

CLIENT	WISCONSIN DEPARTMENT OF ADMINISTRATION 101 E. WILSON STREET MADISON, WI 53703		HILL FARMS HEATING PLANT 4622 UNIVERSITY AVENUE MADISON, WISCONSIN		GEOLOGIC CROSS SECTION A-A'	
	PROJECT NO:	25221165.00	DRAWN BY:	KP	ENGINEER	
DRAWN:	04/14/2023	CHECKED BY:	JR, 4/18/2023	ENGINEER		
REVISED:	04/14/2023	APPROVED BY:	RT, 5/15/2023	ENGINEER		
						FIGURE 5

SCS ENGINEERS
 2830 DAIRY DRIVE, MADISON, WI 53718-6751
 PHONE: (608) 224-2830

Appendix A

Deed

DOCUMENT NO.

STATE BAR OF WISCONSIN FORM 3 - 1982
QUIT CLAIM DEED

THIS SPACE RESERVED FOR RECORDING DATA

1931723

REGISTRARS OFFICE
DANE COUNTY, WIS. ST.
RECORDED 2/11

Wisconsin State Public Building Corporation

86 APR 24 1992 07

quit-claims to State of Wisconsin Building Commission

VOL 8041 PAGE 85

the following described real estate in Dane County, State of Wisconsin:

RETURN TO Robert Lehmann
D. of Facilities Management
PO Box 7866
Madison, WI 53707

Tax Parcel No: Exempt

Part of the Southeast 1/4 of the Southwest 1/4 of Section 17, Town 7 North, Range 9 East, more fully described as follows: Beginning at a point in the South line of said Section 17, 319 feet West of the South 1/4 stake of said section; thence North parallel to the North and South line of said section 492 feet to the South line of right of way of Chicago, Milwaukee and St. Paul Railway Company; thence Southwest along said line of said right of way 808 feet to East side of right of way leading from South road to house formerly occupied by Alfred Merrill; thence South along East side of said right of way 274 feet to South line of said Section; thence East along said line to point of beginning, all in the City of Madison, County of Dane, State of Wisconsin.

FEE # 2 EXEMPT

This is RDC homestead property.
(is) (is not)
Dated this 3rd day of March 1986

(SEAL) Anthony S. Earl, President
(SEAL) Joel Pittelman, Secretary

AUTHENTICATION

Signature(s) Anthony S. Earl and Joel Pittelman

authenticated this 3rd day of March, 1986

Edward D. Main

Edward D. Main

TITLE: MEMBER STATE BAR OF WISCONSIN

(If not authorized by § 706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY

Edward Main, Attorney at Law

(Signatures may be authenticated or acknowledged. Both are not necessary.)

ACKNOWLEDGMENT


STATE OF WISCONSIN

County. Personally came before me this day of 1986 the above named

to me known to be the person who executed the foregoing instrument and acknowledge the same.

Notary Public County, Wis. My Commission is permanent (if not state expiration date: 19.....)

EF2



Appendix B

Soil Boring Logs and Borehole Abandonment Forms

Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-1						
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapusi				Drilling Started 4-10-22		Drilling Completed 4-10-22		Drilling Method geoprobe				
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation				
								Borehole Diam. 2				
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E				Lat. Long.		Local Grid Location (If applicable) N, E.						
County Dane			DNR County Code 13		Civil Town/City/or Village City of Madison							
Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	30"			Asphalt, ~3" thick poorly graded sand & gravel, FC, SP tan (base course)				3.5		M		COLLECT PFA S SAMPLE @ 4.5'
S2			5	Silt, w/ clay and fine sand, ML dark brown & gray, trace angular gravel, (fill).				3.9		M+		
S3	34"			lean clay, brown, shell cl to soft				4.1		M+		wet from surface water 5-9'
S4								4.4		M+		
S5	30"			poorly graded sand, fine, SP dark brown				4.5		M		
S6			15	lighter tan, trace pieces of dolomite				4.1		M		
				EOB @ 15'								

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

Signature: **J. Rennebohm** Firm: **SCS ENGINEERS**

This form is authorized by Chapters 281, 283, 289, 291, 292, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture between \$10 and \$25,000, or imprisonment for up to one year, depending on 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.

Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00	License/Permit/Monitoring Number		Boring Number GP-2
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapusi			Drilling Started 4-6-22	Drilling Completed 4-6-22	Drilling Method Geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam. 2
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E			Lat. Long.	Local Grid Location (If applicable) N., E.	

County Dane	DNR County Code 13	Civil Town/City/or Village City of Madison
----------------	-----------------------	---

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/Comments
									Standard Penetration	Moisture Content	P200	
S1	34"			Asphalt 3/4" thick poorly graded sand & gravel, fine tan (base course)	SP			8.7		M		collect PFAS sample @ 4'
S2				poorly graded sand & gravel, fine, black & tan, pieces of coal/cinders or clay (fill)	SP			5.4		M		
S3			5	silt w/ clay & fine sand, brown, trace gravel (fill)	ML			5.5		M		
S4	34"			lean clay, brown, soft.	CL			5.1		M		
S5			10					5.5		M		
S6	40"			poorly graded sand, fine, brown to tan, w/ pieces of dolomite	SP			5.6		M		
				EOB @ 15'								

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

Signature 	Firm SCS ENGINEERS
---------------	-----------------------

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Route To:

- Watershed/Wastewater
 Remediation/Redev.
 Waste Management Other _____

SOIL BORING LOG INFORMATION

Form 4400-122
Revised by SCS 1-2016

7-98

Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-3			
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapuga				Drilling Started 4.6.22		Drilling Completed 4.6.22		Drilling Method geoprobe	
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E				Lat. Long.		Local Grid Location (If applicable) N., E.			
County Dane				DNR County Code 13		Civil Town/City/or Village City of Madison			

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	37"			Asphalt, 3" thick Poorly graded sand & gravel, fine, black (base course) w/ asphalt cinders/coal? at top - light tan	SP			6.8	M		Collect sample for PAH & POC @ 2.5' & POC @ 8'	
S2			5	Silt, w/ sand & clay, fine, dark brown to black, w/ trace gravel (fill), - - -	ML			7.8	M			
S3	21"			Silt, tan, soft	ML			7.1	M			
S4			10	Poorly graded sand, fine, light brown, w/ trace gravel (dolomite pieces)	SP			9.3	M			
S5	33"							6.8 6.8	M			
S6			15	Refusal @ 14'				7.2 7.2	M			

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

Signature 	Firm SCS ENGINEERS
--	-----------------------

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Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00	License/Permit/Monitoring Number		Boring Number GP-4
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapusi			Drilling Started 4-6-22	Drilling Completed 4-6-22	Drilling Method geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam. 2
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E			Lat. Long.	Local Grid Location (If applicable) N., E.	

County Dane	DNR County Code 13	Civil Town/City/or Village City of Madison
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Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	35"		5	Asphalt, 3" thick	SP			4.2	M		COLLECT PUC & PAH sample @ 3.5'	
S2				Poorly graded sand & gravel, P.C. brown/bk/gray, coal/slag (?) (fill)								
S3	30"		10	Silt. w/ clay & fine sand, brown, trace gravel (fill)	ML			4.5	M			
S4												
S5												
S6	27"		15	Poorly graded sand, fine w/ trace silt, pieces of dolomite	SP			4.4	M			
				EOB @ 15'				3.9	M			

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

Signature 	Firm SCS ENGINEERS
---------------	-----------------------

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Route To:
 Watershed/Wastewater
 Remediation/Redev.
 Waste Management Other

Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00	License/Permit/Monitoring Number		Boring Number GP-5
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapuga			Drilling Started 4.6.22	Drilling Completed 4.6.22	Drilling Method Geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam. 2
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E			Lat. Long.	Local Grid Location (If applicable) N., E.	
County Dane		DNR County Code 13	Civil Town/City/or Village City of Madison		

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	40"			Asphalt 3" thick poorly graded sand & gravel fine dark brown (basecourse)	SP			4.5	M		Collect sample for P200 TN + lead @ 41	
S2			5	Silt + w/ clay & fine sand, brown to dark brown, trace gravel (fill)	ML			4.9	M			
S3								4.8	M			
S4	42"							3.1	M			
S5			10					4.5	M			
S6	33"			poorly graded sand, fine, light SP tan/brown, pieces of dolomite				3.9	M			
			15	EOB @ 14' hit refusal								

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

Signature: *J. Rennebohm* J. Rennebohm Firm: SCS ENGINEERS

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Route To:
 Watershed/Wastewater
 Remediation/Redev.
 Waste Management Other

Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-6						
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapusi				Drilling Started 4-6-22		Drilling Completed 4-6-22						
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level						
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E		Lat.		Local Grid Location (If applicable)		Drilling Method geoprobe						
County Dane		DNR County Code 13		Civil Town/City/or Village City of Madison								
Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	21"			Asphalt, 3" thick poorly graded sand & gravel, f-c, tan base courses	SP			4.7	M		Collect sample for P, V, C + N, + lead @ 14'	
S2				Silty sand, light brown, fine, trace gravel	SM			4.3	M			
S3			5	lean clay, brown, soft	CL			5.0	M			
S4	46"							3.6	M			
S5			10					4.8	M			
S6	33"			poorly graded sand, fine, light brown / tan, trace dolomite gravel pieces	SP			4.4	M			
EOB @ 14' refusal @ 14'												

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

Signature: *J. Bennebohm* Firm: SCS ENGINEERS

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Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-7			
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kepugi				Drilling Started 4.6.22		Drilling Completed 4.6.22		Drilling Method geoprobe	
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E				Lat. Long.		Local Grid Location (If applicable) N., E.			
County Dane			DNR County Code 13		Civil Town/City/or Village City of Madison				

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	40"			Asphalt, 3" thick Poorly graded sand & gravel, fine tan (base course)	SP			6.7	M		Collect sample for PbOct N & lead @ 11'	
S2			5	Silt, w/ clay & fine sand, brown to light brown, trace gravel (fills)	ML			4.4	M			
S3	34"							4.9	M			
S4			10					5.4	M			
S5	28"			poorly graded sand, fine, tan/light brown, gravel dolomite pieces	SP			5.0	M			
See			15	EOB @ 121 refusal								

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

Signature 	Firm SCS ENGINEERS
--	-----------------------

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Route To:
 Watershed/Wastewater
 Remediation/Redev.
 Waste Management Other

Facility/Project Name DOA Hill Farms Heating Plan		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-8					
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapugi				Drilling Started 4.6.22		Drilling Completed 4.6.22		Drilling Method geoprobe			
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation		Borehole Diam. 2	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E				Lat. Long.		Local Grid Location (If applicable) N., E.					
County Dane			DNR County Code 13			Civil Town/City/or Village City of Madison					

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	32"			Asphalt, 3" thick poorly graded sand & gravel, F-C, tan-black (base course)	SP			5.0	M		COLLECT sample for PbOCT N, lead @ 12'	
S2				Silt, w/ clay, trace sand & gravel, brown, stiff (FILL)	ML			5.4	M			
S3	31"		5	lean clay, brown, soft	CL			3.2	M			
S4								8.2	M			
S5	24"		10	Poorly graded sand, fine, light brown, w/ trace dolomite pieces	SP			8.2	M			poor recovery
				EOB@ 15'								

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

Signature: *J. Rennebohm* Firm: SCS ENGINEERS

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Route To:

- Watershed/Wastewater
 Remediation/Redev.
 Waste Management Other _____

SOIL BORING LOG INFORMATION

Form 4400-122

7-98

Revised by SCS 1-2016

Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-9					
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kupusi				Drilling Started 9/28/2022		Drilling Completed 9/28/2022		Drilling Method geoprobe			
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation		Borehole Diam. 2	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E						Lat. Long.		Local Grid Location (If applicable) N, E.			
County Dane				DNR County Code 13		Civil Town/City/or Village City of Madison					

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	30"			Asphalt, ~3" thick Poorly graded sand, f-c, tan to brown, w/ silt & gravel (fines) ~2" layer of black sand/gravel just below asphalt (potential coal tar asphalt)	SP			0.0		M		Did not observe shiny black pieces, just dull
S2			5	Silt, brown to med brown, w/ rust color mottling, trace fine sand.	ML			0.0		M		Collected soil sample @ 9'
S3	60							0.0		M		
S4								0.0				
S5	60"		10	Silty sand, fine, dk to med brown. Soft lean clay, brown, stiff	SM CL			0.0		Mt/W		perched water?
S6			15	Silty sand, f-m, brown, w/ trace gravel & clay	SM			0.0		M		perched water in sand
				EOB @ 15'								

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

Signature:  Firm: SCS ENGINEERS Jackie Pennebohm

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Route To:

Watershed/Wastewater


Remediation/Redev.

Waste Management Other _____

Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number 6P-16					
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapugi				Drilling Started 9-28-2022		Drilling Completed 9-28-2022		Drilling Method geoprobe			
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation		Borehole Diam. 2	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E						Lat. Long.		Local Grid Location (If applicable) N, E.			
County Dane				DNR County Code 13		Civil Town/City/or Village City of Madison					

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/Comments
									Standard Penetration	Moisture Content	P200	
S1	30"			Asphalt, 3" thick Poorly graded sand, f-c, brown & tan, w/ silt & gravel (fill)	SP			0.0		M		Collected Soil sample at 14'
S2			5	Silt, brown, w/ trace fine sand	ML			0.0		M		
S3	60"			lean clay, brown, soft	CL			0.0		M		
S4			10	Silty sand, fine, dark brown, w/ trace gravel, soft	SM			0.0		M		
S5				lean clay, brown, stiff	CL			0.0		M		
S6	60"			Silty sand, f-m, brown, w/ gravel	SM			0.0		M		
			15	Poorly graded sand, f-c, brown, w/ gravel (SP)								
EOB @ 15'												

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

Signature:  Firm: SCS ENGINEERS Jackie Rennebohm

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Route To:

- Watershed/Wastewater
- Remediation/Redev.
- Waste Management
- Other _____

SOIL BORING LOG INFORMATION

Form 4400-122
Revised by SCS 1-2016

7-98

Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number EP-11			
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapugi				Drilling Started 9-28-2022		Drilling Completed 9-28-2022		Drilling Method geoprobe	
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation	
								Borehole Diam. 2	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E						Lat. Long.		Local Grid Location (If applicable) N., E.	
County Dane				DNR County Code 13		Civil Town/City/or Village City of Madison			

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	24"			Asphalt, 3" thick SANDY silt, fine, w/trace gravel, soft, brown (fill)	ML			0.0		M		Collect soil sample @ 11"
S2			5	Silty sand, f-m, brown, w/ gravel	SM			0.0		M		
S3	55"			lean clay, brown, soft	CL			0.0		M		
S4			10					0.0		M ⁺		perched water in sand
S5	45"			poorly graded sand, f-c, dark brown, trace silt	SP			2.0		M		
S6				lean clay, brown, soft	CL					M		
				Silty sand, f-c, w/ gravel, brown to light brown	SM			0.0		M		
			15	Dolomite bedrock								
				EOB @ 15'								

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

Signature:  Firm: SCS ENGINEERS Jackie Rennebohm

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Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-12				
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapusi				Drilling Started 9-28-2022		Drilling Completed 9-28-2022		Drilling Method geoprobe		
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation		Borehole Diam. 2
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E				Lat. Long.		Local Grid Location (If applicable) N., E.				
County Dane			DNR County Code 13		Civil Town/City/or Village City of Madison					

Sample			Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
Number	Length Recovered	Blow Counts							Standard Penetration	Moisture Content	P200	
S1	14"			Landscaping gravel Poorly graded sand, f-c, brown w/ gravel & silt (fines)	SP			0.0	M		Collect soil samples @ 31	
S2			5	-light tan				0.0	M			
S3	55"			Silty brown, stiff	ML			0.0	M			
S4			10					0.0	M			
S5	60"							0.0	M			
S6			15	Silty sand, f-m, light tan, SM w/ gravel (dolomite)				0.0	M			
EOB @ 14'												

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

Signature  Firm SCS ENGINEERS Jackie Rennebohm

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Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00	License/Permit/Monitoring Number		Boring Number GP-13
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapugi			Drilling Started 9-28-2022	Drilling Completed 9-28-2022	Drilling Method geoprobe
DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam. 2
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E			Lat. Long.	Local Grid Location (If applicable) N., E.	
County Dane		DNR County Code 13	Civil Town/City/or Village City of Madison		

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	34"			Asphalt, 2" thick poorly graded sand, f-c, brown, black, & tan, w/ gravel, silt, & clay (fill)	SP			0.0		M		collect soil sample at 14.5'
S2			5	silty clay, stiff, brown (fill)	CL			0.0		M		
S3	100"			Silt, brown, stiff	ML			0.0		M		Boring adjacent to GP-1
S4								0.0		M		
S5	45"		10	poorly graded sand, f-c, brown lean clay, brown, soft	SP CL			0.0		M		
S6				Silty Sand, light brown to tan, w/ gravel (dolomites)	SM			0.0		M		
			15	EOB @ 15'								

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

Signature:  Firm: SCS ENGINEERS Jackie Rennebohm

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Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-14					
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapugi				Drilling Started 9-28-2022		Drilling Completed 9-28-2022		Drilling Method Geoprobe			
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation		Borehole Diam. 2	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E						Lat. Long.		Local Grid Location (If applicable) N, E.			
County Dane				DNR County Code 13		Civil Town/City/or Village City of Madison					

Sample			Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
Number	Length Recovered	Blow Counts							Standard Penetration	Moisture Content	P200	
S1	42"		5	Asphalt, 1" thick	SP			0.0		M		Collect soil samples @ 11 & 14.5'
S2				poorly graded sand, f-m, light tan, w/ gravel 2" layer of possible coal & cinders below asphalt (fill)				0.0		M		
S3	55"		5	Sandy silt, brown, fine, w/ trace gravel (fill)	ML			0.0		M	Boring adjacent to GP-2	
S4				silt, brown, stiff	ML			0.0		M		
S5	38"		10	lean clay, brown, soft	CL			0.0		M		
S6				poorly graded sand, f-c, brown lean clay, brown, soft, trace fine sand	SP CL			0.0		M		
			15	Silty sand, light brown to brown, w/ gravel (dolomites)	SM			0.0		M		
				EOB @ 15'								

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

Signature:  Firm: SCS ENGINEERS Jackie Pennebaker

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Route To:
 Watershed/Wastewater
 Remediation/Redev.
 Waste Management Other _____

Facility/Project Name DOA Hill Farms Heating Plant		SCS # 25221165.00		License/Permit/Monitoring Number		Boring Number GP-15			
Boring Drilled By (Firm name and name of crew chief) On-site Environmental Services, Inc. - Tony Kapugin				Drilling Started 9-28-2022		Drilling Completed 9-28-2022		Drilling Method geoprobe	
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Static Water Level		Surface Elevation	
Boring Location State Plane SW 1/4 of SW 1/4 of Section 17, T. 07 N, R. 09 E				Lat. Long.		Local Grid Location (If applicable) N., E.			
County Dane			DNR County Code 13		Civil Town/City/or Village City of Madison				

Sample Number	Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties			RQD/ Comments
									Standard Penetration	Moisture Content	P200	
S1	34"			Asphalt 1 3/4" thick poorly graded sand & gravel, f.c. black to brown, trace cinders, or coal below asphalt	SP (fill)			0.0		M		Collect soil Samples @ 3'
S2				Silt, brown, stiff	ML			0.0		M		
S3	55"		5	color change to gray from ~7' to 12'				0.3		M		
S4								0.6		M		
S5	35"		10					0.1		M		
				Silty sand, f.m. brown, w/ gravel (Dolomite)	SM			6.0		M		
			15	EOB @ 18'								

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

Signature:  Firm: SCS ENGINEERS Jackie Rennebohm

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Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane		WI Unique Well # of Removed Well NA		Hicap # NA		Facility Name DOA Hill Farms Heating Plant	
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)	
1/4 / 1/4 SW 1/4 SW		Section 17		Township 07 N		License/Permit/Monitoring #	
or Gov't Lot #		Range 09		<input checked="" type="checkbox"/> E <input type="checkbox"/> W		Original Well Owner Wisconsin Department of Administration	
Well Street Address 4630 University Avenue				Present Well Owner Wisconsin Department of Administration			
Well City, Village or Town Madison				Well ZIP Code 53703			
Subdivision Name				Lot #		Mailing Address of Present Owner 101 E. Wilson Street	
Reason for Removal from Service Temporary Borehole				WI Unique Well # of Replacement Well		City of Present Owner Madison	
WI Unique Well # of Replacement Well				Original Construction Date (mm/dd/yyyy) 04/06/2022		State WI	
If a Well Construction Report is available, please attach.				ZIP Code 53703			

3. Filled & Sealed Well / Drillhole / Borehole Information **4. Pump, Liner, Screen, Casing & Sealing Material**

<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 04/06/2022		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.		Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Borehole / Drillhole		Construction Type:		Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug		<input checked="" type="checkbox"/> Other (specify): Geoprobe/Direct Push		Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Formation Type:		<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Total Well Depth From Ground Surface (ft.) 15		Casing Diameter (in.) NA		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.) NA		Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		Depth to Water (feet) ~40 feet		Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
If yes, to what depth (feet)?		~40 feet		If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

5. Material Used to Fill Well / Drillhole			
From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA
3/8" Bentonite chips	0.5	15	0.46

6. Comments

Geoprobe boring GP1

7. Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	Date Received	Noted By
Street or Route PO Box 280 Sun Prairie	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rennebohm</i>	Date Signed 04/06/2022

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water Watershed/Wastewater Remediation/Redevelopment

Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane	WI Unique Well # of Removed Well NA	Hicap # NA	Facility Name DOA Hill Farms Heating Plant
Latitude / Longitude (see instructions) N _____ W _____	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001	Facility ID (FID or PWS)
1/4 / 1/4 SW or Gov't Lot #	Section 17	Township 07 N	License/Permit/Monitoring #
Well Street Address 4630 University Avenue	Range 09	<input checked="" type="checkbox"/> E <input type="checkbox"/> W	Original Well Owner Wisconsin Department of Administration
Well City, Village or Town Madison	Well ZIP Code 53703		Present Well Owner Wisconsin Department of Administration
Subdivision Name	Lot #		Mailing Address of Present Owner 101 E. Wilson Street
			City of Present Owner Madison
			State WI
			ZIP Code 53703

Reason for Removal from Service
Temporary Borehole

WI Unique Well # of Replacement Well _____

3. Filled & Sealed Well / Drillhole / Borehole Information

Monitoring Well

Water Well

Borehole / Drillhole

Original Construction Date (mm/dd/yyyy)
04/06/2022

If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug

Other (specify): Geoprobe/Direct Push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.)
15

Casing Diameter (in.)
NA

Lower Drillhole Diameter (in.)
2.0

Casing Depth (ft.)
NA

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)?

Depth to Water (feet)
~40 feet

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed? Yes No N/A

Liner(s) removed? Yes No N/A

Liner(s) perforated? Yes No N/A

Screen removed? Yes No N/A

Casing left in place? Yes No N/A

Was casing cut off below surface? Yes No N/A

Did sealing material rise to surface? Yes No N/A

Did material settle after 24 hours? Yes No N/A

If yes, was hole retopped? Yes No N/A

If bentonite chips were used, were they hydrated with water from a known safe source? Yes No N/A

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped

Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials

Neat Cement Grout Concrete

Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

Bentonite Chips Bentonite - Cement Grout

Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite chips	0.5	15	0.46	NA

6. Comments

Geoprobe boring GP2

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	DNR Use Only	
Street or Route PO Box 280 Sun Prairie	Telephone Number (608) 837-8992	Date Received	Noted By	
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rennebohm</i>	Date Signed 04/06/2022

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water Watershed/Wastewater Remediation/Redevelopment

Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane	WI Unique Well # of Removed Well NA	Hicap # NA	Facility Name DOA Hill Farms Heating Plant
Latitude / Longitude (see instructions) N _____ W _____	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001	Facility ID (FID or PWS)
1/4 / 1/4 SW 1/4 SW	Section 17	Township 07 N	License/Permit/Monitoring #
or Gov't Lot #	Range 09	<input checked="" type="checkbox"/> E <input type="checkbox"/> W	Original Well Owner Wisconsin Department of Administration
Well Street Address 4630 University Avenue	Well ZIP Code 53703	Present Well Owner Wisconsin Department of Administration	
Well City, Village or Town Madison	Subdivision Name	Lot #	Mailing Address of Present Owner 101 E. Wilson Street
Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well	City of Present Owner Madison	State WI
3. Filled & Sealed Well / Drillhole / Borehole Information		ZIP Code 53703	
<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 04/06/2022	4. Pump, Liner, Screen, Casing & Sealing Material	
<input type="checkbox"/> Water Well	If a Well Construction Report is available, please attach.	Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input checked="" type="checkbox"/> Borehole / Drillhole		Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Construction Type:		Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug		Screen removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input checked="" type="checkbox"/> Other (specify): <u>Geoprobe/Direct Push</u>		Casing left in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Formation Type:		Was casing cut off below surface?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Total Well Depth From Ground Surface (ft.) 14	Casing Diameter (in.) NA	Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA	If yes, was hole retopped?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Was well annular space grouted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
If yes, to what depth (feet)?	Depth to Water (feet) ~40 feet	Required Method of Placing Sealing Material	
5. Material Used to Fill Well / Drillhole		<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped	
Concrete	From (ft.) To (ft.)	<input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain):	
3/8" Bentonite chips	Surface 0.5	Sealing Materials	
	0.5 14	<input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Concrete	
		<input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips	
		No. Yards, Sacks Sealant or Volume (circle one)	
		Surface 0.5 NA	
		0.5 14 0.43	
		Mix Ratio or Mud Weight	
		NA NA	

6. Comments

Geoprobe boring GP3

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	DNR Use Only	
Street or Route PO Box 280 Sun Prairie	Telephone Number (608) 837-8992	Comments	Date Received	Noted By
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rennetohm</i>	Date Signed 04/06/2022

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Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information				2. Facility / Owner Information			
County Dane		WI Unique Well # of Removed Well NA		Hicap # NA		Facility Name DOA Hill Farms Heating Plant	
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)	
¼ / ¼ SW or Gov't Lot #		Section 17		Township 07 N		License/Permit/Monitoring #	
Well Street Address 4630 University Avenue		Well ZIP Code 53703		Original Well Owner Wisconsin Department of Administration		Present Well Owner Wisconsin Department of Administration	
Subdivision Name		Lot #		Mailing Address of Present Owner 101 E. Wilson Street		City of Present Owner Madison	
Reason for Removal from Service Temporary Borehole		WI Unique Well # of Replacement Well		State WI		ZIP Code 53703	
3. Filled & Sealed Well / Drillhole / Borehole Information				4. Pump, Liner, Screen, Casing & Sealing Material			
<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 04/06/2022		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.		Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Borehole / Drillhole		Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (specify): <u>Geoprobe/Direct Push</u>		Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Total Well Depth From Ground Surface (ft.) 15		Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Casing Diameter (in.) NA		Casing Depth (ft.) NA		If yes, was hole retopped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Lower Drillhole Diameter (in.) 2.0		Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips	
If yes, to what depth (feet)?		Depth to Water (feet) ~40 feet		For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry		5. Material Used to Fill Well / Drillhole	
Concrete		From (ft.)		To (ft.)		No. Yards, Sacks Sealant or Volume (circle one)	
3/8" Bentonite chips		Surface		0.5		NA	
		0.5		15		0.46	
						Mix Ratio or Mud Weight NA	
						NA	
6. Comments							
Geoprobe boring GP4							
7. Supervision of Work				DNR Use Only			
Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.		License #		Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022		Date Received	
Street or Route PO Box 280 Sun Prairie		Telephone Number (608) 837-8992		Comments		Noted By	
City Sun Prairie		State WI		ZIP Code 53590		Signature of Person Doing Work <i>Jackie Rennaohm</i>	
						Date Signed 04/06/2022	

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane	WI Unique Well # of Removed Well NA	Hicap # NA
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ SW or Gov't Lot #	Section 17	Township 07 N
Well Street Address 4630 University Avenue	Range 09	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town Madison	Well ZIP Code 53703	
Subdivision Name	Lot #	

Facility Name DOA Hill Farms Heating Plant		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Wisconsin Department of Administration		
Present Well Owner Wisconsin Department of Administration		
Mailing Address of Present Owner 101 E. Wilson Street		
City of Present Owner Madison	State WI	ZIP Code 53703

Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well
--	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 04/06/2022
<input type="checkbox"/> Water Well	
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug
 Other (specify): Geoprobe/Direct Push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.) 14	Casing Diameter (in.) NA
---	------------------------------------

Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA
--	---------------------------------

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)?	Depth to Water (feet) ~40 feet
-------------------------------	--

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials

Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite chips	0.5	14	0.43	NA

6. Comments

Geoprobe boring GP5

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	Date Received	Noted By
Street or Route PO Box 280 Sun Prairie	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Pennabohn</i>	Date Signed 04/06/2022

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane	WI Unique Well # of Removed Well NA	Hicap # NA
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ SW ¼ SW or Gov't Lot #	Section 17	Township 07 N
Well Street Address 4630 University Avenue	Range 09	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town Madison	Well ZIP Code 53703	
Subdivision Name	Lot #	

Facility Name DOA Hill Farms Heating Plant		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Wisconsin Department of Administration		
Present Well Owner Wisconsin Department of Administration		
Mailing Address of Present Owner 101 E. Wilson Street		
City of Present Owner Madison	State WI	ZIP Code 53703

Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well
--	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 04/06/2022
<input type="checkbox"/> Water Well	
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug
 Other (specify): Geoprobe/Direct Push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.) 14	Casing Diameter (in.) NA
---	------------------------------------

Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA
--	---------------------------------

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)?	Depth to Water (feet) ~40 feet
-------------------------------	--

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials

Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite chips	0.5	14	0.43	NA

6. Comments

Geoprobe boring GP6

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	Date Received	Noted By
Street or Route PO Box 280 Sun Prairie	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rannabohn</i>	Date Signed 04/06/2022

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water Watershed/Wastewater Remediation/Redevelopment

Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane		WI Unique Well # of Removed Well NA		Hicap # NA		Facility Name DOA Hill Farms Heating Plant	
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)	
¼ / ¼ SW ¼ SW		Section 17		Township 07 N		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W	
or Gov't Lot #		Well Street Address 4630 University Avenue		Well ZIP Code 53703		License/Permit/Monitoring #	
Subdivision Name		Well City, Village or Town Madison		Original Well Owner Wisconsin Department of Administration		Present Well Owner Wisconsin Department of Administration	
Reason for Removal from Service Temporary Borehole		WI Unique Well # of Replacement Well		Mailing Address of Present Owner 101 E. Wilson Street		City of Present Owner Madison	
3. Filled & Sealed Well / Drillhole / Borehole Information		Original Construction Date (mm/dd/yyyy) 04/06/2022		State WI		ZIP Code 53703	
<input type="checkbox"/> Monitoring Well		If a Well Construction Report is available, please attach.		4. Pump, Liner, Screen, Casing & Sealing Material			
<input type="checkbox"/> Water Well				Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Borehole / Drillhole				Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Construction Type:				Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug				Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Other (specify): <u>Geoprobe/Direct Push</u>				Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Formation Type:				Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock				Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Total Well Depth From Ground Surface (ft.) 12		Casing Diameter (in.) NA		Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.) NA		If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		Depth to Water (feet) ~40 feet		Required Method of Placing Sealing Material			
If yes, to what depth (feet)?				<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped			
				<input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____			
				Sealing Materials			
				<input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Concrete			
				<input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips			
				For Monitoring Wells and Monitoring Well Boreholes Only:			
				<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout			
				<input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry			

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite chips	0.5	12	0.37	NA

6. Comments

Geoprobe boring GP7

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	DNR Use Only	
Street or Route PO Box 280 Sun Prairie		State WI	ZIP Code 53590	Date Received	Noted By
Telephone Number (608) 837-8992		Signature of Person Doing Work <i>Jackie Rennebohm</i>		Comments	
City Sun Prairie		Date Signed 04/06/2022			

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane	WI Unique Well # of Removed Well NA	Hicap # NA
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ SW or Gov't Lot #	Section 17	Township 07 N
Well Street Address 4630 University Avenue	Range 09	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town Madison	Well ZIP Code 53703	
Subdivision Name	Lot #	

Facility Name DOA Hill Farms Heating Plant		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Wisconsin Department of Administration		
Present Well Owner Wisconsin Department of Administration		
Mailing Address of Present Owner 101 E. Wilson Street		
City of Present Owner Madison	State WI	ZIP Code 53703

Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well
--	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole	Original Construction Date (mm/dd/yyyy) 04/06/2022 If a Well Construction Report is available, please attach.
---	--

Construction Type:
<input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (specify): <u>Geoprobe/Direct Push</u>

Formation Type:
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock

Total Well Depth From Ground Surface (ft.) 15	Casing Diameter (in.) NA
---	------------------------------------

Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA
--	---------------------------------

Was well annular space grouted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
If yes, to what depth (feet)?	Depth to Water (feet) ~40 feet

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material
<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____

Sealing Materials
<input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips
For Monitoring Wells and Monitoring Well Boreholes Only:
<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite chips	0.5	15	0.46	NA

6. Comments

Geoprobe boring GP8

7. Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 04/06/2022	Date Received	Noted By
Street or Route PO Box 280 Sun Prairie	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rennsbohm</i>	Date Signed 04/06/2022

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County: **Dane** WI Unique Well # of Removed Well: _____ Hicap #: **NA**

Latitude / Longitude (see instructions): _____ N Format Code: DD Method Code: GPS008
 _____ W DDM SCR002
 _____ OTH001

¼ / ¼ SW ¼ SW Section: **17** Township: **07 N** Range: E W
 or Gov't Lot #: _____ Lot #: _____

Well Street Address: **4630 University Avenue**

Well City, Village or Town: **Madison** Well ZIP Code: **53703**

Subdivision Name: _____ Lot #: _____

Facility Name: **DOA Hill Farms Heating Plant**

Facility ID (FID or PWS): _____

License/Permit/Monitoring #: _____

Original Well Owner: **Wisconsin Department of Administration**

Present Well Owner: **Wisconsin Department of Administration**

Mailing Address of Present Owner: **101 E. Wilson Street**

City of Present Owner: **Madison** State: **WI** ZIP Code: **53703**

Reason for Removal from Service: **Temporary Borehole** WI Unique Well # of Replacement Well: _____

3. Filled & Sealed Well / Drillhole / Borehole Information

Monitoring Well Original Construction Date (mm/dd/yyyy): **09/28/2022**
 Water Well If a Well Construction Report is available, please attach.
 Borehole / Drillhole

Construction Type:
 Drilled Driven (Sandpoint) Dug
 Other (specify): **Geoprobe/Direct Push**

Formation Type:
 Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.): **15** Casing Diameter (in.): **NA**

Lower Drillhole Diameter (in.): **2.0** Casing Depth (ft.): **NA**

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? **NA** Depth to Water (feet): **~40 feet**

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed? Yes No N/A
 Liner(s) removed? Yes No N/A
 Liner(s) perforated? Yes No N/A
 Screen removed? Yes No N/A
 Casing left in place? Yes No N/A

Was casing cut off below surface? Yes No N/A
 Did sealing material rise to surface? Yes No N/A
 Did material settle after 24 hours? Yes No N/A
 If yes, was hole retopped? Yes No N/A
 If bentonite chips were used, were they hydrated with water from a known safe source? Yes No N/A

Required Method of Placing Sealing Material:
 Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials:
 Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
 Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite Chips	0.5	15	0.46	NA

6. Comments

Geoprobe boring GP9

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022	Date Received	Noted By
Street or Route PO Box 280	City Sun Prairie	State WI	ZIP Code 53590	Telephone Number (608) 837-8992
Signature of Person Doing Work <i>Jackie Rennebohm</i>			Comments	
Date Signed 09/28/2022				

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane		WI Unique Well # of Removed Well	Hicap # NA
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ SW or Gov't Lot #	¼ SW	Section 17	Township 07 N
Well Street Address 4630 University Avenue		Range 07	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town Madison		Well ZIP Code 53703	
Subdivision Name		Lot #	

Facility Name DOA Hill Farms Heating Plant		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Wisconsin Department of Administration		
Present Well Owner Wisconsin Department of Administration		
Mailing Address of Present Owner 101 E. Wilson Street		
City of Present Owner Madison	State WI	ZIP Code 53703

Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well
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3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 09/28/2022
<input type="checkbox"/> Water Well	
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug
 Other (specify): Geoprobe/Direct Push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.) 15	Casing Diameter (in.) NA
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Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA
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Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? NA	Depth to Water (feet) ~40 feet
--	--

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials

Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite Chips	0.5	15	0.46	NA

6. Comments

Geoprobe boring GP10

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022	Date Received	Noted By
Street or Route PO Box 280	City Sun Prairie	State WI	ZIP Code 53590	Telephone Number (608) 837-8992
Signature of Person Doing Work <i>Jackie Rannbohm</i>			Date Signed 09/28/2022	

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information				2. Facility / Owner Information			
County Dane		WI Unique Well # of Removed Well	Hicap # NA	Facility Name DOA Hill Farms Heating Plant		Facility ID (FID or PWS)	
Latitude / Longitude (see instructions)		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001	License/Permit/Monitoring #			
¼ / ¼ SW	¼ SW	Section 17	Township 07 N	Range 07	<input checked="" type="checkbox"/> E <input type="checkbox"/> W	Original Well Owner Wisconsin Department of Administration	
or Gov't Lot #				Present Well Owner Wisconsin Department of Administration			
Well Street Address 4630 University Avenue				Mailing Address of Present Owner 101 E. Wilson Street			
Well City, Village or Town Madison			Well ZIP Code 53703		City of Present Owner Madison		State WI
Subdivision Name			Lot #		ZIP Code 53703		
Reason for Removal from Service Temporary Borehole		WI Unique Well # of Replacement Well		4. Pump, Liner, Screen, Casing & Sealing Material			
3. Filled & Sealed Well / Drillhole / Borehole Information		Original Construction Date (mm/dd/yyyy) 09/28/2022		<input type="checkbox"/> Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> Did sealing material rise to surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> If bentonite chips were used, were they hydrated with water from a known safe source? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
<input type="checkbox"/> Monitoring Well	If a Well Construction Report is available, please attach.		Required Method of Placing Sealing Material				
<input type="checkbox"/> Water Well	Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____				
<input checked="" type="checkbox"/> Borehole / Drillhole	Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (specify): Geoprobe/Direct Push		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips				
Total Well Depth From Ground Surface (ft.) 15		Casing Diameter (in.) NA		For Monitoring Wells and Monitoring Well Boreholes Only:			
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.) NA		<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry			
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		If yes, to what depth (feet)? NA		Depth to Water (feet) ~40 feet		5. Material Used to Fill Well / Drillhole	
5. Material Used to Fill Well / Drillhole		From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)		Mix Ratio or Mud Weight	
Concrete		Surface	0.5	NA		NA	
3/8" Bentonite Chips		0.5	15	0.46		NA	
6. Comments Geoprobe boring GP11							
7. Supervision of Work				DNR Use Only			
Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022		Date Received		Noted By
Street or Route PO Box 280			Telephone Number (608) 837-8992		Comments		
City Sun Prairie		State WI	ZIP Code 53590		Signature of Person Doing Work <i>Jackie Rennebohm</i>		Date Signed 09/28/2022

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water Watershed/Wastewater Remediation/Redevelopment

Waste Management Other: _____

1. Well Location Information				2. Facility / Owner Information			
County Dane		WI Unique Well # of Removed Well _____		Hicap # NA		Facility Name DOA Hill Farms Heating Plant	
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS) _____	
¼ / ¼ SW ¼ SW		Section 17		Township 07 N		License/Permit/Monitoring # _____	
or Gov't Lot # _____		Range 07		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Original Well Owner Wisconsin Department of Administration	
Well Street Address 4630 University Avenue				Present Well Owner Wisconsin Department of Administration			
Well City, Village or Town Madison				Mailing Address of Present Owner 101 E. Wilson Street			
Subdivision Name _____				Well ZIP Code 53703		City of Present Owner Madison	
Reason for Removal from Service Temporary Borehole				Lot # _____		State WI	
WI Unique Well # of Replacement Well _____		State WI		ZIP Code 53703			

3. Filled & Sealed Well / Drillhole / Borehole Information				4. Pump, Liner, Screen, Casing & Sealing Material			
<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 09/28/2022		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach. _____		Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Borehole / Drillhole				Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Construction Type:				Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
<input type="checkbox"/> Drilled		<input type="checkbox"/> Driven (Sandpoint)		<input type="checkbox"/> Dug		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Other (specify): <u>Geoprobe/Direct Push</u>				If yes, was hole retopped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Formation Type:				If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Unconsolidated Formation		<input type="checkbox"/> Bedrock		Required Method of Placing Sealing Material			
Total Well Depth From Ground Surface (ft.) 14		Casing Diameter (in.) NA		<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped			
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.) NA		<input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____			
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown				Sealing Materials			
If yes, to what depth (feet)? NA		Depth to Water (feet) ~40 feet		<input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Concrete			
				<input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips			
				For Monitoring Wells and Monitoring Well Boreholes Only:			
				<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout			
				<input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry			

5. Material Used to Fill Well / Drillhole			
From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA
3/8" Bentonite Chips	0.5	14	0.44

6. Comments

Geoprobe boring GP12

7. Supervision of Work			DNR Use Only		
Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.		License # _____	Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022	Date Received _____	Noted By _____
Street or Route PO Box 280		Telephone Number (608) 837-8992		Comments _____	
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rennebohm</i>	Date Signed 09/28/2022	

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information				2. Facility / Owner Information			
County Dane		WI Unique Well # of Removed Well _____		Hicap # NA		Facility Name DOA Hill Farms Heating Plant	
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS) _____	
¼ / ¼ SW or Gov't Lot #		Section 17		Township 07 N		Range 07 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	
Well Street Address 4630 University Avenue				Original Well Owner Wisconsin Department of Administration			
Well City, Village or Town Madison				Present Well Owner Wisconsin Department of Administration			
Subdivision Name				Well ZIP Code 53703		Mailing Address of Present Owner 101 E. Wilson Street	
Reason for Removal from Service Temporary Borehole				WI Unique Well # of Replacement Well _____		City of Present Owner Madison	
3. Filled & Sealed Well / Drillhole / Borehole Information				4. Pump, Liner, Screen, Casing & Sealing Material			
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole		Original Construction Date (mm/dd/yyyy) 09/28/2022		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (specify): <u>Geoprobe/Direct Push</u>		If a Well Construction Report is available, please attach.		Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock				Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Total Well Depth From Ground Surface (ft.) 15		Casing Diameter (in.) NA		Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.) NA		If yes, was hole retopped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		Depth to Water (feet) ~40 feet		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____			
5. Material Used to Fill Well / Drillhole							
Concrete		Surface		0.5		NA	
3/8" Bentonite Chips		0.5		15		0.46	
6. Comments							
Geoprobe boring GP13							
7. Supervision of Work				DNR Use Only			
Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.		License #		Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022		Date Received	
Street or Route PO Box 280		City Sun Prairie		Telephone Number (608) 837-8992		Noted By	
State WI		ZIP Code 53590		Signature of Person Doing Work <i>Jackie Rennelohm</i>		Date Signed 09/28/2022	

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, 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. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane		WI Unique Well # of Removed Well	Hicap # NA
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ SW	¼ SW	Section 17	Township 07 N
or Gov't Lot #		Range 07	<input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well Street Address 4630 University Avenue			
Well City, Village or Town Madison		Well ZIP Code 53703	
Subdivision Name		Lot #	

Facility Name DOA Hill Farms Heating Plant		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Wisconsin Department of Administration		
Present Well Owner Wisconsin Department of Administration		
Mailing Address of Present Owner 101 E. Wilson Street		
City of Present Owner Madison	State WI	ZIP Code 53703

Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well
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3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 09/28/2022
<input type="checkbox"/> Water Well	
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug
 Other (specify): Geoprobe/Direct Push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.) 15	Casing Diameter (in.) NA
---	------------------------------------

Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA
--	---------------------------------

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? NA	Depth to Water (feet) ~40 feet
--	--

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials

Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite Chips	0.5	15	0.46	NA

6. Comments

Geoprobe boring GP14

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022	Date Received	Noted By
Street or Route PO Box 280	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rannebohm</i>	Date Signed 09/28/2022

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Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Dane		WI Unique Well # of Removed Well	Hicap # NA
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ SW or Gov't Lot #	¼ SW	Section 17	Township 07 N
Well Street Address 4630 University Avenue		Range 07	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town Madison		Well ZIP Code 53703	
Subdivision Name		Lot #	

Facility Name DOA Hill Farms Heating Plant		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner Wisconsin Department of Administration		
Present Well Owner Wisconsin Department of Administration		
Mailing Address of Present Owner 101 E. Wilson Street		
City of Present Owner Madison	State WI	ZIP Code 53703

Reason for Removal from Service Temporary Borehole	WI Unique Well # of Replacement Well
--	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 09/28/2022
<input type="checkbox"/> Water Well	
<input checked="" type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:

Drilled Driven (Sandpoint) Dug
 Other (specify): Geoprobe/Direct Push

Formation Type:

Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.) 13	Casing Diameter (in.) NA
---	------------------------------------

Lower Drillhole Diameter (in.) 2.0	Casing Depth (ft.) NA
--	---------------------------------

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? NA	Depth to Water (feet) ~40 feet
--	--

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Sealing Materials

Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:

Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry


5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	Surface	0.5	NA	NA
3/8" Bentonite Chips	0.5	13	0.42	NA

6. Comments

Geoprobe boring GP15

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing On-site Environmental Services, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 09/28/2022	Date Received	Noted By
Street or Route PO Box 280	Telephone Number (608) 837-8992	Comments		
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work <i>Jackie Rennelohm</i>	Date Signed 09/28/2022



Appendix C
Laboratory Analytical Reports

April 14, 2022

Ray Tierney
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

Dear Ray Tierney:

Enclosed are the analytical results for sample(s) received by the laboratory on April 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Green Bay

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

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243056001	GP-3(2.5')	Solid	04/06/22 10:15	04/07/22 08:00
40243056002	GP-3(8')	Solid	04/06/22 10:15	04/07/22 08:00
40243056003	GP-8(12')	Solid	04/06/22 10:30	04/07/22 08:00
40243056004	GP-6(14')	Solid	04/06/22 10:50	04/07/22 08:00
40243056005	GP-5(4')	Solid	04/06/22 11:25	04/07/22 08:00
40243056006	GP-4(3.5')	Solid	04/06/22 11:50	04/07/22 08:00
40243056007	TRIP BLANK	Solid	04/06/22 00:00	04/07/22 08:00
40243056008	GP-7(11')	Solid	04/06/22 11:05	04/07/22 08:00

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SAMPLE ANALYTE COUNT

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40243056001	GP-3(2.5')	EPA 8270E by SIM	RJN	20
		ASTM D2974-87	PDV	1
40243056002	GP-3(8')	EPA 8260	ALD	10
		ASTM D2974-87	PDV	1
40243056003	GP-8(12')	EPA 6010D	TXW	1
		EPA 8260	ALD	11
		ASTM D2974-87	PDV	1
40243056004	GP-6(14')	EPA 6010D	TXW	1
		EPA 8260	ALD	11
		ASTM D2974-87	PDV	1
40243056005	GP-5(4')	EPA 6010D	TXW	1
		EPA 8260	ALD	11
		ASTM D2974-87	PDV	1
40243056006	GP-4(3.5')	EPA 8270E by SIM	RJN	20
		EPA 8260	ALD	10
		ASTM D2974-87	PDV	1
40243056007	TRIP BLANK	EPA 8260	ALD	10
40243056008	GP-7(11)	EPA 6010D	TXW	1
		EPA 8260	ALD	11
		ASTM D2974-87	PDV	1

PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40243056001	GP-3(2.5')					
EPA 8270E by SIM	Anthracene	89.4J	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Benzo(a)anthracene	658	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Benzo(a)pyrene	994	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Benzo(b)fluoranthene	1360	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Benzo(g,h,i)perylene	867	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Benzo(k)fluoranthene	667	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Chrysene	1100	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Dibenz(a,h)anthracene	181J	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Fluoranthene	1980	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	673	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Phenanthrene	639	ug/kg	357	04/11/22 17:56	
EPA 8270E by SIM	Pyrene	1570	ug/kg	357	04/11/22 17:56	
ASTM D2974-87	Percent Moisture	6.3	%	0.10	04/08/22 17:04	
40243056002	GP-3(8')					
ASTM D2974-87	Percent Moisture	9.9	%	0.10	04/08/22 17:05	
40243056003	GP-8(12')					
EPA 6010D	Lead	1.6J	mg/kg	2.1	04/12/22 16:21	
ASTM D2974-87	Percent Moisture	6.2	%	0.10	04/08/22 17:05	
40243056004	GP-6(14')					
ASTM D2974-87	Percent Moisture	22.6	%	0.10	04/08/22 17:41	
40243056005	GP-5(4')					
EPA 6010D	Lead	2.0J	mg/kg	2.1	04/12/22 16:29	
ASTM D2974-87	Percent Moisture	8.4	%	0.10	04/08/22 17:41	
40243056006	GP-4(3.5')					
EPA 8270E by SIM	Benzo(a)anthracene	13.1J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Benzo(a)pyrene	14.6J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Benzo(b)fluoranthene	23.8	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Benzo(g,h,i)perylene	12.9J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Benzo(k)fluoranthene	9.6J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Chrysene	23.8	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Dibenz(a,h)anthracene	3.2J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Fluoranthene	19.2	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	6.7J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	1-Methylnaphthalene	15.2J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	2-Methylnaphthalene	17.2J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Naphthalene	9.3J	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Phenanthrene	20.1	ug/kg	17.6	04/11/22 18:13	
EPA 8270E by SIM	Pyrene	16.4J	ug/kg	17.6	04/11/22 18:13	
ASTM D2974-87	Percent Moisture	5.3	%	0.10	04/08/22 17:41	
40243056008	GP-7(11)					
EPA 6010D	Lead	3.9J	mg/kg	4.3	04/13/22 12:01	D3
ASTM D2974-87	Percent Moisture	7.2	%	0.10	04/08/22 17:41	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Sample: GP-3(2.5') **Lab ID: 40243056001** Collected: 04/06/22 10:15 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<46.3	ug/kg	357	46.3	20	04/11/22 08:08	04/11/22 17:56	83-32-9	
Acenaphthylene	<45.0	ug/kg	357	45.0	20	04/11/22 08:08	04/11/22 17:56	208-96-8	
Anthracene	89.4J	ug/kg	357	44.3	20	04/11/22 08:08	04/11/22 17:56	120-12-7	
Benzo(a)anthracene	658	ug/kg	357	46.1	20	04/11/22 08:08	04/11/22 17:56	56-55-3	
Benzo(a)pyrene	994	ug/kg	357	40.5	20	04/11/22 08:08	04/11/22 17:56	50-32-8	
Benzo(b)fluoranthene	1360	ug/kg	357	49.5	20	04/11/22 08:08	04/11/22 17:56	205-99-2	
Benzo(g,h,i)perylene	867	ug/kg	357	62.6	20	04/11/22 08:08	04/11/22 17:56	191-24-2	
Benzo(k)fluoranthene	667	ug/kg	357	45.6	20	04/11/22 08:08	04/11/22 17:56	207-08-9	
Chrysene	1100	ug/kg	357	67.3	20	04/11/22 08:08	04/11/22 17:56	218-01-9	
Dibenz(a,h)anthracene	181J	ug/kg	357	49.4	20	04/11/22 08:08	04/11/22 17:56	53-70-3	
Fluoranthene	1980	ug/kg	357	42.2	20	04/11/22 08:08	04/11/22 17:56	206-44-0	
Fluorene	<42.8	ug/kg	357	42.8	20	04/11/22 08:08	04/11/22 17:56	86-73-7	
Indeno(1,2,3-cd)pyrene	673	ug/kg	357	74.3	20	04/11/22 08:08	04/11/22 17:56	193-39-5	
1-Methylnaphthalene	<52.1	ug/kg	357	52.1	20	04/11/22 08:08	04/11/22 17:56	90-12-0	
2-Methylnaphthalene	<52.2	ug/kg	357	52.2	20	04/11/22 08:08	04/11/22 17:56	91-57-6	
Naphthalene	<34.8	ug/kg	357	34.8	20	04/11/22 08:08	04/11/22 17:56	91-20-3	
Phenanthrene	639	ug/kg	357	40.9	20	04/11/22 08:08	04/11/22 17:56	85-01-8	
Pyrene	1570	ug/kg	357	52.4	20	04/11/22 08:08	04/11/22 17:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	41-98		20	04/11/22 08:08	04/11/22 17:56	321-60-8	
Terphenyl-d14 (S)	60	%	37-106		20	04/11/22 08:08	04/11/22 17:56	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	6.3	%	0.10	0.10	1		04/08/22 17:04		

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

Sample: GP-3(8') **Lab ID: 40243056002** Collected: 04/06/22 10:15 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<14.5	ug/kg	24.4	14.5	1	04/11/22 13:30	04/11/22 22:05	71-43-2	
Ethylbenzene	<14.5	ug/kg	61.0	14.5	1	04/11/22 13:30	04/11/22 22:05	100-41-4	
Methyl-tert-butyl ether	<17.9	ug/kg	61.0	17.9	1	04/11/22 13:30	04/11/22 22:05	1634-04-4	
Toluene	<15.4	ug/kg	61.0	15.4	1	04/11/22 13:30	04/11/22 22:05	108-88-3	
1,2,4-Trimethylbenzene	<18.2	ug/kg	61.0	18.2	1	04/11/22 13:30	04/11/22 22:05	95-63-6	
1,3,5-Trimethylbenzene	<19.7	ug/kg	61.0	19.7	1	04/11/22 13:30	04/11/22 22:05	108-67-8	
Xylene (Total)	<44.1	ug/kg	183	44.1	1	04/11/22 13:30	04/11/22 22:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	119	%	66-153		1	04/11/22 13:30	04/11/22 22:05	460-00-4	
Toluene-d8 (S)	119	%	67-159		1	04/11/22 13:30	04/11/22 22:05	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	121	%	82-158		1	04/11/22 13:30	04/11/22 22:05	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	9.9	%	0.10	0.10	1		04/08/22 17:05		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

Sample: GP-8(12') **Lab ID: 40243056003** Collected: 04/06/22 10:30 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Lead	1.6J	mg/kg	2.1	0.63	1	04/12/22 07:11	04/12/22 16:21	7439-92-1	
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<13.5	ug/kg	22.6	13.5	1	04/11/22 13:30	04/11/22 22:26	71-43-2	
Ethylbenzene	<13.5	ug/kg	56.6	13.5	1	04/11/22 13:30	04/11/22 22:26	100-41-4	
Methyl-tert-butyl ether	<16.6	ug/kg	56.6	16.6	1	04/11/22 13:30	04/11/22 22:26	1634-04-4	
Naphthalene	<17.6	ug/kg	283	17.6	1	04/11/22 13:30	04/11/22 22:26	91-20-3	
Toluene	<14.3	ug/kg	56.6	14.3	1	04/11/22 13:30	04/11/22 22:26	108-88-3	
1,2,4-Trimethylbenzene	<16.9	ug/kg	56.6	16.9	1	04/11/22 13:30	04/11/22 22:26	95-63-6	
1,3,5-Trimethylbenzene	<18.2	ug/kg	56.6	18.2	1	04/11/22 13:30	04/11/22 22:26	108-67-8	
Xylene (Total)	<40.8	ug/kg	170	40.8	1	04/11/22 13:30	04/11/22 22:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	112	%	66-153		1	04/11/22 13:30	04/11/22 22:26	460-00-4	
Toluene-d8 (S)	117	%	67-159		1	04/11/22 13:30	04/11/22 22:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	113	%	82-158		1	04/11/22 13:30	04/11/22 22:26	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	6.2	%	0.10	0.10	1		04/08/22 17:05		

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Sample: GP-6(14') **Lab ID: 40243056004** Collected: 04/06/22 10:50 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Lead	<3.8	mg/kg	12.6	3.8	5	04/12/22 07:11	04/13/22 11:58	7439-92-1	D3
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<18.8	ug/kg	31.7	18.8	1	04/11/22 13:30	04/11/22 22:46	71-43-2	
Ethylbenzene	<18.8	ug/kg	79.2	18.8	1	04/11/22 13:30	04/11/22 22:46	100-41-4	
Methyl-tert-butyl ether	<23.3	ug/kg	79.2	23.3	1	04/11/22 13:30	04/11/22 22:46	1634-04-4	
Naphthalene	<24.7	ug/kg	396	24.7	1	04/11/22 13:30	04/11/22 22:46	91-20-3	
Toluene	<20.0	ug/kg	79.2	20.0	1	04/11/22 13:30	04/11/22 22:46	108-88-3	
1,2,4-Trimethylbenzene	<23.6	ug/kg	79.2	23.6	1	04/11/22 13:30	04/11/22 22:46	95-63-6	
1,3,5-Trimethylbenzene	<25.5	ug/kg	79.2	25.5	1	04/11/22 13:30	04/11/22 22:46	108-67-8	
Xylene (Total)	<57.2	ug/kg	238	57.2	1	04/11/22 13:30	04/11/22 22:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	128	%	66-153		1	04/11/22 13:30	04/11/22 22:46	460-00-4	
Toluene-d8 (S)	132	%	67-159		1	04/11/22 13:30	04/11/22 22:46	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	126	%	82-158		1	04/11/22 13:30	04/11/22 22:46	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	22.6	%	0.10	0.10	1		04/08/22 17:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Sample: GP-5(4') **Lab ID:** 40243056005 Collected: 04/06/22 11:25 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Lead	2.0J	mg/kg	2.1	0.63	1	04/12/22 07:11	04/12/22 16:29	7439-92-1	
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<14.1	ug/kg	23.7	14.1	1	04/11/22 13:30	04/11/22 23:06	71-43-2	
Ethylbenzene	<14.1	ug/kg	59.1	14.1	1	04/11/22 13:30	04/11/22 23:06	100-41-4	
Methyl-tert-butyl ether	<17.4	ug/kg	59.1	17.4	1	04/11/22 13:30	04/11/22 23:06	1634-04-4	
Naphthalene	<18.4	ug/kg	296	18.4	1	04/11/22 13:30	04/11/22 23:06	91-20-3	
Toluene	<14.9	ug/kg	59.1	14.9	1	04/11/22 13:30	04/11/22 23:06	108-88-3	
1,2,4-Trimethylbenzene	<17.6	ug/kg	59.1	17.6	1	04/11/22 13:30	04/11/22 23:06	95-63-6	
1,3,5-Trimethylbenzene	<19.0	ug/kg	59.1	19.0	1	04/11/22 13:30	04/11/22 23:06	108-67-8	
Xylene (Total)	<42.7	ug/kg	177	42.7	1	04/11/22 13:30	04/11/22 23:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	111	%	66-153		1	04/11/22 13:30	04/11/22 23:06	460-00-4	
Toluene-d8 (S)	114	%	67-159		1	04/11/22 13:30	04/11/22 23:06	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	113	%	82-158		1	04/11/22 13:30	04/11/22 23:06	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	8.4	%	0.10	0.10	1		04/08/22 17:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

Sample: GP-4(3.5') **Lab ID: 40243056006** Collected: 04/06/22 11:50 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<2.3	ug/kg	17.6	2.3	1	04/11/22 08:08	04/11/22 18:13	83-32-9	
Acenaphthylene	<2.2	ug/kg	17.6	2.2	1	04/11/22 08:08	04/11/22 18:13	208-96-8	
Anthracene	<2.2	ug/kg	17.6	2.2	1	04/11/22 08:08	04/11/22 18:13	120-12-7	
Benzo(a)anthracene	13.1J	ug/kg	17.6	2.3	1	04/11/22 08:08	04/11/22 18:13	56-55-3	
Benzo(a)pyrene	14.6J	ug/kg	17.6	2.0	1	04/11/22 08:08	04/11/22 18:13	50-32-8	
Benzo(b)fluoranthene	23.8	ug/kg	17.6	2.4	1	04/11/22 08:08	04/11/22 18:13	205-99-2	
Benzo(g,h,i)perylene	12.9J	ug/kg	17.6	3.1	1	04/11/22 08:08	04/11/22 18:13	191-24-2	
Benzo(k)fluoranthene	9.6J	ug/kg	17.6	2.2	1	04/11/22 08:08	04/11/22 18:13	207-08-9	
Chrysene	23.8	ug/kg	17.6	3.3	1	04/11/22 08:08	04/11/22 18:13	218-01-9	
Dibenz(a,h)anthracene	3.2J	ug/kg	17.6	2.4	1	04/11/22 08:08	04/11/22 18:13	53-70-3	
Fluoranthene	19.2	ug/kg	17.6	2.1	1	04/11/22 08:08	04/11/22 18:13	206-44-0	
Fluorene	<2.1	ug/kg	17.6	2.1	1	04/11/22 08:08	04/11/22 18:13	86-73-7	
Indeno(1,2,3-cd)pyrene	6.7J	ug/kg	17.6	3.7	1	04/11/22 08:08	04/11/22 18:13	193-39-5	
1-Methylnaphthalene	15.2J	ug/kg	17.6	2.6	1	04/11/22 08:08	04/11/22 18:13	90-12-0	
2-Methylnaphthalene	17.2J	ug/kg	17.6	2.6	1	04/11/22 08:08	04/11/22 18:13	91-57-6	
Naphthalene	9.3J	ug/kg	17.6	1.7	1	04/11/22 08:08	04/11/22 18:13	91-20-3	
Phenanthrene	20.1	ug/kg	17.6	2.0	1	04/11/22 08:08	04/11/22 18:13	85-01-8	
Pyrene	16.4J	ug/kg	17.6	2.6	1	04/11/22 08:08	04/11/22 18:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71	%	41-98		1	04/11/22 08:08	04/11/22 18:13	321-60-8	
Terphenyl-d14 (S)	72	%	37-106		1	04/11/22 08:08	04/11/22 18:13	1718-51-0	
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<13.2	ug/kg	22.2	13.2	1	04/11/22 13:30	04/11/22 23:26	71-43-2	
Ethylbenzene	<13.2	ug/kg	55.6	13.2	1	04/11/22 13:30	04/11/22 23:26	100-41-4	
Methyl-tert-butyl ether	<16.3	ug/kg	55.6	16.3	1	04/11/22 13:30	04/11/22 23:26	1634-04-4	
Toluene	<14.0	ug/kg	55.6	14.0	1	04/11/22 13:30	04/11/22 23:26	108-88-3	
1,2,4-Trimethylbenzene	<16.6	ug/kg	55.6	16.6	1	04/11/22 13:30	04/11/22 23:26	95-63-6	
1,3,5-Trimethylbenzene	<17.9	ug/kg	55.6	17.9	1	04/11/22 13:30	04/11/22 23:26	108-67-8	
Xylene (Total)	<40.1	ug/kg	167	40.1	1	04/11/22 13:30	04/11/22 23:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	108	%	66-153		1	04/11/22 13:30	04/11/22 23:26	460-00-4	
Toluene-d8 (S)	110	%	67-159		1	04/11/22 13:30	04/11/22 23:26	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	108	%	82-158		1	04/11/22 13:30	04/11/22 23:26	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	5.3	%	0.10	0.10	1		04/08/22 17:41		

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Sample: TRIP BLANK **Lab ID: 40243056007** Collected: 04/06/22 00:00 Received: 04/07/22 08:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<11.9	ug/kg	20.0	11.9	1	04/11/22 13:30	04/11/22 20:45	71-43-2	
Ethylbenzene	<11.9	ug/kg	50.0	11.9	1	04/11/22 13:30	04/11/22 20:45	100-41-4	
Methyl-tert-butyl ether	<14.7	ug/kg	50.0	14.7	1	04/11/22 13:30	04/11/22 20:45	1634-04-4	
Toluene	<12.6	ug/kg	50.0	12.6	1	04/11/22 13:30	04/11/22 20:45	108-88-3	
1,2,4-Trimethylbenzene	<14.9	ug/kg	50.0	14.9	1	04/11/22 13:30	04/11/22 20:45	95-63-6	
1,3,5-Trimethylbenzene	<16.1	ug/kg	50.0	16.1	1	04/11/22 13:30	04/11/22 20:45	108-67-8	
Xylene (Total)	<36.1	ug/kg	150	36.1	1	04/11/22 13:30	04/11/22 20:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	66-153		1	04/11/22 13:30	04/11/22 20:45	460-00-4	
Toluene-d8 (S)	97	%	67-159		1	04/11/22 13:30	04/11/22 20:45	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	82-158		1	04/11/22 13:30	04/11/22 20:45	2199-69-1	

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

Sample: GP-7(11) **Lab ID: 40243056008** Collected: 04/06/22 11:05 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Lead	3.9J	mg/kg	4.3	1.3	2	04/12/22 07:11	04/13/22 12:01	7439-92-1	D3
8260 MSV Med Level Short List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
Benzene	<13.8	ug/kg	23.1	13.8	1	04/08/22 08:00	04/08/22 12:11	71-43-2	
Ethylbenzene	<13.8	ug/kg	57.8	13.8	1	04/08/22 08:00	04/08/22 12:11	100-41-4	
Methyl-tert-butyl ether	<17.0	ug/kg	57.8	17.0	1	04/08/22 08:00	04/08/22 12:11	1634-04-4	
Naphthalene	<18.0	ug/kg	289	18.0	1	04/08/22 08:00	04/08/22 12:11	91-20-3	
Toluene	<14.6	ug/kg	57.8	14.6	1	04/08/22 08:00	04/08/22 12:11	108-88-3	
1,2,4-Trimethylbenzene	<17.2	ug/kg	57.8	17.2	1	04/08/22 08:00	04/08/22 12:11	95-63-6	
1,3,5-Trimethylbenzene	<18.6	ug/kg	57.8	18.6	1	04/08/22 08:00	04/08/22 12:11	108-67-8	
Xylene (Total)	<41.7	ug/kg	173	41.7	1	04/08/22 08:00	04/08/22 12:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	119	%	66-153		1	04/08/22 08:00	04/08/22 12:11	460-00-4	
Toluene-d8 (S)	110	%	67-159		1	04/08/22 08:00	04/08/22 12:11	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	111	%	82-158		1	04/08/22 08:00	04/08/22 12:11	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	7.2	%	0.10	0.10	1		04/08/22 17:41		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

QC Batch: 412728 Analysis Method: EPA 6010D
QC Batch Method: EPA 3050B Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243056003, 40243056004, 40243056005, 40243056008

METHOD BLANK: 2377027 Matrix: Solid
Associated Lab Samples: 40243056003, 40243056004, 40243056005, 40243056008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.60	2.0	04/12/22 16:07	

LABORATORY CONTROL SAMPLE: 2377028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	25	25.9	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2377029 2377030

Parameter	Units	50313402001		2377029		2377030		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Lead	mg/kg	37.7	47	46.9	106	103	146	139	75-125	4	20 M0

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

QC Batch: 412594 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Short List
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243056008

METHOD BLANK: 2376096 Matrix: Solid
Associated Lab Samples: 40243056008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<14.9	50.0	04/08/22 10:25	
1,3,5-Trimethylbenzene	ug/kg	<16.1	50.0	04/08/22 10:25	
Benzene	ug/kg	<11.9	20.0	04/08/22 10:25	
Ethylbenzene	ug/kg	<11.9	50.0	04/08/22 10:25	
Methyl-tert-butyl ether	ug/kg	<14.7	50.0	04/08/22 10:25	
Naphthalene	ug/kg	<15.6	250	04/08/22 10:25	
Toluene	ug/kg	<12.6	50.0	04/08/22 10:25	
Xylene (Total)	ug/kg	<36.1	150	04/08/22 10:25	
1,2-Dichlorobenzene-d4 (S)	%	95	82-158	04/08/22 10:25	
4-Bromofluorobenzene (S)	%	99	66-153	04/08/22 10:25	
Toluene-d8 (S)	%	103	67-159	04/08/22 10:25	

LABORATORY CONTROL SAMPLE: 2376097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	2500	2180	87	70-130	
Ethylbenzene	ug/kg	2500	2230	89	78-120	
Methyl-tert-butyl ether	ug/kg	2500	2260	91	65-130	
Toluene	ug/kg	2500	2040	82	76-120	
Xylene (Total)	ug/kg	7500	6370	85	70-130	
1,2-Dichlorobenzene-d4 (S)	%			89	82-158	
4-Bromofluorobenzene (S)	%			98	66-153	
Toluene-d8 (S)	%			89	67-159	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2376098 2376099

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40243056008 Result	Spike Conc.	Spike Conc.	MS Result						
Benzene	ug/kg	<13.8	1150	1150	1020	1000	88	87	70-130	1	20
Ethylbenzene	ug/kg	<13.8	1150	1150	1050	1030	91	90	78-120	2	20
Methyl-tert-butyl ether	ug/kg	<17.0	1150	1150	1090	1070	94	93	65-130	2	20
Toluene	ug/kg	<14.6	1150	1150	1000	971	87	84	76-120	3	20
Xylene (Total)	ug/kg	<41.7	3470	3470	3030	3030	87	87	70-130	0	20
1,2-Dichlorobenzene-d4 (S)	%						106	108	82-158		
4-Bromofluorobenzene (S)	%						121	119	66-153		
Toluene-d8 (S)	%						112	110	67-159		

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

QC Batch:	412787	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Short List
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40243056002, 40243056003, 40243056004, 40243056005, 40243056006, 40243056007

METHOD BLANK: 2377165 Matrix: Solid

Associated Lab Samples: 40243056002, 40243056003, 40243056004, 40243056005, 40243056006, 40243056007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<14.9	50.0	04/11/22 18:43	
1,3,5-Trimethylbenzene	ug/kg	<16.1	50.0	04/11/22 18:43	
Benzene	ug/kg	<11.9	20.0	04/11/22 18:43	
Ethylbenzene	ug/kg	<11.9	50.0	04/11/22 18:43	
Methyl-tert-butyl ether	ug/kg	<14.7	50.0	04/11/22 18:43	
Naphthalene	ug/kg	<15.6	250	04/11/22 18:43	
Toluene	ug/kg	<12.6	50.0	04/11/22 18:43	
Xylene (Total)	ug/kg	<36.1	150	04/11/22 18:43	
1,2-Dichlorobenzene-d4 (S)	%	90	82-158	04/11/22 18:43	
4-Bromofluorobenzene (S)	%	93	66-153	04/11/22 18:43	
Toluene-d8 (S)	%	93	67-159	04/11/22 18:43	

LABORATORY CONTROL SAMPLE: 2377166

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	2500	2230	89	70-130	
Ethylbenzene	ug/kg	2500	2130	85	78-120	
Methyl-tert-butyl ether	ug/kg	2500	1920	77	65-130	
Toluene	ug/kg	2500	2300	92	76-120	
Xylene (Total)	ug/kg	7500	6460	86	70-130	
1,2-Dichlorobenzene-d4 (S)	%			93	82-158	
4-Bromofluorobenzene (S)	%			96	66-153	
Toluene-d8 (S)	%			98	67-159	

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING
 Pace Project No.: 40243056

QC Batch: 412695 Analysis Method: EPA 8270E by SIM
 QC Batch Method: EPA 3546 Analysis Description: 8270E/3546 MSSV PAH by SIM
 Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243056001, 40243056006

METHOD BLANK: 2376934 Matrix: Solid
 Associated Lab Samples: 40243056001, 40243056006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	04/11/22 10:41	
2-Methylnaphthalene	ug/kg	<2.4	16.7	04/11/22 10:41	
Acenaphthene	ug/kg	<2.2	16.7	04/11/22 10:41	
Acenaphthylene	ug/kg	<2.1	16.7	04/11/22 10:41	
Anthracene	ug/kg	<2.1	16.7	04/11/22 10:41	
Benzo(a)anthracene	ug/kg	<2.2	16.7	04/11/22 10:41	
Benzo(a)pyrene	ug/kg	<1.9	16.7	04/11/22 10:41	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	04/11/22 10:41	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	04/11/22 10:41	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	04/11/22 10:41	
Chrysene	ug/kg	<3.1	16.7	04/11/22 10:41	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	04/11/22 10:41	
Fluoranthene	ug/kg	<2.0	16.7	04/11/22 10:41	
Fluorene	ug/kg	<2.0	16.7	04/11/22 10:41	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	04/11/22 10:41	
Naphthalene	ug/kg	<1.6	16.7	04/11/22 10:41	
Phenanthrene	ug/kg	<1.9	16.7	04/11/22 10:41	
Pyrene	ug/kg	<2.5	16.7	04/11/22 10:41	
2-Fluorobiphenyl (S)	%	87	41-98	04/11/22 10:41	
Terphenyl-d14 (S)	%	88	37-106	04/11/22 10:41	

LABORATORY CONTROL SAMPLE: 2376935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	285	86	64-110	
2-Methylnaphthalene	ug/kg	333	276	83	60-110	
Acenaphthene	ug/kg	333	290	87	69-120	
Acenaphthylene	ug/kg	333	277	83	63-120	
Anthracene	ug/kg	333	306	92	71-112	
Benzo(a)anthracene	ug/kg	333	269	81	62-120	
Benzo(a)pyrene	ug/kg	333	315	95	71-111	
Benzo(b)fluoranthene	ug/kg	333	282	85	59-112	
Benzo(g,h,i)perylene	ug/kg	333	326	98	64-115	
Benzo(k)fluoranthene	ug/kg	333	336	101	72-117	
Chrysene	ug/kg	333	307	92	75-120	
Dibenz(a,h)anthracene	ug/kg	333	327	98	67-114	
Fluoranthene	ug/kg	333	304	91	70-110	
Fluorene	ug/kg	333	293	88	64-104	
Indeno(1,2,3-cd)pyrene	ug/kg	333	329	99	71-114	

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

LABORATORY CONTROL SAMPLE: 2376935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	333	261	78	62-120	
Phenanthrene	ug/kg	333	281	84	59-106	
Pyrene	ug/kg	333	281	84	69-120	
2-Fluorobiphenyl (S)	%			80	41-98	
Terphenyl-d14 (S)	%			87	37-106	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2376936 2376937

Parameter	Units	MS 40243053010		MSD 2376937		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result						
1-Methylnaphthalene	ug/kg	<0.0025 mg/kg	344	344	291	316	85	92	51-110	8	34
2-Methylnaphthalene	ug/kg	<0.0025 mg/kg	344	344	284	312	83	91	45-110	10	29
Acenaphthene	ug/kg	<0.0022 mg/kg	344	344	280	299	81	87	52-120	7	26
Acenaphthylene	ug/kg	<0.0022 mg/kg	344	344	283	303	82	88	46-120	7	22
Anthracene	ug/kg	<0.0021 mg/kg	344	344	299	316	87	92	50-112	6	25
Benzo(a)anthracene	ug/kg	<0.0022 mg/kg	344	344	267	292	78	85	41-120	9	37
Benzo(a)pyrene	ug/kg	<0.0020 mg/kg	344	344	301	328	87	95	44-114	9	33
Benzo(b)fluoranthene	ug/kg	<0.0024 mg/kg	344	344	291	304	85	88	41-112	4	43
Benzo(g,h,i)perylene	ug/kg	<0.0030 mg/kg	344	344	305	332	89	97	40-115	8	36
Benzo(k)fluoranthene	ug/kg	<0.0022 mg/kg	344	344	323	341	94	99	56-117	5	30
Chrysene	ug/kg	<0.0032 mg/kg	344	344	296	309	86	90	45-120	4	28
Dibenz(a,h)anthracene	ug/kg	<0.0024 mg/kg	344	344	304	329	88	96	44-114	8	33
Fluoranthene	ug/kg	0.0021J mg/kg	344	344	303	314	88	91	55-110	4	43
Fluorene	ug/kg	<0.0021 mg/kg	344	344	294	314	86	91	47-104	7	27
Indeno(1,2,3-cd)pyrene	ug/kg	<0.0036 mg/kg	344	344	306	331	89	96	45-114	8	33
Naphthalene	ug/kg	<0.0017 mg/kg	344	344	251	286	73	83	47-120	13	26
Phenanthrene	ug/kg	0.0023J mg/kg	344	344	272	297	79	86	38-106	9	24
Pyrene	ug/kg	0.0027J mg/kg	344	344	281	305	81	88	51-120	8	41
2-Fluorobiphenyl (S)	%						77	85	41-98		
Terphenyl-d14 (S)	%						80	81	37-106		

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

QC Batch: 412657

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243056001, 40243056002, 40243056003

SAMPLE DUPLICATE: 2376636

Parameter	Units	40243113001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.9	4.1	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

QC Batch: 412658

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243056004, 40243056005, 40243056006, 40243056008

SAMPLE DUPLICATE: 2376683

Parameter	Units	40243022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.3	3.5	4	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25221165 HILL FARMS HEATING

Pace Project No.: 40243056

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25221165 HILL FARMS HEATING
Pace Project No.: 40243056

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243056003	GP-8(12')	EPA 3050B	412728	EPA 6010D	412941
40243056004	GP-6(14')	EPA 3050B	412728	EPA 6010D	412941
40243056005	GP-5(4')	EPA 3050B	412728	EPA 6010D	412941
40243056008	GP-7(11)	EPA 3050B	412728	EPA 6010D	412941
40243056001	GP-3(2.5')	EPA 3546	412695	EPA 8270E by SIM	412742
40243056006	GP-4(3.5')	EPA 3546	412695	EPA 8270E by SIM	412742
40243056002	GP-3(8')	EPA 5035/5030B	412787	EPA 8260	412800
40243056003	GP-8(12')	EPA 5035/5030B	412787	EPA 8260	412800
40243056004	GP-6(14')	EPA 5035/5030B	412787	EPA 8260	412800
40243056005	GP-5(4')	EPA 5035/5030B	412787	EPA 8260	412800
40243056006	GP-4(3.5')	EPA 5035/5030B	412787	EPA 8260	412800
40243056007	TRIP BLANK	EPA 5035/5030B	412787	EPA 8260	412800
40243056008	GP-7(11)	EPA 5035/5030B	412594	EPA 8260	412595
40243056001	GP-3(2.5')	ASTM D2974-87	412657		
40243056002	GP-3(8')	ASTM D2974-87	412657		
40243056003	GP-8(12')	ASTM D2974-87	412657		
40243056004	GP-6(14')	ASTM D2974-87	412658		
40243056005	GP-5(4')	ASTM D2974-87	412658		
40243056006	GP-4(3.5')	ASTM D2974-87	412658		
40243056008	GP-7(11)	ASTM D2974-87	412658		

REPORT OF LABORATORY ANALYSIS

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Sample Preservation Receipt Form

Client Name: SCS Engineers

Project # 40243056

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

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

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

Pace Lab #	Glass							Plastic					Vials					Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)				
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC								GN			
001																																			2.5 / 5 / 10
002																																			2.5 / 5 / 10
003																																			2.5 / 5 / 10
004																																			2.5 / 5 / 10
005																																			2.5 / 5 / 10
006																																			2.5 / 5 / 10
007																																			2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

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

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9A	40 mL clear ascorbic	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG5U	100 mL amber glass unpres			VG9D	40 mL clear vial DI	ZPLC	ziploc bag
AG2S	500 mL amber glass H2SO4					GN	
BG3U	250 mL clear glass unpres						

Sample Condition Upon Receipt Form (SCUR)

Project #: _____

Client Name: SCS Engineers

WO#: **40243056**

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



Tracking #: _____

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

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR - 113 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3 / Corr: 3.1

Temp Blank Present: yes no

Biological Tissue is Frozen: yes no

Person examining contents:
 Date: 4/7/22 Initials: TP
 Labeled By Initials: AD

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>pg #100 not listed on COC added per pm TP 4/7/22</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>no date on WGFU WPFU 002 no (14) on WGFU and VGM TP 4/7/22 WPFU 004</u>
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

Dan Milewsky

From: Rennebohm, Jackie <JRennebohm@scsengineers.com>
Sent: Thursday, April 7, 2022 3:31 PM
To: Dan Milewsky
Subject: RE: Hill Farms Heating Plant - extra sample

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Dan,

GP7 should be ran for PVOcs +N and lead. Sorry about that. Thanks!

From: Dan Milewsky <Dan.Milewsky@pacelabs.com>
Sent: Thursday, April 7, 2022 2:22 PM
To: Rennebohm, Jackie <JRennebohm@scsengineers.com>
Subject: RE: Hill Farms Heating Plant - extra sample

This email originated from outside of SCS Engineers. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jackie,

We received GP-7 which wasn't listed on the COC. Our staff added it; let me know if you want it run and for what tests.

Dan Milewsky
Project Manager | Pace Environmental Sciences
1241 Bellevue St, STE 9
Green Bay, WI 54302
Direct/Cell-[920-412-8566](tel:920-412-8566) | Lab-[920.469.2436](tel:920.469.2436) | pacelabs.com

April 25, 2022

Ray Tierney
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25221165 HILL FARMS HEATING PL
Pace Project No.: 40243069

Dear Ray Tierney:

Enclosed are the analytical results for sample(s) received by the laboratory on April 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

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

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25221165 HILL FARMS HEATING PL
Pace Project No.: 40243069

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #: 74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243069001	BLANK	Water	04/06/22 09:00	04/07/22 08:00
40243069002	GP-1 (4.5')	Solid	04/06/22 09:15	04/07/22 08:00
40243069003	GP-2 (4')	Solid	04/06/22 09:40	04/07/22 08:00

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SAMPLE ANALYTE COUNT

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40243069002	GP-1 (4.5')	ASTM D2974	JDL	1	PASI-M
40243069003	GP-2 (4')	ASTM D2974	JDL	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40243069002	GP-1 (4.5')					
ASTM D2974	Percent Moisture	13.6	%	0.10	04/11/22 12:07	N2
40243069003	GP-2 (4')					
ASTM D2974	Percent Moisture	16.5	%	0.10	04/11/22 12:07	N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

Sample: GP-1 (4.5') **Lab ID: 40243069002** Collected: 04/06/22 09:15 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	13.6	%	0.10	0.10	1		04/11/22 12:07		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

Sample: GP-2 (4') **Lab ID: 40243069003** Collected: 04/06/22 09:40 Received: 04/07/22 08:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	16.5	%	0.10	0.10	1		04/11/22 12:07		N2

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

QC Batch: 808531

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 40243069002, 40243069003

SAMPLE DUPLICATE: 4290735

Parameter	Units	40243069002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.6	14.8	8	30	N2

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25221165 HILL FARMS HEATING PL

Pace Project No.: 40243069

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25221165 HILL FARMS HEATING PL
Pace Project No.: 40243069

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243069002	GP-1 (4.5')	ASTM D2974	808531		
40243069003	GP-2 (4')	ASTM D2974	808531		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

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

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

10243069

ALL SHADED AREAS are for LAB USE ONLY

Company: SCS Engineers
Address: 2630 Dairy Dr, Madison, WI 53712
Report To: Ray Tierney
Email To: rtierney@scsengineers.com
Copy To: Jackie Rennebohm
Site Collection Info/Address:

Customer Project Name/Number: 25221165
Hill Farms Heating Plant
State: County/City: Time Zone Collected: [] PT [] MT [] CT [] ET
Compliance Monitoring? [] Yes [] No
DW PWS ID #:
DW Location Code:
Immediately Packed on Ice: [] Yes [] No
Field Filtered (if applicable): [] Yes [] No

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

Table with columns: Customer Sample ID, Matrix *, Comp / Grab, Collected (or Composite Start) Date/Time, Composite End Date/Time, Res Cl, # of Ctns. Includes entries for Blank, GP-1 (4.5'), and GP-2.

Analyses table with multiple columns for different sample types and results.

Lab Profile/Line: Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:
LAB USE ONLY: Lab Sample # / Comments: 4/17/22

Customer Remarks / Specifications/Comments/Possible Hazards
Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #: 2763944
Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: (X) N NA
Therm ID#: 113
Cooler 1 Temp Upon Receipt: 3 oC
Cooler 1 Therm Corr. Factor: 5.1 oC
Cooler 1 Corrected Temp: 3.1 oC
Comments:

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:
Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:
Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N (NA)
HCL MeOH PSP Other
Non Conformance(s): Page Page 11 of 54
YES / NO

Sample Preservation Receipt Form

Client Name: SCS Engineers Project # 40243069

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

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

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

Pace Lab #	Glass						Plastic					Vials					Jars				General			VOA Vials (>6mm) *	H ₂ SO ₄ pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO ₃ pH ≤2	pH after adjusted	Volume (mL)					
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU								SP5T	ZPLC	GN		
001																																			2.5 / 5 / 10
002																																			2.5 / 5 / 10
003																																			2.5 / 5 / 10
004																																			2.5 / 5 / 10
005																																			2.5 / 5 / 10
006																																			2.5 / 5 / 10
007																																			2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

TP 4/17/22

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

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9A	40 mL clear ascorbic	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H ₂ SO ₄	BP3N	250 mL plastic HNO ₃	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3S	250 mL plastic H ₂ SO ₄	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG5U	100 mL amber glass unpres			VG9D	40 mL clear vial DI	ZPLC	ziploc bag
AG2S	500 mL amber glass H ₂ SO ₄					GN	
BG3U	250 mL clear glass unpres						

Sample Condition Upon Receipt Form (SCUR)

Project #: _____

Client Name: SCS Engineers

WO#: 40243069

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



Tracking #: _____

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

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used SR - 113 Type of Ice: Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3 / Corr: 3.1

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

Person examining contents:
 Date: 4/7/22 Initials: JP
 Labeled By Initials: AL

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>pg #, Filtered perservative type TP 4/7/22</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>003' (4') not included on COC TP 4/7/22</u>
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

Report Prepared for:

Dan Milewsky
PACE Wisconsin
1241 Bellevue Street
Green Bay WI 54302

**REPORT OF
LABORATORY
ANALYSIS
FOR PFAAs**

Report Information:

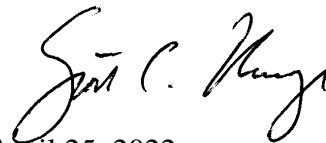
Pace Project #: 10604041
Sample Receipt Date: 04/09/2022
Client Project #: 40243069 SCS ENGINEERS
Client Sub PO #: N/A
State Cert #: 999407970

Invoicing & Reporting Options:

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

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

This report has been reviewed by:



April 25, 2022

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



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Report Prepared Date:

April 19, 2022

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pace Wisconsin. The samples were analyzed for thirty-three perfluorinated compounds using Wisconsin DNR guidance. Reporting limits were set to MDL levels.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blank was free of the target perfluorinated compounds at the reporting limits. This indicates that the sample processing procedures did not significantly contribute to the analyte content determined for the sample material.

A laboratory spike sample was also prepared with each sample batch using clean reference matrix that had been fortified with native standards. The recovery results were within the method limits. This spike indicates that extraction performed as expected. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from that analysis will be provided upon request.

Diminished extracted internal standard (EIS) recovery ("R" flagged) were present in LCS-97941, however, the use of the isotope dilution method generally precludes any adverse impact on those individual native compounds that have a directly associated standard.

The four injection internal standards (13C4 PFOA, 13C4 PFOS, 13C2_PFDA, and 13C2_PFHxA) pass for each analysis in the batch verifying that the instrument detector is working as expected.

Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio-DW	41244
Georgia	959	Ohio-VAP (170	CL101
Hawaii	MN00064	Ohio-VAP (180	CL110
Idaho	MN00064	Oklahoma	9507
Illinois	200011	Oregon- rimary	MN300001
Indiana	C-MN-01	Oregon-Second	MN200001
Iowa	368	Pennsylvania	68-00563
Kansas	E-10167	Puerto Rico	MN00064
Kentucky-DW	90062	South Carolina	74003
Kentucky-WW	90062	Tennessee	TN02818
Louisiana-DEQ	AI-84596	Texas	T104704192
Louisiana-DW	MN00064	Utah	MN00064
Maine	MN00064	Vermont	VT-027053137
Maryland	322	Virginia	460163
Michigan	9909	Washington	C486
Minnesota	027-053-137	West Virginia-D	382
Minnesota-Ag	via MN 027-053	West Virginia-D	9952C
Minnesota-Petr	1240	Wisconsin	999407970
Mississippi	MN00064	Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management



Sample ID Cross Reference

<u>Client Sample ID</u>	<u>Pace Sample ID</u>	<u>Date Received</u>	<u>Sample Type</u>
BLANK	40243069001	04/09/2022	Water
GP-1 (4.5')	40243069002	04/09/2022	Solid
GP-2 (4')	40243069003	04/09/2022	Solid

REPORT OF LABORATORY ANALYSIS

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Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: WI
 Cert. Needed: Yes No

Workorder: 40243069 Workorder Name: 25221165 HILL FARMS HEATING PL Results Requested By: 4/28/2022

Report To: **Subcontract To** (Requested Analysis)

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

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

WO#: 10604041



Item	Sample ID	Sample Type	Collection Date/Time	Lab ID	Matrix	Preserved Containers	
						Unpreserved	Preserved
1	BLANK	PS	4/6/2022 09:00	40243069001	Water	1	
2	GP-1 (4.5)	PS	4/6/2022 09:15	40243069002	Solid	1	
3	GP-2 (4')	PS	4/6/2022 09:40	40243069003	Solid	1	
4							
5							

PFAS (33 WDNR targets)

LAB USE ONLY
 001
 002
 003

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	<i>Anthony Mendel</i>	4/8/22 10:00	<i>[Signature]</i>	4/8/22	moisture is not being measured in Green Bay.
2					
3					

Cooler Temperature on Receipt 1.2 °C Custody Seal or N Received on Ice or N Samples Intact of N

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

Sample Condition Upon Receipt **Client Name:** Pace Analytical **Project #:** **WO# : 10604041**

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial

Tracking Number: _____ See Exceptions 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 Wrap Bubble Bags None Other: _____ **Temp Blank?** Yes No

Thermometer: T1(0461) T2(1336) T3(0459) T4(0254) **Type of Ice:** Wet Blue None Dry Melted
 T5(0489) 01339252/1710 122639816 140792808

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

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.1 °C **Average Corrected Temp (no temp blank only):** _____ °C See Exceptions ENV-FRM-MIN4-0142
 1 Container

Correction Factor: ±0.1 **Cooler Temp Corrected w/temp blank:** 1.2 °C

USDA Regulated Soil: (N/A, water, sample/Other: Soil) **Date/Initials of Person Examining Contents:** KN 04/09/22

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

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

Location (check one): <input type="checkbox"/> Duluth <input checked="" type="checkbox"/> Minneapolis <input type="checkbox"/> Virginia	COMMENTS:
Chain of Custody Present and Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	3.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4. If Fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8hr, <24 hrs, <input type="checkbox"/> >24 hrs
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Matrix: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other- <u>Solid</u>	11. If no, write ID/ Date/Time on Container Below: See Exception <input type="checkbox"/> ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes Chlorine? <input type="checkbox"/> No pH Paper Lot# See Exception <input type="checkbox"/> ENV-FRM-MIN4-0142
Headspace in Methyl Mercury Container? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. See Exception <input type="checkbox"/> ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased): _____

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: [Signature] **Date:** 04/11/22

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

Labeled by: KN Page 20 of 54

CHAIN-OF-CUSTODY Analytical Request Document

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

Billing Information:

Company: **Pace Analytical**
 Address: **2630 Daisy Dr. Madison WI 53712**
 Rep: **Ray Tierney**
 Email To: **RTierney@scsengineers.com**
 Site Collection Info/Address: **CS Engineers**

Customer Project Name/Number: **25221105**
 Hill Farms Heating Plant
 State: **WI** County/City: **Wausau**
 Time Zone Collected: **[] PT [] MT [] CT [] ET**

Site/Facility ID #: **25221105**
 Purchase Order #: **Normal**
 Quote #: **Normal**
 Turnaround Date Required: **Normal**
 Rush: **[] Same Day [] Next Day [] 1 Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day**
 Analysis: **[] Yes [] No**

Sample Disposal: **[] Return [] Archive: [] Hold:**

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Res Cl	# of Ctns
			Date	Time		
B1GAL	BI		4/16	9:00		
GP-1(4.5')	S		4/15			
GP-2	S		4/16	9:40		

Customer Remarks / Spills / Comments: **Wet Blue Dry None**

Packing Material Used:

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

Date/Time: **1/30 4:10-22**

Relinquished by/Company: (Signature)

Date/Time: **4/122 0900**

Relinquished by/Company: (Signature)

Date/Time: **4/122 0900**

Relinquished by/Company: (Signature)

Date/Time: **4/122 0900**

Relinquished by/Company: (Signature)

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

0043009

ALL SHADED AREAS are for LAB USE ONLY

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

Analyses

Lab Profile/Line:	Lab Sample Receipt Checklist:
001	Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottle Intact Y N NA Correct Volumes Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Sealing Films Y N NA Residual Chlorine Present Y N NA Cl Strips: Y N NA Sample pH Acceptable Y N NA pH Strips: Y N NA Sulfide Present: Y N NA Lead Acetate Strips: Y N NA
002	
003	

LAB USE ONLY:
 Lab Sample # / Comments: **47122**

Lab Sample Temperature Info:
 Temp Blank Received: **0 N NA**
 Therm ID#: **113**
 Cooler 1 Temp Upon Receipt: **3.0C**
 Cooler 1 Therm Corr. Factor: **3.1**
 Cooler 1 Corrected Temp: **3.1**
 Comments:

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

Lab Tracking #: **276394**

Samples received via: **FEDEX UPS** Client: **MTJL LAB USE ONLY**

Date/Time: **4/122 0900**

Received by/Company: (Signature)

Date/Time: **4/122 0900**

Received by/Company: (Signature)

Date/Time: **4/122 0900**

Received by/Company: (Signature)

Date/Time: **4/122 0900**

Received by/Company: (Signature)

Date/Time: **4/122 0900**

DC#_Title: ENV-FRM-GBAY-0035 w01_Sample Preservation Receipt Form
 Revision: 3 | Effective Date: | Issued by: Green Bay

Client Name: SCS Engineers
 Project # 402309
 All containers needing preservation have been checked and noted below: Yes No N/A
 Lab Lot# of pH paper: _____ Lab Std #/ID of preservation (if pH adjusted): _____
 Initial when completed: _____ Date/Time: _____

Pace Lab #	Glass				Plastic				Vials				Jars				General				VOA Vials (>6mm) *				H2SO4 pH >2				NaOH+Zn Act pH >9				NaOH pH >12				HNO3 pH >2				pH after adjusted				Volume (mL)			
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH >2	NaOH+Zn Act pH >9	NaOH pH >12	HNO3 pH >2	pH after adjusted	Volume (mL)																
001																																		2.5/5/10														
002																																		2.6/8/10														
003																																		2.5/5/10														
004																																		2.6/8/10														
005																																		2.5/5/10														
006																																		2.5/5/10														
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018																																		2.5/5/10														
019																																		2.5/5/10														
020																																		2.5/5/10														

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

AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN
1 liter amber glass	1 liter clear glass	1 liter amber glass HCL	125 mL amber glass H2SO4	120 mL amber glass unpres	100 mL amber glass unpres	500 mL amber glass H2SO4	250 mL clear glass unpres	1 liter plastic unpres	250 mL plastic unpres	250 mL plastic NaOH	250 mL plastic HNO3	250 mL plastic H2SO4	40 mL clear vial MeOH	40 mL clear vial HCL	40 mL clear vial unpres	40 mL amber Na Thio	40 mL clear ascorbic	4 oz amber jar unpres	9 oz amber jar unpres	4 oz clear jar unpres	4 oz plastic jar unpres	120 mL plastic Na Thiosulfate	ziploc bag	GN

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: SCS Engineers

WO#: **40243069**

Courier: CS Logistics Fed Ex Speedee UPS Walco
 Client Pace Other: _____



Tracking #: _____

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

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR - 113 Type of Ice: Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3 / Corr: 3.1

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

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 4/7/22 Initials: JP

Labeled By Initials: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>pg #, Filtered, perservative type JP 4/7/22</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>003 (4) not included on COC</u>
-Includes date/time/ID/Analysis Matrix: <u>S</u>		<u>JP 4/7/22</u>
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

If checked, see attached form for additional comments

Comments/ Resolution: _____

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243069001	BLANK	SW3535	32864	PFAS-36	Q220413A_02
40243069002	GP-1 (4.5')	SW3535	32841	PFAS-36	Q220416A_02
40243069003	GP-2 (4')	SW3535	32841	PFAS-36	Q220416A_02

Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

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Appendix B

Sample Analysis Summary



Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLANK	Extraction Date	04/12/2022 11:17
Lab Sample ID	40243069001	Total Amount Extracted	253mL
Lab File ID	Q220413A_036	Ical ID	220412B01
Matrix	Non_Potable_Water	CCal File	Q220413A_027
Collected	04/06/2022 09:00	Ending CCal File	Q220413A_038
Received	04/09/2022 13:45	Blank File	Q220413A_023

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.0	0.44	0.44	1	375-22-4		04/13/2022 22:56
PFPeA	ND	2.0	0.43	0.43	1	2706-90-3		04/13/2022 22:56
HFPO-DA	ND	2.0	0.52	0.52	1	13252-13-6		04/13/2022 22:56
PFBS	ND	1.7	0.47	0.47	1	375-73-5		04/13/2022 22:56
PFHxA	ND	2.0	0.43	0.43	1	307-24-4		04/13/2022 22:56
4:2 FTS	ND	1.8	0.55	0.55	1	757124-72-		04/13/2022 22:56
PFPeS	ND	1.9	0.47	0.47	1	2706-91-4		04/13/2022 22:56
PFHpA	ND	2.0	0.54	0.54	1	375-85-9		04/13/2022 22:56
DONA	ND	1.9	0.51	0.51	1	919005-14-		04/13/2022 22:56
PFHxS	ND	1.8	0.50	0.50	1	355-46-4		04/13/2022 22:56
PFOA	ND	2.0	0.58	0.58	1	335-67-1		04/13/2022 22:56
6:2 FTS	ND	1.9	0.64	0.64	1	27619-97-2		04/13/2022 22:56
PFHpS	ND	1.9	0.41	0.41	1	375-92-8		04/13/2022 22:56
PFNA	ND	2.0	0.73	0.73	1	375-95-1		04/13/2022 22:56
PFOSAm	ND	2.0	0.81	0.81	1	754-91-6		04/13/2022 22:56
PFOS	ND	1.8	0.54	0.54	1	1763-23-1		04/13/2022 22:56
MeFOSA	ND	2.0	0.50	0.50	1	31506-32-8		04/13/2022 22:56
PFDA	ND	2.0	0.56	0.56	1	335-76-2		04/13/2022 22:56
EtFOSAm	ND	2.0	0.60	0.60	1	4151-50-2		04/13/2022 22:56
8:2 FTS	ND	1.9	0.65	0.65	1	39108-34-4		04/13/2022 22:56
9-CI-PF3ON	ND	1.8	0.30	0.30	1	756426-58-		04/13/2022 22:56
PFNS	ND	1.9	0.44	0.44	1	68259-12-1		04/13/2022 22:56
PFUnDA	ND	2.0	0.53	0.53	1	2058-94-8		04/13/2022 22:56
NMeFOSAA	ND	2.0	0.43	0.43	1	2355-31-9		04/13/2022 22:56
NEtFOSAA	ND	2.0	0.55	0.55	1	2991-50-6		04/13/2022 22:56
PFDS	ND	1.9	0.44	0.44	1	335-77-3		04/13/2022 22:56
PFDOA	ND	2.0	0.48	0.48	1	307-55-1		04/13/2022 22:56
MeFOSE	ND	2.0	0.33	0.33	1	24448-09-7		04/13/2022 22:56
EtFOSE	ND	2.0	0.49	0.49	1	1691-99-2		04/13/2022 22:56
11-CI-PF3OUdS	ND	1.9	0.43	0.43	1	763051-92-		04/13/2022 22:56
PFTTrDA	ND	2.0	0.61	0.61	1	72629-94-8		04/13/2022 22:56
PFDoS	ND	1.9	0.45	0.45	1	79780-39-5		04/13/2022 22:56
PFTDA	ND	2.0	0.47	0.47	1	376-06-7		04/13/2022 22:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLANK	Extraction Date	04/12/2022 11:17
Lab Sample ID	40243069001	Total Amount Extracted	253mL
Lab File ID	Q220413A_036	Ical ID	220412B01
Matrix	Non_Potable_Water	CCal File	Q220413A_027
Collected	04/06/2022 09:00	Ending CCal File	Q220413A_038
Received	04/09/2022 13:45	Blank File	Q220413A_023

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	20	20	99	50-150		04/13/2022 22:56
13C4 PFOA	20	20	103	50-150		04/13/2022 22:56
13C2 PFDA	20	25	126	50-150		04/13/2022 22:56
13C4 PFOS	19	23	120	50-150		04/13/2022 22:56

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	20	22	110	25-150		04/13/2022 22:56
13C5 PFPeA	20	21	107	25-150		04/13/2022 22:56
13C3 PFBS	18	20	110	25-150		04/13/2022 22:56
13C2 4:2FTS	18	22	121	25-150		04/13/2022 22:56
13C5 PFHxA	20	21	107	25-150		04/13/2022 22:56
13C4 PFHpA	20	19	95	25-150		04/13/2022 22:56
13C3 PFHxS	19	22	115	25-150		04/13/2022 22:56
13C2 6:2FTS	19	23	120	25-150		04/13/2022 22:56
13C8 PFOA	20	22	112	25-150		04/13/2022 22:56
13C9 PFNA	20	22	110	25-150		04/13/2022 22:56
13C8 PFOS	19	24	125	25-150		04/13/2022 22:56
13C2 8:2FTS	19	21	111	25-150		04/13/2022 22:56
13C6 PFDA	20	27	134	25-150		04/13/2022 22:56
d3-MeFOSAA	20	20	99	25-150		04/13/2022 22:56
13C8 PFOSA	20	18	90	25-150		04/13/2022 22:56
d5-EtFOSAA	20	18	91	25-150		04/13/2022 22:56
13C7 PFUdA	20	23	117	25-150		04/13/2022 22:56
13C2 PFDoA	20	24	119	25-150		04/13/2022 22:56
13C2 PFTeDA	20	19	95	25-150		04/13/2022 22:56
13C3 HFPO-DA	20	21	107	25-150		04/13/2022 22:56
d7-N-MeFOSE	20	18	92	10-150		04/13/2022 22:56
d9-N-EtFOSE	20	18	90	10-150		04/13/2022 22:56
d3-N-MeFOSA	20	14	70	10-150		04/13/2022 22:56
d5-N-EtFOSA	20	15	76	10-150		04/13/2022 22:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLANK	Extraction Date	04/12/2022 11:17
Lab Sample ID	40243069001	Total Amount Extracted	253mL
Lab File ID	Q220413A_036	Ical ID	220412B01
Matrix	Non_Potable_Water	CCal File	Q220413A_027
Collected	04/06/2022 09:00	Ending CCal File	Q220413A_038
Received	04/09/2022 13:45	Blank File	Q220413A_023

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.17	6.17	60		04/13/2022 22:56
13C4 PFOA	N/A	N/A	7.40	7.43	72		04/13/2022 22:56
13C2 PFDA	N/A	N/A	8.68	8.67	49		04/13/2022 22:56
13C4 PFOS	N/A	N/A	9.22	9.19	43		04/13/2022 22:56

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.82	4.79	34		04/13/2022 22:56
13C5 PFPeA	N/A	N/A	5.56	5.54	55		04/13/2022 22:56
13C3 PFBS	N/A	N/A	6.50	6.45	13		04/13/2022 22:56
13C2 4:2FTS	N/A	N/A	5.92	5.89	21		04/13/2022 22:56
13C5 PFHxA	N/A	N/A	6.18	6.15	54		04/13/2022 22:56
13C4 PFHpA	N/A	N/A	6.79	6.80	50		04/13/2022 22:56
13C3 PFHxS	N/A	N/A	7.88	7.89	53		04/13/2022 22:56
13C2 6:2FTS	N/A	N/A	7.07	7.09	40		04/13/2022 22:56
13C8 PFOA	N/A	N/A	7.40	7.43	56		04/13/2022 22:56
13C9 PFNA	N/A	N/A	8.03	8.07	86		04/13/2022 22:56
13C8 PFOS	N/A	N/A	9.22	9.25	46		04/13/2022 22:56
13C2 8:2FTS	N/A	N/A	8.30	8.35	45		04/13/2022 22:56
13C6 PFDA	N/A	N/A	8.68	8.73	57		04/13/2022 22:56
d3-MeFOSAA	N/A	N/A	8.55	8.61	36		04/13/2022 22:56
13C8 PFOSA	N/A	N/A	11.45	11.40	49		04/13/2022 22:56
d5-EtFOSAA	N/A	N/A	8.85	8.92	31		04/13/2022 22:56
13C7 PFUdA	N/A	N/A	9.34	9.39	54		04/13/2022 22:56
13C2 PFDoA	N/A	N/A	10.00	10.07	49		04/13/2022 22:56
13C2 PFTeDA	N/A	N/A	11.33	11.39	69		04/13/2022 22:56
13C3 HFPO-DA	N/A	N/A	6.43	6.43	56		04/13/2022 22:56
d7-N-MeFOSE	N/A	N/A	13.11	13.06	18		04/13/2022 22:56
d9-N-EtFOSE	N/A	N/A	13.60	13.54	34		04/13/2022 22:56
d3-N-MeFOSA	N/A	N/A	13.32	13.26	27		04/13/2022 22:56
d5-N-EtFOSA	N/A	N/A	13.76	13.69	36		04/13/2022 22:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLANK	Extraction Date	04/12/2022 11:17
Lab Sample ID	40243069001	Total Amount Extracted	253mL
Lab File ID	Q220413A_036	Ical ID	220412B01
Matrix	Non_Potable_Water	CCal File	Q220413A_027
Collected	04/06/2022 09:00	Ending CCal File	Q220413A_038
Received	04/09/2022 13:45	Blank File	Q220413A_023

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.82	4.79	ND		04/13/2022 22:56
PFPeA	N/A	N/A	5.57	5.55	ND		04/13/2022 22:56
HFPO-DA	0.00	0.43	0.00	6.45	ND		04/13/2022 22:56
PFBS	0.45	0.32	6.51	6.48	ND		04/13/2022 22:56
PFHxA	0.25	0.09	6.18	6.18	ND		04/13/2022 22:56
4:2 FTS	0.00	0.93	0.00	5.91	ND		04/13/2022 22:56
PFPeS	0.00	0.40	0.00	7.21	ND		04/13/2022 22:56
PFHpA	0.00	0.50	0.00	6.81	ND		04/13/2022 22:56
DONA	0.00	0.60	0.00	7.04	ND		04/13/2022 22:56
PFHxS	0.00	0.34	0.00	7.90	ND		04/13/2022 22:56
PFOA	0.00	0.32	0.00	7.44	ND		04/13/2022 22:56
6:2 FTS	1.80	1.20	7.07	7.10	ND		04/13/2022 22:56
PFHpS	0.00	0.45	0.00	8.59	ND		04/13/2022 22:56
PFNA	0.00	0.26	0.00	8.08	ND		04/13/2022 22:56
PFOSAm	N/A	N/A	11.46	11.41	ND		04/13/2022 22:56
PFOS	0.00	0.22	0.00	9.26	ND		04/13/2022 22:56
MeFOSA	0.00	0.50	0.00	13.29	ND		04/13/2022 22:56
PFDA	0.00	0.20	0.00	8.74	ND		04/13/2022 22:56
EtFOSAm	0.00	0.42	0.00	13.72	ND		04/13/2022 22:56
8:2 FTS	0.00	1.40	0.00	8.35	ND		04/13/2022 22:56
9-Cl-PF3ON	0.00	0.04	0.00	9.75	ND		04/13/2022 22:56
PFNS	0.00	0.23	0.00	9.93	ND		04/13/2022 22:56
PFUnDA	0.00	0.18	0.00	9.40	ND		04/13/2022 22:56
NMeFOSAA	0.00	0.71	0.00	8.62	ND		04/13/2022 22:56
NEtFOSAA	0.00	0.52	0.00	8.87	ND		04/13/2022 22:56
PFDS	0.00	0.29	0.00	10.59	ND		04/13/2022 22:56
PFDOA	0.00	0.18	0.00	10.08	ND		04/13/2022 22:56
MeFOSE	N/A	N/A	0.00	13.09	ND		04/13/2022 22:56
EtFOSE	0.00	0.00	0.00	13.56	ND		04/13/2022 22:56
11-Cl-PF3OUdS	0.00	0.02	0.00	11.01	ND		04/13/2022 22:56
PFTTrDA	0.00	0.22	0.00	10.71	ND		04/13/2022 22:56
PFDoS	0.00	0.24	0.00	11.75	ND		04/13/2022 22:56
PFTDA	0.00	0.18	0.00	11.34	ND		04/13/2022 22:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-1 (4.5')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069002	Total Amount Extracted	5.03g
Lab File ID	Q220416A_029	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:15	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	DL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	0.033 J	0.09	0.02	0.02	1	375-22-4		04/16/2022 13:13
PFPeA	0.10	0.09	0.02	0.02	1	2706-90-3		04/16/2022 13:13
HFPO-DA	ND	0.09	0.03	0.03	1	13252-13-6		04/16/2022 13:13
PFBS	ND	0.08	0.02	0.02	1	375-73-5		04/16/2022 13:13
PFHxA	0.051 J	0.09	0.03	0.03	1	307-24-4		04/16/2022 13:13
4:2 FTS	ND	0.09	0.03	0.03	1	757124-72-		04/16/2022 13:13
PFPeS	ND	0.09	0.01	0.01	1	2706-91-4		04/16/2022 13:13
PFHpA	0.040 J	0.09	0.02	0.02	1	375-85-9		04/16/2022 13:13
DONA	ND	0.09	0.03	0.03	1	919005-14-		04/16/2022 13:13
PFHxS	ND	0.09	0.02	0.02	1	355-46-4		04/16/2022 13:13
PFOA	ND	0.09	0.02	0.02	1	335-67-1		04/16/2022 13:13
6:2 FTS	2.3	0.09	0.03	0.03	1	27619-97-2		04/16/2022 13:13
PFHpS	ND	0.09	0.02	0.02	1	375-92-8		04/16/2022 13:13
PFNA	ND	0.09	0.02	0.02	1	375-95-1		04/16/2022 13:13
PFOSAm	ND	0.09	0.02	0.02	1	754-91-6		04/16/2022 13:13
PFOS	ND	0.09	0.02	0.02	1	1763-23-1		04/16/2022 13:13
MeFOSA	ND	0.09	0.02	0.02	1	31506-32-8		04/16/2022 13:13
PFDA	ND	0.09	0.02	0.02	1	335-76-2		04/16/2022 13:13
EtFOSAm	ND	0.09	0.02	0.02	1	4151-50-2		04/16/2022 13:13
8:2 FTS	ND	0.09	0.02	0.02	1	39108-34-4		04/16/2022 13:13
9-CI-PF3ON	ND	0.09	0.01	0.01	1	756426-58-		04/16/2022 13:13
PFNS	ND	0.09	0.01	0.01	1	68259-12-1		04/16/2022 13:13
PFUnDA	ND	0.09	0.02	0.02	1	2058-94-8		04/16/2022 13:13
NMeFOSAA	ND	0.09	0.02	0.02	1	2355-31-9		04/16/2022 13:13
NEtFOSAA	ND	0.09	0.02	0.02	1	2991-50-6		04/16/2022 13:13
PFDS	ND	0.09	0.02	0.02	1	335-77-3		04/16/2022 13:13
PFDOA	ND	0.09	0.02	0.02	1	307-55-1		04/16/2022 13:13
MeFOSE	ND	0.09	0.02	0.02	1	24448-09-7		04/16/2022 13:13
EtFOSE	ND	0.09	0.02	0.02	1	1691-99-2		04/16/2022 13:13
11-CI-PF3OUdS	ND	0.09	0.01	0.01	1	763051-92-		04/16/2022 13:13
PFTTrDA	ND	0.09	0.02	0.02	1	72629-94-8		04/16/2022 13:13
PFDoS	ND	0.09	0.03	0.03	1	79780-39-5		04/16/2022 13:13
PFTDA	ND	0.09	0.03	0.03	1	376-06-7		04/16/2022 13:13

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-1 (4.5')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069002	Total Amount Extracted	5.03g
Lab File ID	Q220416A_029	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:15	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.99	0.98	98	50-150		04/16/2022 13:13
13C4 PFOA	0.99	1.0	101	50-150		04/16/2022 13:13
13C2 PFDA	0.99	1.1	115	50-150		04/16/2022 13:13
13C4 PFOS	0.95	0.89	93	50-150		04/16/2022 13:13

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.99	0.85	86	25-150		04/16/2022 13:13
13C5 PFPeA	0.99	0.84	84	25-150		04/16/2022 13:13
13C3 PFBS	0.92	0.75	81	25-150		04/16/2022 13:13
13C2 4:2FTS	0.93	0.75	81	25-150		04/16/2022 13:13
13C5 PFHxA	0.99	0.75	75	25-150		04/16/2022 13:13
13C4 PFHpA	0.99	0.77	77	25-150		04/16/2022 13:13
13C3 PFHxS	0.94	0.80	85	25-150		04/16/2022 13:13
13C2 6:2FTS	0.94	0.77	82	25-150		04/16/2022 13:13
13C8 PFOA	0.99	0.80	80	25-150		04/16/2022 13:13
13C9 PFNA	0.99	0.84	84	25-150		04/16/2022 13:13
13C8 PFOS	0.95	0.78	82	25-150		04/16/2022 13:13
13C2 8:2FTS	0.95	0.81	85	25-150		04/16/2022 13:13
13C6 PFDA	0.99	0.73	73	25-150		04/16/2022 13:13
d3-MeFOSAA	0.99	0.94	95	25-150		04/16/2022 13:13
13C8 PFOSA	0.99	0.74	75	25-150		04/16/2022 13:13
d5-EtFOSAA	0.99	0.70	70	25-150		04/16/2022 13:13
13C7 PFUdA	0.99	0.88	89	25-150		04/16/2022 13:13
13C2 PFDoA	0.99	0.58	58	25-150		04/16/2022 13:13
13C2 PFTeDA	0.99	0.57	57	25-150		04/16/2022 13:13
13C3 HFPO-DA	0.99	0.74	74	25-150		04/16/2022 13:13
d7-N-MeFOSE	0.99	0.58	58	10-150		04/16/2022 13:13
d9-N-EtFOSE	0.99	0.55	55	10-150		04/16/2022 13:13
d3-N-MeFOSA	0.99	0.65	66	10-150		04/16/2022 13:13
d5-N-EtFOSA	0.99	0.60	61	10-150		04/16/2022 13:13

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-1 (4.5')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069002	Total Amount Extracted	5.03g
Lab File ID	Q220416A_029	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:15	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.18	6.19	47		04/16/2022 13:13
13C4 PFOA	N/A	N/A	7.41	7.42	77		04/16/2022 13:13
13C2 PFDA	N/A	N/A	8.69	8.71	44		04/16/2022 13:13
13C4 PFOS	N/A	N/A	9.23	9.25	57		04/16/2022 13:13

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.82	4.82	38		04/16/2022 13:13
13C5 PFPeA	N/A	N/A	5.57	5.57	71		04/16/2022 13:13
13C3 PFBS	N/A	N/A	6.50	6.51	10		04/16/2022 13:13
13C2 4:2FTS	N/A	N/A	5.92	5.93	11		04/16/2022 13:13
13C5 PFHxA	N/A	N/A	6.19	6.19	46		04/16/2022 13:13
13C4 PFHpA	N/A	N/A	6.80	6.80	42		04/16/2022 13:13
13C3 PFHxS	N/A	N/A	7.89	7.90	65		04/16/2022 13:13
13C2 6:2FTS	N/A	N/A	7.08	7.09	30		04/16/2022 13:13
13C8 PFOA	N/A	N/A	7.41	7.43	48		04/16/2022 13:13
13C9 PFNA	N/A	N/A	8.04	8.07	76		04/16/2022 13:13
13C8 PFOS	N/A	N/A	9.23	9.25	43		04/16/2022 13:13
13C2 8:2FTS	N/A	N/A	8.31	8.35	57		04/16/2022 13:13
13C6 PFDA	N/A	N/A	8.69	8.70	46		04/16/2022 13:13
d3-MeFOSAA	N/A	N/A	8.56	8.61	67		04/16/2022 13:13
13C8 PFOSA	N/A	N/A	11.45	11.45	47		04/16/2022 13:13
d5-EtFOSAA	N/A	N/A	8.86	8.88	31		04/16/2022 13:13
13C7 PFUdA	N/A	N/A	9.35	9.36	75		04/16/2022 13:13
13C2 PFDoA	N/A	N/A	10.02	10.04	41		04/16/2022 13:13
13C2 PFTeDA	N/A	N/A	11.34	11.36	54		04/16/2022 13:13
13C3 HFPO-DA	N/A	N/A	6.44	6.44	49		04/16/2022 13:13
d7-N-MeFOSE	N/A	N/A	13.11	13.10	13		04/16/2022 13:13
d9-N-EtFOSE	N/A	N/A	13.60	13.59	29		04/16/2022 13:13
d3-N-MeFOSA	N/A	N/A	13.32	13.31	28		04/16/2022 13:13
d5-N-EtFOSA	N/A	N/A	13.77	13.75	36		04/16/2022 13:13

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-1 (4.5')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069002	Total Amount Extracted	5.03g
Lab File ID	Q220416A_029	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:15	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.82	4.82	60	J	04/16/2022 13:13
PFPeA	N/A	N/A	5.57	5.57	97		04/16/2022 13:13
HFPO-DA	0.00	0.58	0.00	6.46	ND		04/16/2022 13:13
PFBS	0.00	0.34	0.00	6.52	ND		04/16/2022 13:13
PFHxA	0.08	0.08	6.19	6.20	64	J	04/16/2022 13:13
4:2 FTS	0.00	0.96	0.00	5.93	ND		04/16/2022 13:13
PFPeS	0.00	0.47	0.00	7.23	ND		04/16/2022 13:13
PFHpA	0.47	0.45	6.80	6.82	51	J	04/16/2022 13:13
DONA	0.00	0.52	0.00	7.04	ND		04/16/2022 13:13
PFHxS	0.00	0.34	0.00	7.91	ND		04/16/2022 13:13
PFOA	0.00	0.32	0.00	7.44	ND		04/16/2022 13:13
6:2 FTS	1.30	1.30	7.08	7.10	31		04/16/2022 13:13
PFHpS	0.00	0.43	0.00	8.59	ND		04/16/2022 13:13
PFNA	0.46	0.28	8.05	8.08	ND		04/16/2022 13:13
PFOSAm	N/A	N/A	11.48	11.46	ND		04/16/2022 13:13
PFOS	0.00	0.26	0.00	9.26	ND		04/16/2022 13:13
MeFOSA	0.00	0.49	0.00	13.33	ND		04/16/2022 13:13
PFDA	0.00	0.20	0.00	8.72	ND		04/16/2022 13:13
EtFOSAm	0.41	0.42	13.80	13.78	ND		04/16/2022 13:13
8:2 FTS	0.00	1.30	0.00	8.33	ND		04/16/2022 13:13
9-Cl-PF3ON	0.00	0.04	0.00	9.75	ND		04/16/2022 13:13
PFNS	0.00	0.25	0.00	9.93	ND		04/16/2022 13:13
PFUnDA	0.00	0.20	0.00	9.40	ND		04/16/2022 13:13
NMeFOSAA	0.00	0.70	0.00	8.62	ND		04/16/2022 13:13
NEtFOSAA	0.00	0.46	0.00	8.87	ND		04/16/2022 13:13
PFDS	0.00	0.29	0.00	10.59	ND		04/16/2022 13:13
PFDOA	0.00	0.21	0.00	10.08	ND		04/16/2022 13:13
MeFOSE	N/A	N/A	0.00	13.09	ND		04/16/2022 13:13
EtFOSE	0.00	0.00	13.65	13.56	ND		04/16/2022 13:13
11-Cl-PF3OUdS	0.00	0.02	0.00	11.01	ND		04/16/2022 13:13
PFTTrDA	0.00	0.21	0.00	10.71	ND		04/16/2022 13:13
PFDoS	0.00	0.24	0.00	11.82	ND		04/16/2022 13:13
PFTDA	0.00	0.16	0.00	11.37	ND		04/16/2022 13:13

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-2 (4')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069003	Total Amount Extracted	5.04g
Lab File ID	Q220416A_030	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:40	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	DL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	0.065 J	0.09	0.02	0.02	1	375-22-4		04/16/2022 13:32
PFPeA	0.17	0.09	0.02	0.02	1	2706-90-3		04/16/2022 13:32
HFPO-DA	ND	0.09	0.02	0.02	1	13252-13-6		04/16/2022 13:32
PFBS	ND	0.08	0.02	0.02	1	375-73-5		04/16/2022 13:32
PFHxA	0.082 J	0.09	0.03	0.03	1	307-24-4		04/16/2022 13:32
4:2 FTS	ND	0.09	0.03	0.03	1	757124-72-		04/16/2022 13:32
PFPeS	ND	0.09	0.01	0.01	1	2706-91-4		04/16/2022 13:32
PFHpA	0.10	0.09	0.02	0.02	1	375-85-9		04/16/2022 13:32
DONA	ND	0.09	0.03	0.03	1	919005-14-		04/16/2022 13:32
PFHxS	ND	0.09	0.02	0.02	1	355-46-4		04/16/2022 13:32
PFOA	ND	0.09	0.02	0.02	1	335-67-1		04/16/2022 13:32
6:2 FTS	ND	0.09	0.03	0.03	1	27619-97-2		04/16/2022 13:32
PFHpS	ND	0.09	0.02	0.02	1	375-92-8		04/16/2022 13:32
PFNA	ND	0.09	0.02	0.02	1	375-95-1		04/16/2022 13:32
PFOSAm	ND	0.09	0.02	0.02	1	754-91-6		04/16/2022 13:32
PFOS	0.16	0.09	0.02	0.02	1	1763-23-1		04/16/2022 13:32
MeFOSA	ND	0.09	0.02	0.02	1	31506-32-8		04/16/2022 13:32
PFDA	ND	0.09	0.02	0.02	1	335-76-2		04/16/2022 13:32
EtFOSAm	ND	0.09	0.02	0.02	1	4151-50-2		04/16/2022 13:32
8:2 FTS	ND	0.09	0.02	0.02	1	39108-34-4		04/16/2022 13:32
9-CI-PF3ON	ND	0.09	0.01	0.01	1	756426-58-		04/16/2022 13:32
PFNS	ND	0.09	0.01	0.01	1	68259-12-1		04/16/2022 13:32
PFUnDA	ND	0.09	0.02	0.02	1	2058-94-8		04/16/2022 13:32
NMeFOSAA	ND	0.09	0.02	0.02	1	2355-31-9		04/16/2022 13:32
NEtFOSAA	ND	0.09	0.02	0.02	1	2991-50-6		04/16/2022 13:32
PFDS	ND	0.09	0.02	0.02	1	335-77-3		04/16/2022 13:32
PFDOA	ND	0.09	0.02	0.02	1	307-55-1		04/16/2022 13:32
MeFOSE	ND	0.09	0.02	0.02	1	24448-09-7		04/16/2022 13:32
EtFOSE	ND	0.09	0.02	0.02	1	1691-99-2		04/16/2022 13:32
11-CI-PF3OUdS	ND	0.09	0.01	0.01	1	763051-92-		04/16/2022 13:32
PFTTrDA	ND	0.09	0.02	0.02	1	72629-94-8		04/16/2022 13:32
PFDoS	ND	0.09	0.03	0.03	1	79780-39-5		04/16/2022 13:32
PFTDA	ND	0.09	0.03	0.03	1	376-06-7		04/16/2022 13:32

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-2 (4')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069003	Total Amount Extracted	5.04g
Lab File ID	Q220416A_030	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:40	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.99	0.95	96	50-150		04/16/2022 13:32
13C4 PFOA	0.99	0.91	92	50-150		04/16/2022 13:32
13C2 PFDA	0.99	0.82	83	50-150		04/16/2022 13:32
13C4 PFOS	0.95	0.88	93	50-150		04/16/2022 13:32

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.99	0.81	82	25-150		04/16/2022 13:32
13C5 PFPeA	0.99	0.82	82	25-150		04/16/2022 13:32
13C3 PFBS	0.92	0.70	76	25-150		04/16/2022 13:32
13C2 4:2FTS	0.93	0.72	78	25-150		04/16/2022 13:32
13C5 PFHxA	0.99	0.82	83	25-150		04/16/2022 13:32
13C4 PFHpA	0.99	0.79	80	25-150		04/16/2022 13:32
13C3 PFHxS	0.94	0.74	79	25-150		04/16/2022 13:32
13C2 6:2FTS	0.94	0.82	87	25-150		04/16/2022 13:32
13C8 PFOA	0.99	0.79	80	25-150		04/16/2022 13:32
13C9 PFNA	0.99	0.81	82	25-150		04/16/2022 13:32
13C8 PFOS	0.95	0.78	82	25-150		04/16/2022 13:32
13C2 8:2FTS	0.95	0.75	79	25-150		04/16/2022 13:32
13C6 PFDA	0.99	0.70	71	25-150		04/16/2022 13:32
d3-MeFOSAA	0.99	0.85	86	25-150		04/16/2022 13:32
13C8 PFOSA	0.99	0.61	62	25-150		04/16/2022 13:32
d5-EtFOSAA	0.99	0.72	73	25-150		04/16/2022 13:32
13C7 PFUdA	0.99	0.70	71	25-150		04/16/2022 13:32
13C2 PFDoA	0.99	0.60	61	25-150		04/16/2022 13:32
13C2 PFTeDA	0.99	0.61	62	25-150		04/16/2022 13:32
13C3 HFPO-DA	0.99	0.78	79	25-150		04/16/2022 13:32
d7-N-MeFOSE	0.99	0.48	48	10-150		04/16/2022 13:32
d9-N-EtFOSE	0.99	0.42	43	10-150		04/16/2022 13:32
d3-N-MeFOSA	0.99	0.62	63	10-150		04/16/2022 13:32
d5-N-EtFOSA	0.99	0.60	60	10-150		04/16/2022 13:32

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-2 (4')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069003	Total Amount Extracted	5.04g
Lab File ID	Q220416A_030	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:40	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.19	6.19	60		04/16/2022 13:32
13C4 PFOA	N/A	N/A	7.41	7.42	64		04/16/2022 13:32
13C2 PFDA	N/A	N/A	8.69	8.71	56		04/16/2022 13:32
13C4 PFOS	N/A	N/A	9.23	9.25	42		04/16/2022 13:32

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.82	4.82	40		04/16/2022 13:32
13C5 PFPeA	N/A	N/A	5.57	5.57	74		04/16/2022 13:32
13C3 PFBS	N/A	N/A	6.51	6.51	13		04/16/2022 13:32
13C2 4:2FTS	N/A	N/A	5.93	5.93	11		04/16/2022 13:32
13C5 PFHxA	N/A	N/A	6.19	6.19	75		04/16/2022 13:32
13C4 PFHpA	N/A	N/A	6.80	6.80	51		04/16/2022 13:32
13C3 PFHxS	N/A	N/A	7.89	7.90	78		04/16/2022 13:32
13C2 6:2FTS	N/A	N/A	7.08	7.09	56		04/16/2022 13:32
13C8 PFOA	N/A	N/A	7.41	7.43	59		04/16/2022 13:32
13C9 PFNA	N/A	N/A	8.04	8.07	71		04/16/2022 13:32
13C8 PFOS	N/A	N/A	9.23	9.25	50		04/16/2022 13:32
13C2 8:2FTS	N/A	N/A	8.31	8.35	48		04/16/2022 13:32
13C6 PFDA	N/A	N/A	8.70	8.70	54		04/16/2022 13:32
d3-MeFOSAA	N/A	N/A	8.56	8.61	45		04/16/2022 13:32
13C8 PFOSA	N/A	N/A	11.46	11.45	49		04/16/2022 13:32
d5-EtFOSAA	N/A	N/A	8.87	8.88	38		04/16/2022 13:32
13C7 PFUdA	N/A	N/A	9.35	9.36	56		04/16/2022 13:32
13C2 PFDoA	N/A	N/A	10.02	10.04	47		04/16/2022 13:32
13C2 PFTeDA	N/A	N/A	11.34	11.36	67		04/16/2022 13:32
13C3 HFPO-DA	N/A	N/A	6.44	6.44	50		04/16/2022 13:32
d7-N-MeFOSE	N/A	N/A	13.11	13.10	13		04/16/2022 13:32
d9-N-EtFOSE	N/A	N/A	13.61	13.59	23		04/16/2022 13:32
d3-N-MeFOSA	N/A	N/A	13.33	13.31	28		04/16/2022 13:32
d5-N-EtFOSA	N/A	N/A	13.77	13.75	51		04/16/2022 13:32

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	GP-2 (4')	Extraction Date	04/13/2022 16:00
Lab Sample ID	40243069003	Total Amount Extracted	5.04g
Lab File ID	Q220416A_030	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_028
Collected	04/06/2022 09:40	Ending CCal File	Q220416A_033
Received	04/09/2022 13:45	Blank File	Q220416A_007

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.83	4.82	11	J	04/16/2022 13:32
PFPeA	N/A	N/A	5.58	5.57	13		04/16/2022 13:32
HFPO-DA	0.00	0.58	0.00	6.46	ND		04/16/2022 13:32
PFBS	0.24	0.34	6.52	6.52	ND		04/16/2022 13:32
PFHxA	0.07	0.08	6.20	6.20	74	J	04/16/2022 13:32
4:2 FTS	0.00	0.96	0.00	5.93	ND		04/16/2022 13:32
PFPeS	0.00	0.47	0.00	7.23	ND		04/16/2022 13:32
PFHpA	0.54	0.45	6.81	6.82	60		04/16/2022 13:32
DONA	0.00	0.52	0.00	7.04	ND		04/16/2022 13:32
PFHxS	0.33	0.34	7.90	7.91	ND		04/16/2022 13:32
PFOA	0.27	0.32	7.42	7.44	ND		04/16/2022 13:32
6:2 FTS	1.80	1.30	7.08	7.10	ND		04/16/2022 13:32
PFHpS	0.00	0.43	0.00	8.59	ND		04/16/2022 13:32
PFNA	0.26	0.28	8.04	8.08	ND		04/16/2022 13:32
PFOSAm	N/A	N/A	0.00	11.46	ND		04/16/2022 13:32
PFOS	0.20	0.26	9.25	9.26	11		04/16/2022 13:32
MeFOSA	0.00	0.49	0.00	13.33	ND		04/16/2022 13:32
PFDA	0.00	0.20	0.00	8.72	ND		04/16/2022 13:32
EtFOSAm	0.00	0.42	0.00	13.78	ND		04/16/2022 13:32
8:2 FTS	0.00	1.30	0.00	8.33	ND		04/16/2022 13:32
9-Cl-PF3ON	0.00	0.04	0.00	9.75	ND		04/16/2022 13:32
PFNS	0.00	0.25	0.00	9.93	ND		04/16/2022 13:32
PFUnDA	0.00	0.20	0.00	9.40	ND		04/16/2022 13:32
NMeFOSAA	0.00	0.70	0.00	8.62	ND		04/16/2022 13:32
NEtFOSAA	0.00	0.46	0.00	8.87	ND		04/16/2022 13:32
PFDS	0.00	0.29	0.00	10.59	ND		04/16/2022 13:32
PFDOA	0.00	0.21	0.00	10.08	ND		04/16/2022 13:32
MeFOSE	N/A	N/A	0.00	13.09	ND		04/16/2022 13:32
EtFOSE	0.00	0.00	0.00	13.56	ND		04/16/2022 13:32
11-Cl-PF3OUdS	0.00	0.02	0.00	11.01	ND		04/16/2022 13:32
PFTTrDA	0.00	0.21	0.00	10.71	ND		04/16/2022 13:32
PFDoS	0.00	0.24	0.00	11.82	ND		04/16/2022 13:32
PFTDA	0.00	0.16	0.00	11.37	ND		04/16/2022 13:32

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKKI	Extraction Date	04/12/2022 11:17
Lab Sample ID	BLANK-98025	Total Amount Extracted	252mL
Lab File ID	Q220413A_023	Ical ID	220412B01
Matrix	Water	CCal File	Q220413A_016
Collected	04/11/2022 14:52	Ending CCal File	Q220413A_027
Received	04/11/2022 14:52	Blank File	Q220413A_023

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.0	0.44	0.44	1	375-22-4		04/13/2022 18:55
PFPeA	ND	2.0	0.43	0.43	1	2706-90-3		04/13/2022 18:55
HFPO-DA	ND	2.0	0.53	0.53	1	13252-13-6		04/13/2022 18:55
PFBS	ND	1.8	0.47	0.47	1	375-73-5		04/13/2022 18:55
PFHxA	ND	2.0	0.43	0.43	1	307-24-4		04/13/2022 18:55
4:2 FTS	ND	1.9	0.55	0.55	1	757124-72-		04/13/2022 18:55
PFPeS	ND	1.9	0.47	0.47	1	2706-91-4		04/13/2022 18:55
PFHpA	ND	2.0	0.55	0.55	1	375-85-9		04/13/2022 18:55
DONA	ND	1.9	0.51	0.51	1	919005-14-		04/13/2022 18:55
PFHxS	ND	1.8	0.50	0.50	1	355-46-4		04/13/2022 18:55
PFOA	ND	2.0	0.58	0.58	1	335-67-1		04/13/2022 18:55
6:2 FTS	ND	1.9	0.64	0.64	1	27619-97-2		04/13/2022 18:55
PFHpS	ND	1.9	0.41	0.41	1	375-92-8		04/13/2022 18:55
PFNA	ND	2.0	0.73	0.73	1	375-95-1		04/13/2022 18:55
PFOSAm	ND	2.0	0.81	0.81	1	754-91-6		04/13/2022 18:55
PFOS	ND	1.8	0.54	0.54	1	1763-23-1		04/13/2022 18:55
MeFOSA	ND	2.0	0.51	0.51	1	31506-32-8		04/13/2022 18:55
PFDA	ND	2.0	0.56	0.56	1	335-76-2		04/13/2022 18:55
EtFOSAm	ND	2.0	0.60	0.60	1	4151-50-2		04/13/2022 18:55
8:2 FTS	ND	1.9	0.65	0.65	1	39108-34-4		04/13/2022 18:55
9-CI-PF3ON	ND	1.9	0.30	0.30	1	756426-58-		04/13/2022 18:55
PFNS	ND	1.9	0.44	0.44	1	68259-12-1		04/13/2022 18:55
PFUnDA	ND	2.0	0.54	0.54	1	2058-94-8		04/13/2022 18:55
NMeFOSAA	ND	2.0	0.43	0.43	1	2355-31-9		04/13/2022 18:55
NEtFOSAA	ND	2.0	0.55	0.55	1	2991-50-6		04/13/2022 18:55
PFDS	ND	1.9	0.45	0.45	1	335-77-3		04/13/2022 18:55
PFDOA	ND	2.0	0.48	0.48	1	307-55-1		04/13/2022 18:55
MeFOSE	ND	2.0	0.33	0.33	1	24448-09-7		04/13/2022 18:55
EtFOSE	ND	2.0	0.49	0.49	1	1691-99-2		04/13/2022 18:55
11-CI-PF3OUdS	ND	1.9	0.43	0.43	1	763051-92-		04/13/2022 18:55
PFTTrDA	ND	2.0	0.62	0.62	1	72629-94-8		04/13/2022 18:55
PFDoS	ND	1.9	0.46	0.46	1	79780-39-5		04/13/2022 18:55
PFTDA	ND	2.0	0.47	0.47	1	376-06-7		04/13/2022 18:55

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKKI	Extraction Date	04/12/2022 11:17
Lab Sample ID	BLANK-98025	Total Amount Extracted	252mL
Lab File ID	Q220413A_023	Ical ID	220412B01
Matrix	Water	CCal File	Q220413A_016
Collected	04/11/2022 14:52	Ending CCal File	Q220413A_027
Received	04/11/2022 14:52	Blank File	Q220413A_023

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	20	22	109	50-150		04/13/2022 18:55
13C4 PFOA	20	19	97	50-150		04/13/2022 18:55
13C2 PFDA	20	19	95	50-150		04/13/2022 18:55
13C4 PFOS	19	22	116	50-150		04/13/2022 18:55

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	20	20	101	50-150		04/13/2022 18:55
13C5 PFPeA	20	20	101	50-150		04/13/2022 18:55
13C3 PFBS	18	20	106	50-150		04/13/2022 18:55
13C2 4:2FTS	19	21	112	50-150		04/13/2022 18:55
13C5 PFHxA	20	19	95	50-150		04/13/2022 18:55
13C4 PFHpA	20	19	98	50-150		04/13/2022 18:55
13C3 PFHxS	19	20	109	50-150		04/13/2022 18:55
13C2 6:2FTS	19	20	107	50-150		04/13/2022 18:55
13C8 PFOA	20	20	100	50-150		04/13/2022 18:55
13C9 PFNA	20	21	105	50-150		04/13/2022 18:55
13C8 PFOS	19	20	107	50-150		04/13/2022 18:55
13C2 8:2FTS	19	21	109	50-150		04/13/2022 18:55
13C6 PFDA	20	20	103	50-150		04/13/2022 18:55
d3-MeFOSAA	20	19	93	50-150		04/13/2022 18:55
13C8 PFOSA	20	16	81	50-150		04/13/2022 18:55
d5-EtFOSAA	20	17	88	50-150		04/13/2022 18:55
13C7 PFUdA	20	18	91	50-150		04/13/2022 18:55
13C2 PFDoA	20	17	88	50-150		04/13/2022 18:55
13C2 PFTeDA	20	15	76	50-150		04/13/2022 18:55
13C3 HFPO-DA	20	18	92	50-150		04/13/2022 18:55
d7-N-MeFOSE	20	15	77	20-150		04/13/2022 18:55
d9-N-EtFOSE	20	16	79	20-150		04/13/2022 18:55
d3-N-MeFOSA	20	9.7	49	20-150		04/13/2022 18:55
d5-N-EtFOSA	20	10	51	20-150		04/13/2022 18:55

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKKI	Extraction Date	04/12/2022 11:17
Lab Sample ID	BLANK-98025	Total Amount Extracted	252mL
Lab File ID	Q220413A_023	Ical ID	220412B01
Matrix	Water	CCal File	Q220413A_016
Collected	04/11/2022 14:52	Ending CCal File	Q220413A_027
Received	04/11/2022 14:52	Blank File	Q220413A_023

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.17	6.17	50		04/13/2022 18:55
13C4 PFOA	N/A	N/A	7.40	7.43	74		04/13/2022 18:55
13C2 PFDA	N/A	N/A	8.68	8.67	37		04/13/2022 18:55
13C4 PFOS	N/A	N/A	9.21	9.19	54		04/13/2022 18:55

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.80	4.79	39		04/13/2022 18:55
13C5 PFPeA	N/A	N/A	5.55	5.54	70		04/13/2022 18:55
13C3 PFBS	N/A	N/A	6.49	6.45	20		04/13/2022 18:55
13C2 4:2FTS	N/A	N/A	5.91	5.89	11		04/13/2022 18:55
13C5 PFHxA	N/A	N/A	6.17	6.15	71		04/13/2022 18:55
13C4 PFHpA	N/A	N/A	6.78	6.80	61		04/13/2022 18:55
13C3 PFHxS	N/A	N/A	7.87	7.89	65		04/13/2022 18:55
13C2 6:2FTS	N/A	N/A	7.07	7.09	45		04/13/2022 18:55
13C8 PFOA	N/A	N/A	7.40	7.43	78		04/13/2022 18:55
13C9 PFNA	N/A	N/A	8.03	8.07	69		04/13/2022 18:55
13C8 PFOS	N/A	N/A	9.21	9.25	52		04/13/2022 18:55
13C2 8:2FTS	N/A	N/A	8.30	8.35	69		04/13/2022 18:55
13C6 PFDA	N/A	N/A	8.68	8.73	40		04/13/2022 18:55
d3-MeFOSAA	N/A	N/A	8.55	8.61	64		04/13/2022 18:55
13C8 PFOSA	N/A	N/A	11.43	11.40	47		04/13/2022 18:55
d5-EtFOSAA	N/A	N/A	8.86	8.92	35		04/13/2022 18:55
13C7 PFUdA	N/A	N/A	9.33	9.39	55		04/13/2022 18:55
13C2 PFDoA	N/A	N/A	10.00	10.07	54		04/13/2022 18:55
13C2 PFTeDA	N/A	N/A	11.33	11.39	62		04/13/2022 18:55
13C3 HFPO-DA	N/A	N/A	6.42	6.43	47		04/13/2022 18:55
d7-N-MeFOSE	N/A	N/A	13.10	13.06	25		04/13/2022 18:55
d9-N-EtFOSE	N/A	N/A	13.59	13.54	32		04/13/2022 18:55
d3-N-MeFOSA	N/A	N/A	13.31	13.26	29		04/13/2022 18:55
d5-N-EtFOSA	N/A	N/A	13.75	13.69	39		04/13/2022 18:55

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKKI	Extraction Date	04/12/2022 11:17
Lab Sample ID	BLANK-98025	Total Amount Extracted	252mL
Lab File ID	Q220413A_023	Ical ID	220412B01
Matrix	Water	CCal File	Q220413A_016
Collected	04/11/2022 14:52	Ending CCal File	Q220413A_027
Received	04/11/2022 14:52	Blank File	Q220413A_023

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.81	4.79	ND		04/13/2022 18:55
PFPeA	N/A	N/A	5.56	5.55	ND		04/13/2022 18:55
HFPO-DA	0.00	0.47	0.00	6.45	ND		04/13/2022 18:55
PFBS	0.49	0.35	6.50	6.48	ND		04/13/2022 18:55
PFHxA	0.00	0.08	0.00	6.18	ND		04/13/2022 18:55
4:2 FTS	0.00	0.99	0.00	5.91	ND		04/13/2022 18:55
PFPeS	0.00	0.43	0.00	7.21	ND		04/13/2022 18:55
PFHpA	0.00	0.46	0.00	6.81	ND		04/13/2022 18:55
DONA	0.00	0.55	0.00	7.04	ND		04/13/2022 18:55
PFHxS	0.00	0.35	0.00	7.90	ND		04/13/2022 18:55
PFOA	0.00	0.33	0.00	7.44	ND		04/13/2022 18:55
6:2 FTS	0.00	1.50	0.00	7.10	ND		04/13/2022 18:55
PFHpS	0.00	0.41	0.00	8.59	ND		04/13/2022 18:55
PFNA	0.00	0.26	0.00	8.08	ND		04/13/2022 18:55
PFOSAm	N/A	N/A	11.44	11.41	ND		04/13/2022 18:55
PFOS	0.18	0.24	9.22	9.26	ND		04/13/2022 18:55
MeFOSA	0.00	0.52	0.00	13.29	ND		04/13/2022 18:55
PFDA	0.00	0.19	0.00	8.74	ND		04/13/2022 18:55
EtFOSAm	0.00	0.42	0.00	13.72	ND		04/13/2022 18:55
8:2 FTS	0.00	1.40	0.00	8.35	ND		04/13/2022 18:55
9-Cl-PF3ON	0.00	0.04	0.00	9.75	ND		04/13/2022 18:55
PFNS	0.00	0.24	0.00	9.93	ND		04/13/2022 18:55
PFUnDA	0.00	0.18	0.00	9.40	ND		04/13/2022 18:55
NMeFOSAA	0.00	0.62	0.00	8.62	ND		04/13/2022 18:55
NEtFOSAA	0.00	0.43	0.00	8.87	ND		04/13/2022 18:55
PFDS	0.00	0.28	0.00	10.59	ND		04/13/2022 18:55
PFDOA	0.00	0.20	0.00	10.08	ND		04/13/2022 18:55
MeFOSE	N/A	N/A	0.00	13.09	ND		04/13/2022 18:55
EtFOSE	0.00	0.00	0.00	13.56	ND		04/13/2022 18:55
11-Cl-PF3OUdS	0.00	0.03	0.00	11.01	ND		04/13/2022 18:55
PFTTrDA	0.00	0.19	0.00	10.71	ND		04/13/2022 18:55
PFDoS	0.00	0.23	0.00	11.75	ND		04/13/2022 18:55
PFTDA	0.00	0.18	0.00	11.34	ND		04/13/2022 18:55

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary

PFAS by Isotope Dilution

Client Sample ID	BLKIC	Extraction Date	04/13/2022 16:00
Lab Sample ID	BLANK-97940	Total Amount Extracted	5.06g
Lab File ID	Q220416A_007	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_005
Collected	04/07/2022 13:52	Ending CCal File	Q220416A_017
Received	04/07/2022 13:52	Blank File	

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	DL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.09	0.02	0.02	1	375-22-4		04/16/2022 06:25
PFPeA	ND	0.09	0.02	0.02	1	2706-90-3		04/16/2022 06:25
HFPO-DA	ND	0.09	0.02	0.02	1	13252-13-6		04/16/2022 06:25
PFBS	ND	0.08	0.02	0.02	1	375-73-5		04/16/2022 06:25
PFHxA	ND	0.09	0.03	0.03	1	307-24-4		04/16/2022 06:25
4:2 FTS	ND	0.09	0.03	0.03	1	757124-72-		04/16/2022 06:25
PFPeS	ND	0.09	0.01	0.01	1	2706-91-4		04/16/2022 06:25
PFHpA	ND	0.09	0.02	0.02	1	375-85-9		04/16/2022 06:25
DONA	ND	0.09	0.03	0.03	1	919005-14-		04/16/2022 06:25
PFHxS	ND	0.09	0.02	0.02	1	355-46-4		04/16/2022 06:25
PFOA	ND	0.09	0.02	0.02	1	335-67-1		04/16/2022 06:25
6:2 FTS	ND	0.09	0.03	0.03	1	27619-97-2		04/16/2022 06:25
PFHpS	ND	0.09	0.02	0.02	1	375-92-8		04/16/2022 06:25
PFNA	ND	0.09	0.02	0.02	1	375-95-1		04/16/2022 06:25
PFOSAm	ND	0.09	0.02	0.02	1	754-91-6		04/16/2022 06:25
PFOS	ND	0.09	0.02	0.02	1	1763-23-1		04/16/2022 06:25
MeFOSA	ND	0.09	0.02	0.02	1	31506-32-8		04/16/2022 06:25
PFDA	ND	0.09	0.02	0.02	1	335-76-2		04/16/2022 06:25
EtFOSAm	ND	0.09	0.02	0.02	1	4151-50-2		04/16/2022 06:25
8:2 FTS	ND	0.09	0.02	0.02	1	39108-34-4		04/16/2022 06:25
9-CI-PF3ON	ND	0.09	0.01	0.01	1	756426-58-		04/16/2022 06:25
PFNS	ND	0.09	0.01	0.01	1	68259-12-1		04/16/2022 06:25
PFUnDA	ND	0.09	0.02	0.02	1	2058-94-8		04/16/2022 06:25
NMeFOSAA	ND	0.09	0.02	0.02	1	2355-31-9		04/16/2022 06:25
NEtFOSAA	ND	0.09	0.02	0.02	1	2991-50-6		04/16/2022 06:25
PFDS	ND	0.09	0.02	0.02	1	335-77-3		04/16/2022 06:25
PFDOA	ND	0.09	0.02	0.02	1	307-55-1		04/16/2022 06:25
MeFOSE	ND	0.09	0.02	0.02	1	24448-09-7		04/16/2022 06:25
EtFOSE	ND	0.09	0.02	0.02	1	1691-99-2		04/16/2022 06:25
11-CI-PF3OUdS	ND	0.09	0.01	0.01	1	763051-92-		04/16/2022 06:25
PFTTrDA	ND	0.09	0.02	0.02	1	72629-94-8		04/16/2022 06:25
PFDoS	ND	0.09	0.03	0.03	1	79780-39-5		04/16/2022 06:25
PFTDA	ND	0.09	0.03	0.03	1	376-06-7		04/16/2022 06:25

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKIC	Extraction Date	04/13/2022 16:00
Lab Sample ID	BLANK-97940	Total Amount Extracted	5.06g
Lab File ID	Q220416A_007	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_005
Collected	04/07/2022 13:52	Ending CCal File	Q220416A_017
Received	04/07/2022 13:52	Blank File	

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.99	0.97	98	50-150		04/16/2022 06:25
13C4 PFOA	0.99	0.89	90	50-150		04/16/2022 06:25
13C2 PFDA	0.99	1.1	112	50-150		04/16/2022 06:25
13C4 PFOS	0.95	0.91	96	50-150		04/16/2022 06:25

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.99	0.88	89	50-150		04/16/2022 06:25
13C5 PFPeA	0.99	0.88	89	50-150		04/16/2022 06:25
13C3 PFBS	0.92	0.84	91	50-150		04/16/2022 06:25
13C2 4:2FTS	0.92	0.83	90	50-150		04/16/2022 06:25
13C5 PFHxA	0.99	0.90	91	50-150		04/16/2022 06:25
13C4 PFHpA	0.99	0.86	86	50-150		04/16/2022 06:25
13C3 PFHxS	0.94	0.80	85	50-150		04/16/2022 06:25
13C2 6:2FTS	0.94	0.79	84	50-150		04/16/2022 06:25
13C8 PFOA	0.99	0.94	95	50-150		04/16/2022 06:25
13C9 PFNA	0.99	0.88	89	50-150		04/16/2022 06:25
13C8 PFOS	0.95	0.91	96	50-150		04/16/2022 06:25
13C2 8:2FTS	0.95	0.75	79	50-150		04/16/2022 06:25
13C6 PFDA	0.99	0.85	86	50-150		04/16/2022 06:25
d3-MeFOSAA	0.99	0.94	95	50-150		04/16/2022 06:25
13C8 PFOSA	0.99	0.74	74	50-150		04/16/2022 06:25
d5-EtFOSAA	0.99	0.81	82	50-150		04/16/2022 06:25
13C7 PFUdA	0.99	0.88	89	50-150		04/16/2022 06:25
13C2 PFDoA	0.99	1.1	112	50-150		04/16/2022 06:25
13C2 PFTeDA	0.99	0.96	97	50-150		04/16/2022 06:25
13C3 HFPO-DA	0.99	0.86	87	50-150		04/16/2022 06:25
d7-N-MeFOSE	0.99	0.63	64	20-150		04/16/2022 06:25
d9-N-EtFOSE	0.99	0.56	57	20-150		04/16/2022 06:25
d3-N-MeFOSA	0.99	0.48	49	20-150		04/16/2022 06:25
d5-N-EtFOSA	0.99	0.46	47	20-150		04/16/2022 06:25

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKIC	Extraction Date	04/13/2022 16:00
Lab Sample ID	BLANK-97940	Total Amount Extracted	5.06g
Lab File ID	Q220416A_007	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_005
Collected	04/07/2022 13:52	Ending CCal File	Q220416A_017
Received	04/07/2022 13:52	Blank File	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.19	6.19	71		04/16/2022 06:25
13C4 PFOA	N/A	N/A	7.41	7.42	63		04/16/2022 06:25
13C2 PFDA	N/A	N/A	8.68	8.71	42		04/16/2022 06:25
13C4 PFOS	N/A	N/A	9.23	9.25	53		04/16/2022 06:25

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.83	4.82	35		04/16/2022 06:25
13C5 PFPeA	N/A	N/A	5.58	5.57	74		04/16/2022 06:25
13C3 PFBS	N/A	N/A	6.51	6.51	17		04/16/2022 06:25
13C2 4:2FTS	N/A	N/A	5.93	5.93	15		04/16/2022 06:25
13C5 PFHxA	N/A	N/A	6.19	6.19	51		04/16/2022 06:25
13C4 PFHpA	N/A	N/A	6.80	6.80	51		04/16/2022 06:25
13C3 PFHxS	N/A	N/A	7.89	7.90	58		04/16/2022 06:25
13C2 6:2FTS	N/A	N/A	7.08	7.09	54		04/16/2022 06:25
13C8 PFOA	N/A	N/A	7.41	7.43	55		04/16/2022 06:25
13C9 PFNA	N/A	N/A	8.03	8.07	78		04/16/2022 06:25
13C8 PFOS	N/A	N/A	9.23	9.25	55		04/16/2022 06:25
13C2 8:2FTS	N/A	N/A	8.30	8.35	55		04/16/2022 06:25
13C6 PFDA	N/A	N/A	8.68	8.70	52		04/16/2022 06:25
d3-MeFOSAA	N/A	N/A	8.55	8.61	50		04/16/2022 06:25
13C8 PFOSA	N/A	N/A	11.46	11.45	43		04/16/2022 06:25
d5-EtFOSAA	N/A	N/A	8.86	8.88	42		04/16/2022 06:25
13C7 PFUdA	N/A	N/A	9.35	9.36	74		04/16/2022 06:25
13C2 PFDoA	N/A	N/A	10.01	10.04	53		04/16/2022 06:25
13C2 PFTeDA	N/A	N/A	11.33	11.36	55		04/16/2022 06:25
13C3 HFPO-DA	N/A	N/A	6.44	6.44	53		04/16/2022 06:25
d7-N-MeFOSE	N/A	N/A	13.10	13.10	18		04/16/2022 06:25
d9-N-EtFOSE	N/A	N/A	13.61	13.59	27		04/16/2022 06:25
d3-N-MeFOSA	N/A	N/A	13.32	13.31	32		04/16/2022 06:25
d5-N-EtFOSA	N/A	N/A	13.77	13.75	47		04/16/2022 06:25

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Method Blank Analysis Summary

PFAS by Isotope Dilution

Client Sample ID	BLKIC	Extraction Date	04/13/2022 16:00
Lab Sample ID	BLANK-97940	Total Amount Extracted	5.06g
Lab File ID	Q220416A_007	Ical ID	220418A01
Matrix	Soil	CCal File	Q220416A_005
Collected	04/07/2022 13:52	Ending CCal File	Q220416A_017
Received	04/07/2022 13:52	Blank File	

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	0.00	4.82	ND		04/16/2022 06:25
PFPeA	N/A	N/A	0.00	5.57	ND		04/16/2022 06:25
HFPO-DA	0.00	0.59	0.00	6.46	ND		04/16/2022 06:25
PFBS	0.00	0.41	0.00	6.52	ND		04/16/2022 06:25
PFHxA	0.00	0.08	0.00	6.20	ND		04/16/2022 06:25
4:2 FTS	0.00	1.10	0.00	5.93	ND		04/16/2022 06:25
PFPeS	0.00	0.44	0.00	7.23	ND		04/16/2022 06:25
PFHpA	0.00	0.41	0.00	6.82	ND		04/16/2022 06:25
DONA	0.00	0.48	0.00	7.04	ND		04/16/2022 06:25
PFHxS	0.00	0.31	0.00	7.91	ND		04/16/2022 06:25
PFOA	0.00	0.33	0.00	7.44	ND		04/16/2022 06:25
6:2 FTS	0.00	1.40	0.00	7.10	ND		04/16/2022 06:25
PFHpS	0.00	0.42	0.00	8.59	ND		04/16/2022 06:25
PFNA	0.00	0.33	0.00	8.08	ND		04/16/2022 06:25
PFOSAm	N/A	N/A	11.47	11.46	ND		04/16/2022 06:25
PFOS	0.00	0.24	0.00	9.26	ND		04/16/2022 06:25
MeFOSA	0.00	0.46	0.00	13.33	ND		04/16/2022 06:25
PFDA	0.00	0.23	0.00	8.72	ND		04/16/2022 06:25
EtFOSAm	0.00	0.38	0.00	13.78	ND		04/16/2022 06:25
8:2 FTS	0.00	1.20	0.00	8.33	ND		04/16/2022 06:25
9-Cl-PF3ON	0.00	0.03	0.00	9.75	ND		04/16/2022 06:25
PFNS	0.00	0.24	0.00	9.93	ND		04/16/2022 06:25
PFUnDA	0.00	0.17	0.00	9.40	ND		04/16/2022 06:25
NMeFOSAA	0.00	0.69	0.00	8.62	ND		04/16/2022 06:25
NEtFOSAA	0.00	0.61	0.00	8.87	ND		04/16/2022 06:25
PFDS	0.00	0.27	0.00	10.59	ND		04/16/2022 06:25
PFDOA	0.00	0.18	0.00	10.08	ND		04/16/2022 06:25
MeFOSE	N/A	N/A	0.00	13.09	ND		04/16/2022 06:25
EtFOSE	0.00	0.00	0.00	13.56	ND		04/16/2022 06:25
11-Cl-PF3OUdS	0.00	0.03	0.00	11.01	ND		04/16/2022 06:25
PFTTrDA	0.00	0.20	0.00	10.71	ND		04/16/2022 06:25
PFDoS	0.00	0.22	0.00	11.82	ND		04/16/2022 06:25
PFTDA	0.00	0.16	0.00	11.37	ND		04/16/2022 06:25

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-98026	Instrument ID	10LCMS01
Run File Name	Q220413A_024	Column ID	118AB10133
Analyzed	04/13/2022 19:13	Ical ID	220412B01
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	20	102	50-150	
13C4_PFOA	19	18	93	50-150	
13C2_PFDA	19	20	102	50-150	
13C4_PFOS	18	21	113	50-150	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	19	20	102	50-150	
13C5_PFPeA	19	19	98	50-150	
13C3_PFBFS	18	18	101	50-150	
13C2_4:2FTS	18	17	95	50-150	
13C5_PFHxA	19	17	90	50-150	
13C4_PFHpA	19	18	95	50-150	
13C3_PFHxS	18	19	107	50-150	
13C2_6:2FTS	18	19	103	50-150	
13C8_PFOA	19	20	102	50-150	
13C9_PFNA	19	17	88	50-150	
13C8_PFOS	18	18	99	50-150	
13C2_8:2FTS	18	17	93	50-150	
13C6_PFDA	19	21	108	50-150	
d3-MeFOSAA	19	14	75	50-150	
13C8_PFOA	19	16	85	50-150	
d5-EtFOSAA	19	13	70	50-150	
13C7_PFUdA	19	15	76	50-150	
13C2_PFDaA	19	17	88	50-150	
13C2_PFTeDA	19	14	71	50-150	
13C3_HFPO-DA	19	17	89	50-150	
d7-N-MeFOSE	19	16	84	20-150	
d9-N-EtFOSE	19	16	85	20-150	
d3-N-MeFOSA	19	13	68	20-150	
d5-N-EtFOSA	19	14	73	20-150	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-98026
 Run File Name Q220413A_024
 Analyzed 04/13/2022 19:13
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220412B01
 Level L

Native Analytes

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.8	4.4	114	50-150		375-22-4
PFPeA	3.8	4.3	112	50-150		2706-90-3
HFPO-DA	3.8	3.7	96	50-150		13252-13-6
PFBS	3.4	3.9	116	50-150		375-73-5
PFHxA	3.8	4.8	126	50-150		307-24-4
4:2 FTS	3.6	3.9	108	50-150		757124-72-4
PFPeS	3.6	3.9	107	50-150		2706-91-4
PFHpA	3.8	4.3	112	50-150		375-85-9
DONA	3.6	4.2	116	50-150		919005-14-4
PFHxS	3.5	4.0	114	50-150		355-46-4
PFOA	3.8	4.3	112	50-150		335-67-1
6:2 FTS	3.6	3.8	105	50-150		27619-97-2
PFHpS	3.6	4.5	124	50-150		375-92-8
PFNA	3.8	4.4	116	50-150		375-95-1
PFOSAm	3.8	4.5	119	50-150		754-91-6
PFOS	3.5	4.0	113	50-150		1763-23-1
MeFOSA	3.8	3.7	96	50-150		31506-32-8
PFDA	3.8	4.4	116	50-150		335-76-2
EtFOSAm	3.8	4.1	108	50-150		4151-50-2
8:2 FTS	3.7	4.0	109	50-150		39108-34-4
9-CI-PF3ON	3.6	3.5	97	50-150		756426-58-1
PFNS	3.7	3.6	97	50-150		68259-12-1
PFUnDA	3.8	4.2	111	50-150		2058-94-8
NMeFOSAA	3.8	4.3	112	50-150		2355-31-9
NEtFOSAA	3.8	4.3	113	50-150		2991-50-6
PFDS	3.7	3.4	91	50-150		335-77-3
PFDOA	3.8	3.7	97	50-150		307-55-1
MeFOSE	3.8	3.9	102	50-150		24448-09-7
EtFOSE	3.8	3.9	100	50-150		1691-99-2
11-CI-PF3OUdS	3.6	3.1	87	50-150		763051-92-9
PFTrDA	3.8	3.7	97	50-150		72629-94-8
PFDoS	3.7	3.5	95	50-150		79780-39-5
PFTDA	3.8	4.9	127	50-150		376-06-7

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-98026
 Run File Name Q220413A_024
 Analyzed 04/13/2022 19:13
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220412B01
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.18	6.17	
13C4 PFOA	N/A	N/A	7.40	7.43	
13C2 PFDA	N/A	N/A	8.68	8.67	
13C4 PFOS	N/A	N/A	9.22	9.19	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.81	4.79	
13C5 PFPeA	N/A	N/A	5.56	5.54	
13C3 PFBS	N/A	N/A	6.49	6.45	
13C2 4:2FTS	N/A	N/A	5.92	5.89	
13C5 PFHxA	N/A	N/A	6.18	6.15	
13C4 PFHpA	N/A	N/A	6.79	6.80	
13C3 PFHxS	N/A	N/A	7.88	7.89	
13C2 6:2FTS	N/A	N/A	7.07	7.09	
13C8 PFOA	N/A	N/A	7.40	7.43	
13C9 PFNA	N/A	N/A	8.03	8.07	
13C8 PFOS	N/A	N/A	9.22	9.25	
13C2 8:2FTS	N/A	N/A	8.30	8.35	
13C6 PFDA	N/A	N/A	8.68	8.73	
d3-MeFOSAA	N/A	N/A	8.55	8.61	
13C8 PFOSA	N/A	N/A	11.44	11.40	
d5-EtFOSAA	N/A	N/A	8.86	8.92	
13C7 PFUdA	N/A	N/A	9.34	9.39	
13C2 PFDoA	N/A	N/A	10.01	10.07	
13C2 PFTeDA	N/A	N/A	11.33	11.39	
13C3 HFPO-DA	N/A	N/A	6.43	6.43	
d7-N-MeFOSE	N/A	N/A	13.10	13.06	
d9-N-EtFOSE	N/A	N/A	13.59	13.54	
d3-N-MeFOSA	N/A	N/A	13.31	13.26	
d5-N-EtFOSA	N/A	N/A	13.75	13.69	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-98026
 Run File Name Q220413A_024
 Analyzed 04/13/2022 19:13
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220412B01
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.82	4.79	
PFPeA	N/A	N/A	5.57	5.55	
HFPO-DA	0.45	0.47	6.44	6.45	
PFBS	0.34	0.35	6.50	6.48	
PFHxA	0.08	0.08	6.19	6.18	
4:2 FTS	1.00	0.99	5.92	5.91	
PFPeS	0.42	0.43	7.21	7.21	
PFHpA	0.44	0.46	6.80	6.81	
DONA	0.47	0.55	7.03	7.04	
PFHxS	0.28	0.35	7.89	7.90	
PFOA	0.29	0.33	7.41	7.44	
6:2 FTS	1.40	1.50	7.08	7.10	
PFHpS	0.34	0.41	8.57	8.59	
PFNA	0.33	0.26	8.04	8.08	
PFOSAm	N/A	N/A	11.45	11.41	
PFOS	0.24	0.24	9.23	9.26	
MeFOSA	0.52	0.52	13.33	13.29	
PFDA	0.13	0.19	8.69	8.74	
EtFOSAm	0.42	0.42	13.78	13.72	
8:2 FTS	1.40	1.40	8.31	8.35	
9-Cl-PF3ON	0.03	0.04	9.72	9.75	
PFNS	0.26	0.24	9.89	9.93	
PFUnDA	0.16	0.18	9.35	9.40	
NMeFOSAA	0.66	0.62	8.57	8.62	
NEtFOSAA	0.51	0.43	8.87	8.87	
PFDS	0.27	0.28	10.55	10.59	
PFDOA	0.23	0.20	10.01	10.08	
MeFOSE	N/A	N/A	13.14	13.09	
EtFOSE	0.00	0.00	13.63	13.56	
11-Cl-PF3OUdS	0.02	0.03	11.02	11.01	
PFTrDA	0.24	0.19	10.68	10.71	
PFDoS	0.24	0.23	11.78	11.75	
PFTDA	0.15	0.18	11.34	11.34	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-97941	Instrument ID	10LCMS01
Run File Name	Q220418C_003	Column ID	118AB10133
Analyzed	04/18/2022 16:33	Ical ID	220418B01
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	0.99	0.97	97	50-150	
13C4_PFOA	0.99	0.94	94	50-150	
13C2_PFDA	0.99	0.84	84	50-150	
13C4_PFOS	0.95	0.99	104	50-150	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	0.99	0.86	86	50-150	
13C5_PFPeA	0.99	0.82	82	50-150	
13C3_PFBFS	0.92	0.91	98	50-150	
13C2_4:2FTS	0.93	0.76	82	50-150	
13C5_PFHxA	0.99	0.87	88	50-150	
13C4_PFHpA	0.99	0.92	92	50-150	
13C3_PFHxS	0.94	0.81	86	50-150	
13C2_6:2FTS	0.94	0.77	82	50-150	
13C8_PFOA	0.99	0.76	77	50-150	
13C9_PFNA	0.99	0.83	84	50-150	
13C8_PFOS	0.95	0.80	84	50-150	
13C2_8:2FTS	0.95	0.81	85	50-150	
13C6_PFDA	0.99	0.83	83	50-150	
d3-MeFOSAA	0.99	0.95	96	50-150	
13C8_PFOSA	0.99	0.45	46	50-150	R
d5-EtFOSAA	0.99	0.90	90	50-150	
13C7_PFUdA	0.99	0.86	87	50-150	
13C2_PFDaA	0.99	0.90	91	50-150	
13C2_PFTeDA	0.99	0.69	69	50-150	
13C3_HFPO-DA	0.99	0.81	81	50-150	
d7-N-MeFOSE	0.99	0.28	28	20-150	
d9-N-EtFOSE	0.99	0.29	29	20-150	
d3-N-MeFOSA	0.99	0.13	13	20-150	R
d5-N-EtFOSA	0.99	0.13	13	20-150	R

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-97941
 Run File Name Q220418C_003
 Analyzed 04/18/2022 16:33
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220418B01
 Level L

Native Analytes

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	0.20	0.22	108	50-150		375-22-4
PFPeA	0.20	0.22	112	50-150		2706-90-3
HFPO-DA	0.20	0.20	98	50-150		13252-13-6
PFBS	0.18	0.19	108	50-150		375-73-5
PFHxA	0.20	0.24	121	50-150		307-24-4
4:2 FTS	0.19	0.21	112	50-150		757124-72-4
PFPeS	0.19	0.21	110	50-150		2706-91-4
PFHpA	0.20	0.22	108	50-150		375-85-9
DONA	0.19	0.22	115	50-150		919005-14-4
PFHxS	0.18	0.19	104	50-150		355-46-4
PFOA	0.20	0.24	119	50-150		335-67-1
6:2 FTS	0.19	0.21	111	50-150		27619-97-2
PFHpS	0.19	0.24	128	50-150		375-92-8
PFNA	0.20	0.20	103	50-150		375-95-1
PFOSAm	0.20	0.22	111	50-150		754-91-6
PFOS	0.18	0.20	108	50-150		1763-23-1
MeFOSA	0.20	0.18	92	50-150		31506-32-8
PFDA	0.20	0.24	120	50-150		335-76-2
EtFOSAm	0.20	0.19	97	50-150		4151-50-2
8:2 FTS	0.19	0.22	113	50-150		39108-34-4
9-CI-PF3ON	0.19	0.20	105	50-150		756426-58-1
PFNS	0.19	0.20	106	50-150		68259-12-1
PFUnDA	0.20	0.18	92	50-150		2058-94-8
NMeFOSAA	0.20	0.17	85	50-150		2355-31-9
NEtFOSAA	0.20	0.20	101	50-150		2991-50-6
PFDS	0.19	0.20	106	50-150		335-77-3
PFDOA	0.20	0.22	112	50-150		307-55-1
MeFOSE	0.20	0.22	111	50-150		24448-09-7
EtFOSE	0.20	0.22	112	50-150		1691-99-2
11-CI-PF3OUdS	0.19	0.19	101	50-150		763051-92-9
PFTrDA	0.20	0.23	116	50-150		72629-94-8
PFDoS	0.19	0.19	101	50-150		79780-39-5
PFTDA	0.20	0.23	114	50-150		376-06-7

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-97941
 Run File Name Q220418C_003
 Analyzed 04/18/2022 16:33
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220418B01
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.19	6.19	
13C4 PFOA	N/A	N/A	7.42	7.42	
13C2 PFDA	N/A	N/A	8.70	8.71	
13C4 PFOS	N/A	N/A	9.24	9.25	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.82	4.82	
13C5 PFPeA	N/A	N/A	5.58	5.57	
13C3 PFBS	N/A	N/A	6.51	6.51	
13C2 4:2FTS	N/A	N/A	5.93	5.93	
13C5 PFHxA	N/A	N/A	6.19	6.19	
13C4 PFHpA	N/A	N/A	6.81	6.80	
13C3 PFHxS	N/A	N/A	7.90	7.90	
13C2 6:2FTS	N/A	N/A	7.09	7.09	
13C8 PFOA	N/A	N/A	7.42	7.43	
13C9 PFNA	N/A	N/A	8.05	8.07	
13C8 PFOS	N/A	N/A	9.24	9.25	
13C2 8:2FTS	N/A	N/A	8.32	8.35	
13C6 PFDA	N/A	N/A	8.70	8.70	
d3-MeFOSAA	N/A	N/A	8.57	8.61	
13C8 PFOSA	N/A	N/A	11.45	11.45	R
d5-EtFOSAA	N/A	N/A	8.88	8.88	
13C7 PFUdA	N/A	N/A	9.36	9.36	
13C2 PFDoA	N/A	N/A	10.04	10.04	
13C2 PFTeDA	N/A	N/A	11.36	11.36	
13C3 HFPO-DA	N/A	N/A	6.45	6.44	
d7-N-MeFOSE	N/A	N/A	13.10	13.10	
d9-N-EtFOSE	N/A	N/A	13.60	13.59	
d3-N-MeFOSA	N/A	N/A	13.31	13.31	R
d5-N-EtFOSA	N/A	N/A	13.76	13.75	R

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-97941
 Run File Name Q220418C_003
 Analyzed 04/18/2022 16:33
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220418B01
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.83	4.82	
PFPeA	N/A	N/A	5.58	5.57	
HFPO-DA	0.55	0.57	6.47	6.46	
PFBS	0.29	0.35	6.52	6.52	
PFHxA	0.09	0.08	6.20	6.20	
4:2 FTS	1.00	0.95	5.94	5.93	
PFPeS	0.44	0.47	7.22	7.23	
PFHpA	0.45	0.41	6.81	6.82	
DONA	0.53	0.54	7.04	7.04	
PFHxS	0.34	0.37	7.91	7.91	
PFOA	0.32	0.34	7.43	7.44	
6:2 FTS	1.20	1.10	7.09	7.10	
PFHpS	0.32	0.42	8.58	8.59	
PFNA	0.28	0.27	8.06	8.08	
PFOSAm	N/A	N/A	11.46	11.46	
PFOS	0.22	0.25	9.25	9.26	
MeFOSA	0.53	0.49	13.34	13.33	
PFDA	0.20	0.19	8.72	8.72	
EtFOSAm	0.48	0.41	13.79	13.78	
8:2 FTS	1.30	1.10	8.33	8.33	
9-Cl-PF3ON	0.03	0.03	9.74	9.75	
PFNS	0.23	0.21	9.92	9.93	
PFUnDA	0.17	0.20	9.37	9.40	
NMeFOSAA	0.71	0.82	8.59	8.62	
NEtFOSAA	0.43	0.40	8.89	8.87	
PFDS	0.25	0.25	10.58	10.59	
PFDOA	0.19	0.16	10.04	10.08	
MeFOSE	N/A	N/A	13.15	13.09	
EtFOSE	0.00	0.00	13.64	13.56	
11-Cl-PF3OUdS	0.03	0.02	11.05	11.01	
PFTrDA	0.22	0.19	10.71	10.71	
PFDoS	0.23	0.24	11.81	11.82	
PFTDA	0.18	0.21	11.37	11.37	

REPORT OF LABORATORY ANALYSIS

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October 06, 2022

Ray Tierney
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

Dear Ray Tierney:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Green Bay

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

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jackie Rennebohm, SCS ENGINEERS



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: DOA HILL FARMS HEATING PLANT

Pace Project No.: 40252310

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40252310001	GP-14(1')	Solid	09/28/22 11:00	09/29/22 08:25
40252310002	GP-12(3')	Solid	09/28/22 11:35	09/29/22 08:25
40252310003	GP-15(3')	Solid	09/28/22 12:00	09/29/22 08:25

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SAMPLE ANALYTE COUNT

Project: DOA HILL FARMS HEATING PLANT

Pace Project No.: 40252310

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40252310001	GP-14(1')	EPA 8270E by SIM	RJN	20
		ASTM D2974-87	NMK	1
40252310002	GP-12(3')	EPA 8270E by SIM	RJN	20
		ASTM D2974-87	NMK	1
40252310003	GP-15(3')	EPA 8270E by SIM	RJN	20
		ASTM D2974-87	NMK	1

PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40252310001	GP-14(1')					
EPA 8270E by SIM	Benzo(b)fluoranthene	4.2J	ug/kg	18.0	10/05/22 14:45	
EPA 8270E by SIM	Chrysene	6.1J	ug/kg	18.0	10/05/22 14:45	
EPA 8270E by SIM	Fluoranthene	4.9J	ug/kg	18.0	10/05/22 14:45	
EPA 8270E by SIM	Phenanthrene	3.5J	ug/kg	18.0	10/05/22 14:45	
EPA 8270E by SIM	Pyrene	5.1J	ug/kg	18.0	10/05/22 14:45	
ASTM D2974-87	Percent Moisture	7.1	%	0.10	10/03/22 16:02	
40252310002	GP-12(3')					
EPA 8270E by SIM	Benzo(b)fluoranthene	6.4J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Benzo(g,h,i)perylene	3.4J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Benzo(k)fluoranthene	3.5J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Chrysene	11.6J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Fluoranthene	11.2J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Naphthalene	2.4J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Phenanthrene	5.3J	ug/kg	18.4	10/05/22 08:18	
EPA 8270E by SIM	Pyrene	9.5J	ug/kg	18.4	10/05/22 08:18	
ASTM D2974-87	Percent Moisture	9.2	%	0.10	10/03/22 16:02	
40252310003	GP-15(3')					
EPA 8270E by SIM	Phenanthrene	11.1J	ug/kg	18.4	10/05/22 08:53	
ASTM D2974-87	Percent Moisture	9.3	%	0.10	10/03/22 16:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

Sample: GP-14(1') **Lab ID: 40252310001** Collected: 09/28/22 11:00 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<2.3	ug/kg	18.0	2.3	1	10/03/22 09:55	10/05/22 14:45	83-32-9	
Acenaphthylene	<2.3	ug/kg	18.0	2.3	1	10/03/22 09:55	10/05/22 14:45	208-96-8	
Anthracene	<2.2	ug/kg	18.0	2.2	1	10/03/22 09:55	10/05/22 14:45	120-12-7	
Benzo(a)anthracene	<2.3	ug/kg	18.0	2.3	1	10/03/22 09:55	10/05/22 14:45	56-55-3	
Benzo(a)pyrene	<2.0	ug/kg	18.0	2.0	1	10/03/22 09:55	10/05/22 14:45	50-32-8	
Benzo(b)fluoranthene	4.2J	ug/kg	18.0	2.5	1	10/03/22 09:55	10/05/22 14:45	205-99-2	
Benzo(g,h,i)perylene	<3.2	ug/kg	18.0	3.2	1	10/03/22 09:55	10/05/22 14:45	191-24-2	
Benzo(k)fluoranthene	<2.3	ug/kg	18.0	2.3	1	10/03/22 09:55	10/05/22 14:45	207-08-9	
Chrysene	6.1J	ug/kg	18.0	3.4	1	10/03/22 09:55	10/05/22 14:45	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	18.0	2.5	1	10/03/22 09:55	10/05/22 14:45	53-70-3	
Fluoranthene	4.9J	ug/kg	18.0	2.1	1	10/03/22 09:55	10/05/22 14:45	206-44-0	
Fluorene	<2.2	ug/kg	18.0	2.2	1	10/03/22 09:55	10/05/22 14:45	86-73-7	
Indeno(1,2,3-cd)pyrene	<3.8	ug/kg	18.0	3.8	1	10/03/22 09:55	10/05/22 14:45	193-39-5	
1-Methylnaphthalene	<2.6	ug/kg	18.0	2.6	1	10/03/22 09:55	10/05/22 14:45	90-12-0	
2-Methylnaphthalene	<2.6	ug/kg	18.0	2.6	1	10/03/22 09:55	10/05/22 14:45	91-57-6	
Naphthalene	<1.8	ug/kg	18.0	1.8	1	10/03/22 09:55	10/05/22 14:45	91-20-3	
Phenanthrene	3.5J	ug/kg	18.0	2.1	1	10/03/22 09:55	10/05/22 14:45	85-01-8	
Pyrene	5.1J	ug/kg	18.0	2.6	1	10/03/22 09:55	10/05/22 14:45	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	41-98		1	10/03/22 09:55	10/05/22 14:45	321-60-8	
Terphenyl-d14 (S)	83	%	37-106		1	10/03/22 09:55	10/05/22 14:45	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	7.1	%	0.10	0.10	1		10/03/22 16:02		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

Sample: GP-12(3') **Lab ID: 40252310002** Collected: 09/28/22 11:35 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<2.4	ug/kg	18.4	2.4	1	10/03/22 09:55	10/05/22 08:18	83-32-9	
Acenaphthylene	<2.3	ug/kg	18.4	2.3	1	10/03/22 09:55	10/05/22 08:18	208-96-8	
Anthracene	<2.3	ug/kg	18.4	2.3	1	10/03/22 09:55	10/05/22 08:18	120-12-7	
Benzo(a)anthracene	<2.4	ug/kg	18.4	2.4	1	10/03/22 09:55	10/05/22 08:18	56-55-3	
Benzo(a)pyrene	<2.1	ug/kg	18.4	2.1	1	10/03/22 09:55	10/05/22 08:18	50-32-8	
Benzo(b)fluoranthene	6.4J	ug/kg	18.4	2.6	1	10/03/22 09:55	10/05/22 08:18	205-99-2	
Benzo(g,h,i)perylene	3.4J	ug/kg	18.4	3.2	1	10/03/22 09:55	10/05/22 08:18	191-24-2	
Benzo(k)fluoranthene	3.5J	ug/kg	18.4	2.3	1	10/03/22 09:55	10/05/22 08:18	207-08-9	
Chrysene	11.6J	ug/kg	18.4	3.5	1	10/03/22 09:55	10/05/22 08:18	218-01-9	
Dibenz(a,h)anthracene	<2.5	ug/kg	18.4	2.5	1	10/03/22 09:55	10/05/22 08:18	53-70-3	
Fluoranthene	11.2J	ug/kg	18.4	2.2	1	10/03/22 09:55	10/05/22 08:18	206-44-0	
Fluorene	<2.2	ug/kg	18.4	2.2	1	10/03/22 09:55	10/05/22 08:18	86-73-7	
Indeno(1,2,3-cd)pyrene	<3.8	ug/kg	18.4	3.8	1	10/03/22 09:55	10/05/22 08:18	193-39-5	
1-Methylnaphthalene	<2.7	ug/kg	18.4	2.7	1	10/03/22 09:55	10/05/22 08:18	90-12-0	
2-Methylnaphthalene	<2.7	ug/kg	18.4	2.7	1	10/03/22 09:55	10/05/22 08:18	91-57-6	
Naphthalene	2.4J	ug/kg	18.4	1.8	1	10/03/22 09:55	10/05/22 08:18	91-20-3	
Phenanthrene	5.3J	ug/kg	18.4	2.1	1	10/03/22 09:55	10/05/22 08:18	85-01-8	
Pyrene	9.5J	ug/kg	18.4	2.7	1	10/03/22 09:55	10/05/22 08:18	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	41-98		1	10/03/22 09:55	10/05/22 08:18	321-60-8	
Terphenyl-d14 (S)	76	%	37-106		1	10/03/22 09:55	10/05/22 08:18	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	9.2	%	0.10	0.10	1		10/03/22 16:02		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

Sample: GP-15(3') **Lab ID: 40252310003** Collected: 09/28/22 12:00 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<2.4	ug/kg	18.4	2.4	1	10/03/22 09:55	10/05/22 08:53	83-32-9	
Acenaphthylene	<2.3	ug/kg	18.4	2.3	1	10/03/22 09:55	10/05/22 08:53	208-96-8	
Anthracene	<2.3	ug/kg	18.4	2.3	1	10/03/22 09:55	10/05/22 08:53	120-12-7	
Benzo(a)anthracene	<2.4	ug/kg	18.4	2.4	1	10/03/22 09:55	10/05/22 08:53	56-55-3	
Benzo(a)pyrene	<2.1	ug/kg	18.4	2.1	1	10/03/22 09:55	10/05/22 08:53	50-32-8	
Benzo(b)fluoranthene	<2.6	ug/kg	18.4	2.6	1	10/03/22 09:55	10/05/22 08:53	205-99-2	
Benzo(g,h,i)perylene	<3.2	ug/kg	18.4	3.2	1	10/03/22 09:55	10/05/22 08:53	191-24-2	
Benzo(k)fluoranthene	<2.4	ug/kg	18.4	2.4	1	10/03/22 09:55	10/05/22 08:53	207-08-9	
Chrysene	<3.5	ug/kg	18.4	3.5	1	10/03/22 09:55	10/05/22 08:53	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	18.4	2.6	1	10/03/22 09:55	10/05/22 08:53	53-70-3	
Fluoranthene	<2.2	ug/kg	18.4	2.2	1	10/03/22 09:55	10/05/22 08:53	206-44-0	
Fluorene	<2.2	ug/kg	18.4	2.2	1	10/03/22 09:55	10/05/22 08:53	86-73-7	
Indeno(1,2,3-cd)pyrene	<3.8	ug/kg	18.4	3.8	1	10/03/22 09:55	10/05/22 08:53	193-39-5	
1-Methylnaphthalene	<2.7	ug/kg	18.4	2.7	1	10/03/22 09:55	10/05/22 08:53	90-12-0	
2-Methylnaphthalene	<2.7	ug/kg	18.4	2.7	1	10/03/22 09:55	10/05/22 08:53	91-57-6	
Naphthalene	<1.8	ug/kg	18.4	1.8	1	10/03/22 09:55	10/05/22 08:53	91-20-3	
Phenanthrene	11.1J	ug/kg	18.4	2.1	1	10/03/22 09:55	10/05/22 08:53	85-01-8	
Pyrene	<2.7	ug/kg	18.4	2.7	1	10/03/22 09:55	10/05/22 08:53	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	41-98		1	10/03/22 09:55	10/05/22 08:53	321-60-8	
Terphenyl-d14 (S)	77	%	37-106		1	10/03/22 09:55	10/05/22 08:53	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	9.3	%	0.10	0.10	1		10/03/22 16:02		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

QC Batch: 427513 Analysis Method: EPA 8270E by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270E/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40252310001, 40252310002, 40252310003

METHOD BLANK: 2462399 Matrix: Solid
Associated Lab Samples: 40252310001, 40252310002, 40252310003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	10/05/22 06:52	
2-Methylnaphthalene	ug/kg	<2.4	16.7	10/05/22 06:52	
Acenaphthene	ug/kg	<2.2	16.7	10/05/22 06:52	
Acenaphthylene	ug/kg	<2.1	16.7	10/05/22 06:52	
Anthracene	ug/kg	<2.1	16.7	10/05/22 06:52	
Benzo(a)anthracene	ug/kg	<2.2	16.7	10/05/22 06:52	
Benzo(a)pyrene	ug/kg	<1.9	16.7	10/05/22 06:52	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	10/05/22 06:52	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	10/05/22 06:52	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	10/05/22 06:52	
Chrysene	ug/kg	<3.2	16.7	10/05/22 06:52	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	10/05/22 06:52	
Fluoranthene	ug/kg	<2.0	16.7	10/05/22 06:52	
Fluorene	ug/kg	<2.0	16.7	10/05/22 06:52	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	10/05/22 06:52	
Naphthalene	ug/kg	<1.6	16.7	10/05/22 06:52	
Phenanthrene	ug/kg	<1.9	16.7	10/05/22 06:52	
Pyrene	ug/kg	<2.5	16.7	10/05/22 06:52	
2-Fluorobiphenyl (S)	%	72	41-98	10/05/22 06:52	
Terphenyl-d14 (S)	%	91	37-106	10/05/22 06:52	

LABORATORY CONTROL SAMPLE: 2462400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	277	83	64-110	
2-Methylnaphthalene	ug/kg	333	265	80	60-110	
Acenaphthene	ug/kg	333	290	87	69-120	
Acenaphthylene	ug/kg	333	269	81	63-120	
Anthracene	ug/kg	333	319	96	71-112	
Benzo(a)anthracene	ug/kg	333	260	78	62-120	
Benzo(a)pyrene	ug/kg	333	332	100	71-111	
Benzo(b)fluoranthene	ug/kg	333	280	84	59-112	
Benzo(g,h,i)perylene	ug/kg	333	320	96	64-115	
Benzo(k)fluoranthene	ug/kg	333	343	103	72-117	
Chrysene	ug/kg	333	384	115	75-120	
Dibenz(a,h)anthracene	ug/kg	333	312	94	67-114	
Fluoranthene	ug/kg	333	298	89	70-110	
Fluorene	ug/kg	333	286	86	64-104	
Indeno(1,2,3-cd)pyrene	ug/kg	333	307	92	71-114	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: DOA HILL FARMS HEATING PLANT
Pace Project No.: 40252310

LABORATORY CONTROL SAMPLE: 2462400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	333	265	79	62-120	
Phenanthrene	ug/kg	333	260	78	59-106	
Pyrene	ug/kg	333	294	88	69-120	
2-Fluorobiphenyl (S)	%			72	41-98	
Terphenyl-d14 (S)	%			89	37-106	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2462401 2462402

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40252362001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1-Methylnaphthalene	ug/kg	<3.1	420	418	282	225	67	54	51-110	22	34	
2-Methylnaphthalene	ug/kg	<3.1	420	418	264	190	63	45	45-110	33	29	R1
Acenaphthene	ug/kg	<0.0027 mg/kg	420	418	273	227	65	54	52-120	18	26	
Acenaphthylene	ug/kg	<0.0026 mg/kg	420	418	270	206	64	49	46-120	27	22	R1
Anthracene	ug/kg	<0.0026 mg/kg	420	418	331	235	79	56	50-112	34	25	R1
Benzo(a)anthracene	ug/kg	<0.0027 mg/kg	420	418	252	179	60	43	41-120	34	37	
Benzo(a)pyrene	ug/kg	<0.0024 mg/kg	420	418	338	241	81	57	44-114	34	33	R1
Benzo(b)fluoranthene	ug/kg	<0.0029 mg/kg	420	418	300	207	72	49	41-112	37	43	
Benzo(g,h,i)perylene	ug/kg	<0.0037 mg/kg	420	418	304	224	72	53	40-115	30	36	
Benzo(k)fluoranthene	ug/kg	<0.0027 mg/kg	420	418	338	241	81	57	56-117	34	30	R1
Chrysene	ug/kg	<0.0040 mg/kg	420	418	410	289	98	69	45-120	35	28	R1
Dibenz(a,h)anthracene	ug/kg	<0.0029 mg/kg	420	418	315	219	75	52	44-114	36	33	R1
Fluoranthene	ug/kg	<0.0025 mg/kg	420	418	304	219	72	52	55-110	33	43	M1
Fluorene	ug/kg	<0.0025 mg/kg	420	418	276	220	66	52	47-104	23	27	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.0044 mg/kg	420	418	309	217	74	52	45-114	35	33	R1
Naphthalene	ug/kg	<0.0020 mg/kg	420	418	262	191	62	45	47-120	31	26	M1,R1
Phenanthrene	ug/kg	<0.0024 mg/kg	420	418	260	191	62	45	38-106	31	24	R1
Pyrene	ug/kg	<0.0031 mg/kg	420	418	299	214	71	51	51-120	33	41	
2-Fluorobiphenyl (S)	%							56	45	41-98		
Terphenyl-d14 (S)	%							70	51	37-106		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: DOA HILL FARMS HEATING PLANT

Pace Project No.: 40252310

QC Batch: 427615

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40252310001, 40252310002, 40252310003

SAMPLE DUPLICATE: 2462665

Parameter	Units	40252030017 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.4	17.3	1	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: DOA HILL FARMS HEATING PLANT

Pace Project No.: 40252310

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DOA HILL FARMS HEATING PLANT

Pace Project No.: 40252310

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40252310001	GP-14(1')	EPA 3546	427513	EPA 8270E by SIM	427604
40252310002	GP-12(3')	EPA 3546	427513	EPA 8270E by SIM	427604
40252310003	GP-15(3')	EPA 3546	427513	EPA 8270E by SIM	427604
40252310001	GP-14(1')	ASTM D2974-87	427615		
40252310002	GP-12(3')	ASTM D2974-87	427615		
40252310003	GP-15(3')	ASTM D2974-87	427615		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

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

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

40252310

ALL SHADED AREAS are for LAB USE ONLY

Company: **SCS Engineers**
 Address: **2830 Dairy Dr. Madison, WI**
 Report To: **Ray Tierney**
 Copy To: **Sackie Bennebohm**
 Customer Project Name/Number: **DOA Hill Gas Heating Plant**
 State: **WI** County/City: **Dane** Time Zone Collected: [] PT [] MT [] CT [] ET
 Phone: **25221145-60** Site/Facility ID #: _____ Compliance Monitoring? [] Yes [] No
 Email: _____
 Collected By (print): **J. Bennebohm** Purchase Order #: _____ Quote #: _____ DW PWS ID #: _____ DW Location Code: _____
 Collected By (signature): _____ Turnaround Date Required: _____ Immediately Packed on Ice: [] Yes [] No
 Sample Disposal: [] Dispose as appropriate [] Return Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [] Yes [] No
 [] Archive: _____ Analysis: _____
 [] Hold: _____

Container Preservative Type ** Lab Project Manager: _____

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

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

Handwritten notes in table: **PAH** (vertical), **001**, **002**, **003**, **SEE SCUR**, **DP 9/29/22**

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
GP-14 (1')	S		9-28	1100				X
GP-12 (3')	↓		↓	1135				X
GP-15 (3')	↓		↓	1200				X

Customer Remarks / Special Conditions / Possible Hazards: _____
 Type of Ice Used: Wet Blue Dry None
 Packing Material Used: _____
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
 Lab Tracking #: **2784651**
 Samples received via: FEDEX UPS Client Courier Pace Courier

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

Relinquished by/Company: (Signature) **[Signature] / SCS**
 Relinquished by/Company: (Signature) **CS Logistics**
 Relinquished by/Company: (Signature) _____

Date/Time: **9/28/2022 1400**
 Date/Time: **9/29/22 0825**
 Received by/Company: (Signature) **[Signature]**
 Received by/Company: (Signature) _____

Date/Time: _____
 Date/Time: **9/29/22 0825**
 Date/Time: _____

Trip Blank Received: Y N NA
 HCL MeOH TSP Other
 Non Conformance(s): YES / NO
 Page: **Page 14 of 16**
 of: _____

Effective Date: 8/16/2022

Client Name: SCS Engineers

Sample Preservation Receipt Form
Project # 4052310

All containers needing preservation have been checked and noted below:
Lab Lot# of pH paper:

Yes No N/A
Lab Std #ID of preservation (if pH adjusted):

Initial when completed:
Date/Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General		VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)						
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WG9U	WPFU								SP5T	ZPLC	GN 1	GN 2		
001																																				2.5 / 5
002																																				2.5 / 5
003																																				2.5 / 5
004																																				2.5 / 5
005																																				2.5 / 5
006																																				2.5 / 5
007																																				2.5 / 5
008																																				2.5 / 5
009																																				2.5 / 5
010																																				2.5 / 5
011																																				2.5 / 5
012																																				2.5 / 5
013																																				2.5 / 5
014																																				2.5 / 5
015																																				2.5 / 5
016																																				2.5 / 5
017																																				2.5 / 5
018																																				2.5 / 5
019																																				2.5 / 5
020																																				2.5 / 5

9/29/22

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

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JG9U	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WG9U	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: SCS Engineers

WO#: **40252310**

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



Tracking #: _____

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

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used SR - 118 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 1 / Corr: 1.5

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

Person examining contents:
 Date: 9/29/22 / Initials: TP
 Labeled By Initials: NK

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>Pg #</u> <u>TP 9/29/22</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- DI VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Correct Type: <u>Green Bay</u> , Pace IR, Non-Pace		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

November 22, 2022

Ray Tierney
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: DOA HILL FARMS HEATING
Pace Project No.: 40252309

Dear Ray Tierney:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

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

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Jackie Rennebohm, SCS ENGINEERS



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: DOA HILL FARMS HEATING
Pace Project No.: 40252309

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40252309001	EQUIPMENT BLANK	Water	09/28/22 09:30	09/29/22 08:25
40252309002	GP-9(9')	Solid	09/28/22 09:50	09/29/22 08:25
40252309003	GP-10(10')	Solid	09/28/22 10:10	09/29/22 08:25
40252309004	GP-11(11')	Solid	09/28/22 10:25	09/29/22 08:25
40252309005	GP-12(3')	Solid	09/28/22 11:35	09/29/22 08:25
40252309006	GP-13(14.5')	Solid	09/28/22 10:45	09/29/22 08:25
40252309007	GP-14 (14.5')	Solid	09/28/22 11:05	09/29/22 08:25
40252309008	GP-15 (3')	Solid	09/28/22 12:00	09/29/22 08:25
40252309009	HA-1 OUTFALL (1')	Solid	09/28/22 12:30	09/29/22 16:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: DOA HILL FARMS HEATING
Pace Project No.: 40252309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40252309002	GP-9(9')	ASTM D2974	JDL	1	PASI-M
40252309003	GP-10(10')	ASTM D2974	JDL	1	PASI-M
40252309004	GP-11(11')	ASTM D2974	JDL	1	PASI-M
40252309005	GP-12(3')	ASTM D2974	JDL	1	PASI-M
40252309006	GP-13(14.5')	ASTM D2974	JDL	1	PASI-M
40252309007	GP-14 (14.5)	ASTM D2974	JDL	1	PASI-M
40252309008	GP-15 (3')	ASTM D2974	JDL	1	PASI-M
40252309009	HA-1 OUTFALL (1')	ASTM D2974	JDL	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: DOA HILL FARMS HEATING
Pace Project No.: 40252309

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40252309002	GP-9(9')					
ASTM D2974	Percent Moisture	22.0	%	0.10	10/17/22 10:49	N2
40252309003	GP-10(10')					
ASTM D2974	Percent Moisture	9.8	%	0.10	10/17/22 10:49	N2
40252309004	GP-11(11')					
ASTM D2974	Percent Moisture	23.6	%	0.10	10/17/22 10:49	N2
40252309005	GP-12(3')					
ASTM D2974	Percent Moisture	13.1	%	0.10	10/17/22 10:50	N2
40252309006	GP-13(14.5')					
ASTM D2974	Percent Moisture	6.7	%	0.10	10/17/22 10:50	N2
40252309007	GP-14 (14.5')					
ASTM D2974	Percent Moisture	6.7	%	0.10	10/17/22 10:50	N2
40252309008	GP-15 (3')					
ASTM D2974	Percent Moisture	16.7	%	0.10	10/17/22 10:50	N2
40252309009	HA-1 OUTFALL (1')					
ASTM D2974	Percent Moisture	14.9	%	0.10	10/17/22 10:50	N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-9(9') **Lab ID:** 40252309002 Collected: 09/28/22 09:50 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	22.0	%	0.10	0.10	1		10/17/22 10:49		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-10(10') **Lab ID: 40252309003** Collected: 09/28/22 10:10 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	9.8	%	0.10	0.10	1		10/17/22 10:49		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-11(11') **Lab ID: 40252309004** Collected: 09/28/22 10:25 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	23.6	%	0.10	0.10	1		10/17/22 10:49		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-12(3') **Lab ID: 40252309005** Collected: 09/28/22 11:35 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	13.1	%	0.10	0.10	1		10/17/22 10:50		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-13(14.5') **Lab ID: 40252309006** Collected: 09/28/22 10:45 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	6.7	%	0.10	0.10	1		10/17/22 10:50		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-14 (14.5) **Lab ID: 40252309007** Collected: 09/28/22 11:05 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	6.7	%	0.10	0.10	1		10/17/22 10:50		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: GP-15 (3') **Lab ID: 40252309008** Collected: 09/28/22 12:00 Received: 09/29/22 08:25 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	16.7	%	0.10	0.10	1		10/17/22 10:50		N2

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ANALYTICAL RESULTS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

Sample: HA-1 OUTFALL (1') **Lab ID:** 40252309009 Collected: 09/28/22 12:30 Received: 09/29/22 16:40 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis								
Percent Moisture	14.9	%	0.10	0.10	1		10/17/22 10:50		N2

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: DOA HILL FARMS HEATING
Pace Project No.: 40252309

QC Batch:	847218	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight / %M by ASTM D2974
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 40252309002, 40252309003, 40252309004, 40252309005, 40252309006, 40252309007, 40252309008, 40252309009

SAMPLE DUPLICATE: 4482875

Parameter	Units	10629815001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.4	8.0	4	30	N2

SAMPLE DUPLICATE: 4482876

Parameter	Units	10629411008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.4	16.9	3	30	N2

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: DOA HILL FARMS HEATING

Pace Project No.: 40252309

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DOA HILL FARMS HEATING
Pace Project No.: 40252309

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40252309002	GP-9(9')	ASTM D2974	847218		
40252309003	GP-10(10')	ASTM D2974	847218		
40252309004	GP-11(11')	ASTM D2974	847218		
40252309005	GP-12(3')	ASTM D2974	847218		
40252309006	GP-13(14.5')	ASTM D2974	847218		
40252309007	GP-14 (14.5')	ASTM D2974	847218		
40252309008	GP-15 (3')	ASTM D2974	847218		
40252309009	HA-1 OUTFALL (1')	ASTM D2974	847218		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

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

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

4052309

ALL SHADED AREAS are for LAB USE ONLY

Company: **SCS Engineers** Billing Information:

Address: **2830 Dairy Dr. Madison WI**

Report To: **Ray Tierney** Email To: **rtierney@scsengineers.com**

Copy To: **Sackie Pennebaker** Site Collection Info/Address:

Customer Project Name/Number: **DOA Hill Farms Heating Plant** State: **WI** County/City: **Dane** Time Zone Collected: [] PT [] MT [] CT [] ET

Phone: **25221165** Site/Facility ID #: Compliance Monitoring? [] Yes [] No

Collected By (print): **J. Pennebaker** Purchase Order #: DW PWS ID #: Quote #: DW Location Code:

Collected By (signature): Turnaround Date Required: Immediately Packed on Ice: [] Yes [] No

Sample Disposal: [] Dispose as appropriate [] Return [] Archive: [] Hold: Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [] Yes [] No Analysis:

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
Equipment blank W			9/28	930				
GP-9 (9'S)	S			950				
GP-10 (10'S)				1010				
GP-11 (11'S)				1025				
GP-12 (13'S)				1135				
GP-13 (14.5'S)				1045				
GP-14 (14.5'S)				1105				
GP-15 (3'S)				1200				
HA-1-outfall (1'S)				1230				

Container Preservative Type ** Lab Project Manager:

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

Analyses										Lab Profile/Line:
P F A S (33 targets) XXXXXX										Lab Sample Receipt Checklist:
										Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____ LAB USE ONLY: Lab Sample # / Comments:
										021
										002
										003
										004
										005
										006
										007
										008
										009

Customer Remarks / Special Conditions / Possible Hazards: Type of Ice Used: Wet Blue Dry None

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

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

Lab Tracking #: **2784650** Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA
Therm ID#: **001**
Cooler 1 Temp Upon Receipt: _____ oC
Cooler 1 Therm Corr. Factor: _____ oC
Cooler 1 Corrected Temp: _____ oC
Comments:

Relinquished by/Company: (Signature) **SCS**

Date/Time: **9/28/2022/1400** Received by/Company: (Signature)

Date/Time: MTJL LAB USE ONLY

Relinquished by/Company: (Signature) **CS Logistics**

Date/Time: **9/29/22 0825** Received by/Company: (Signature) **Jenna K. Pace**

Date/Time: **9/29/22 0825**

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)

Date/Time: Received by/Company: (Signature)

Date/Time: PM: PB:

Client Name: SCS Engineers

Sample Preservation Receipt Form

All containers needing preservation have been checked and noted below:

Yes No N/A

Project # LA52309

Lab Lot# of pH paper:

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

Initial when completed:

Date/Time:

Pace Lab #	Glass						Plastic						Vials				Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)								
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WG9U	WP9U	SP5T								ZPLC	GN 1	GN 2					
001																																							
002																																							2.5 / 5
003																																							2.5 / 5
004																																							2.5 / 5
005																																							2.5 / 5
006																																							2.5 / 5
007																																							2.5 / 5
008																																							2.5 / 5
009																																							2.5 / 5
010																																							2.5 / 5
011																																							2.5 / 5
012																																							2.5 / 5
013																																							2.5 / 5
014																																							2.5 / 5
015																																							2.5 / 5
016																																							2.5 / 5
017																																							2.5 / 5
018																																							2.5 / 5
019																																							2.5 / 5
020																																							2.5 / 5

TP 9/29/22


Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): Yes No N/A *If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JG9U	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WG9U	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WP9U	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Sample Condition Upon Receipt Form (SCUR)

Client Name: SCS Engineers
 Courier: CS Logistics Fed Ex Speedee UPS Waltco
 Client Pace Other: _____

Project #: _____
WO# : 40252309

 40252309

Tracking #: _____
 Custody Seal on Cooler/Box Present: yes no Seals intact: yes no
 Custody Seal on Samples Present: yes no Seals intact: yes no
 Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer Used SR-118 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 1 /Corr: 1.5
 Temp Blank Present: yes no Biological Tissue is Frozen: yes no

Person examining contents:
 Date: 9/29/22 / Initials: TP
 Labeled By Initials: NK

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2.	<u>Pg #</u> <u>TP 9/29/22</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.	
- DI VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.	
Sufficient Volume:		8.	
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.	
Correct Type: Pace <u>Green Bay</u> , Pace IR, Non-Pace			
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.	<u>003 ID "GP-10(14)"</u> <u>TP 9/29/22</u>
-Includes date/time/ID/Analysis Matrix: <u>W, S</u>			
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: _____
 Person Contacted: _____ Date/Time: _____ If checked, see attached form for additional comments
 Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir
 Page 2 of 2

Report Prepared for:

Dan Milewsky
PACE Wisconsin
1241 Bellevue Street
Green Bay WI 54302

**REPORT OF
LABORATORY
ANALYSIS
FOR PFAAs**

Report Prepared Date:

November 21, 2022

Report Information:

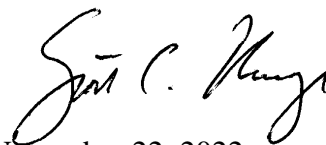
Pace Project #: 10627921
Sample Receipt Date: 10/01/2022
Client Project #: 40252309 SCS ENGINEERS
Client Sub PO #: N/A
State Cert #: N/A

Invoicing & Reporting Options:

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

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

This report has been reviewed by:



November 22, 2022

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



Report of Laboratory Analysis

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The results relate only to the samples included in this report.

DISCUSSION

This report presents the results from the analyses performed on nine samples, one matrix spike, and one matrix spike duplicate submitted by a representative of Pace Wisconsin. The samples were analyzed for thirty-three perfluorinated compounds using MPCA guidance for PFAS. Reporting limits were set to quantification limits.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank was free of the target perfluorinated compounds at the reporting limits. This indicates that the sample processing procedures did not significantly contribute to the analyte content determined for the sample material.

A laboratory spike sample and matrix spike samples were also prepared with the sample batch using clean reference matrix or sample material that had been fortified with native standards. The recovery results were within the method limits. The RPDs (relative percent differences) between one designated spike and its duplicate were within the method limits. These spikes indicate that extraction performed as expected.

Diminished extracted internal standard (EIS) recovery ("R" flagged) were present in samples and QC, however, the use of the isotope dilution method generally precludes any adverse impact on those individual native compounds that have a directly associated standard.

The four injection internal standards (13C4 PFOA, 13C4 PFOS, 13C2_PFDA, and 13C2_PFHxA) pass for each analysis in the batch verifying that the instrument detector is working as expected.

It should be noted that Pace Analytical has not yet completed the certification process for all analytes in this method. Therefore, the results have been marked "N2" as qualified.



Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Mississippi	MN00064
Alabama	40770	Missouri	10100
Alaska-DW	MN00064	Montana	CERT0092
Alaska-UST	17-009	Nebraska	NE-OS-18-06
Arizona	AZ0014	Nevada	MN00064
Arkansas - WW	88-0680	New Hampshire	2081
Arkansas-DW	MN00064	New Jersey	MN002
California	2929	New York	11647
Colorado	MN00064	North Carolina-	27700
Connecticut	PH-0256	North Carolina-	530
Florida	E87605	North Dakota	R-036
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Ohio-VAP (170	CL101
Idaho	MN00064	Ohio-VAP (180	CL110
Illinois	200011	Oklahoma	9507
Indiana	C-MN-01	Oregon- rimary	MN300001
Iowa	368	Oregon-Second	MN200001
Kansas	E-10167	Pennsylvania	68-00563
Kentucky-DW	90062	Puerto Rico	MN00064
Kentucky-WW	90062	South Carolina	74003
Louisiana-DEQ	AI-84596	Tennessee	TN02818
Louisiana-DW	MN00064	Texas	T104704192
Maine	MN00064	Utah	MN00064
Maryland	322	Vermont	VT-027053137
Michigan	9909	Virginia	460163
Minnesota	027-053-137	Washington	C486
Minnesota-Ag	via MN 027-053	West Virginia-D	382
Minnesota-Petr	1240	West Virginia-D	9952C
		Wisconsin	999407970
		Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

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Sample ID Cross Reference

<u>Client Sample ID</u>	<u>Pace Sample ID</u>	<u>Date Received</u>	<u>Sample Type</u>
EQUIPMENT BLANK	40252309001	10/01/2022	Water
GP-9(9')	40252309002	10/01/2022	Solid
GP-10(10')	40252309003	10/01/2022	Solid
GP-11(11')	40252309004	10/01/2022	Solid
GP-12(3')	40252309005	10/01/2022	Solid
GP-13(14.5')	40252309006	10/01/2022	Solid
GP-14 (14.5)	40252309007	10/01/2022	Solid
GP-15 (3')	40252309008	10/01/2022	Solid
HA-1 OUTFALL (1')	40252309009	10/01/2022	Solid

REPORT OF LABORATORY ANALYSIS

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WO#: 10627921

Internal Transfer Chain of Custody

Samples Pre-Logged into eCOC.

State Of Origin: WI
Cert. Needed: Yes No
Owner Received Date: 9/29/2022 Results Requested By: 10/28/2022



Workorder: 40252309 Workorder Name: DOA HILL FARMS HEATING

Report ID: Subcontract ID

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

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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		PFAS (WNR 33 Targets)	LAB USE ONLY
						Unpreserved	Preserved		
1	EQUIPMENT BLANK	PS	9/28/2022 09:30	40252309001	Water	2		X	
2	GP-9(9')	PS	9/28/2022 09:50	40252309002	Solid	1		X	
3	GP-10(10')	PS	9/28/2022 10:10	40252309003	Solid	1		X	
4	GP-11(11')	PS	9/28/2022 10:25	40252309004	Solid	1		X	
5	GP-12(3')	PS	9/28/2022 11:35	40252309005	Solid	1		X	
6	GP-13(14.5')	PS	9/28/2022 10:45	40252309006	Solid	1		X	
7	GP-14 (14.5)	PS	9/28/2022 11:05	40252309007	Solid	1		X	
8	GP-15 (3')	PS	9/28/2022 12:00	40252309008	Solid	1		X	
9	HA-1 OUTFALL (1')	PS	9/28/2022 12:30	40252309009	Solid	1		X	

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	or	N	Samples Intact	or	N
1	<i>[Signature]</i>	9/30/22 17:00	<i>[Signature]</i>	10/12/22 12:38	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
2										
3										

Cooler Temperature on Receipt: 4.4 °C

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

Effective Date:

Sample Condition Upon Receipt: **Client Name: PACE, WI**

Project #: **WO# : 10627921**
 PM: SCU Due Date: 10/24/22
 CLIENT: PASI-WI

Courier: FedEx UPS USPS Client
 Pace SpeedDee Commercial

Tracking Number: See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No
 Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: T1 (0461) T2 (1336) T3 (0459) T4 (0254) T5 (0178)
 T6 (0235) T7 (0042) T8 (0775) 01339252/1710
 Biological Tissue Frozen? Yes No N/A
 Temp Blank? Yes No
 Type of Ice: Wet Blue Dry None
 Melted

Did Samples Originate in West Virginia? Yes No
 Were All Container Temps Taken? Yes No N/A
 Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: 4.2 °C
 Average Corrected Temp (no temp blank only): _____ °C
 Correction Factor: Add 0.2 Cooler Temp Corrected w/temp blank: 4.4 °C
 See Exceptions ENV-FRM-MIN4-0142 1 Container

USDA Regulated Soil: N/A water sample/other: SL
 Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? Yes No

Date/Initials of Person Examining Contents: JMK/1/22
 Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

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

Location (Check one): <input type="checkbox"/> Duluth <input checked="" type="checkbox"/> Minneapolis <input type="checkbox"/> Virginia	COMMENTS
Chain of Custody Present and Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4. If fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 <input type="checkbox"/> No
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E.coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrom <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Sample Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Field Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. If no, write ID/Date/Time of container below: <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? Matrix: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Other	12. Sample # <input type="checkbox"/> NaOH <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> Zinc Acetate
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Residual Chlorine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
All containers needing preservation are found to be in compliance with EPA recommendation? (=HNO3, H2SO4, <2pH, NaOH>9 Sulfide, NaOH>10 Cyanide)	pH Paper Lot # Residual Chlorine: <input type="checkbox"/> 0-6 Roll <input type="checkbox"/> 0-6 Strip <input type="checkbox"/> 0-14 Strip
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks—verify with PM first.)	13.
Headspace in Methyl Mercury Container? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Extra labels present on soil VOA or WIDRO containers? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
3 Trip Blanks Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased): _____
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

CLIENT NOTIFICATION/RESOLUTION
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____
 Project Manager Review: [Signature] Date: 10/05/22

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

Labeled By: [Signature] Line: [Signature]

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

Company: Pace Analytical
Address: SCS Engineers
 2830 Dairy Dr., Madison, WI
Report To: Ray Tierney
Copy To: Sackie Pennebaker
Customer Project Name/Number: DOA Hill Farms Heating Plant
Site/Facility ID #: 252211us
Phone: 252211us
Email: S.Pennebaker@scsengineers.com
Site Collection Info/Address: 2830 Dairy Dr., Madison, WI
County/City: Dane
Time Zone Collected: PT [] MT [] CT [] ET []
Compliance Monitoring? [] Yes [] No
DW PWS ID #: []
DW Location Code: []
Immediately Packed on Ice: [] Yes [] No
Field Filtered (if applicable): [] Yes [] No
Analysis: []
Collected (or Composite Start) Date Time
 [] Same Day [] Next Day [] 13 Day [] 14 Day [] 15 Day
 (Expedite Charges Apply)
Matrix * Matrix #
 [] 2 Day [] 3 Day [] 4 Day [] 5 Day
 (Expedite Charges Apply)
Collected (or Composite Start) Date Time
 9/28 9:30
 9:50
 10:10
 10:25
 11:25
 10:45
 11:05
 12:00
 12:30

Customer Sample ID
 Equipment blank DW
 GP-9 (915)
 GP-10 (1105)
 GP-11 (1115)
 GP-12 (131)
 GP-13 (145)
 GP-14 (145)
 GP-15 (31)
 HA-1-outfall(115)
Res CI
 []
 []
 []
 []
 []
 []
 []
 []
 []
 []
of Ctns
 []
 []
 []
 []
 []
 []
 []
 []
 []
 []
Customer Remarks / Special Conditions / Possible Hazards:
 Type of ice Used: Wet Blue Dry None
 Packing Material Used:
 Packed sample(s) screened (<500 cpm): Y N NA
 Received by/Company: (Signature) Date/Time: 9/26/2022 / 400
 Received by/Company: (Signature) Date/Time: 9/27/2022 / 0825
 Received by/Company: (Signature) Date/Time: []

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTIL Log-in Number Here
 LHS2309

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

Analyses
 Lab Profile/Line:
 Lab Sample Receipt Checklist:
 Custody Seals Present/Intact Y N NA
 Custody Signatures Present Y N NA
 Collector Signature Present Y N NA
 Bottles Intact Y N NA
 Correct Bottles Y N NA
 Sufficient Volume Y N NA
 Samples Received on Ice Y N NA
 VOA - Headspace Acceptable Y N NA
 USDA Regulated Soils Y N NA
 Samples in Holding Time Y N NA
 Residual Chlorine Present Y N NA
 Cl Strips: Y N NA
 Sample pH Acceptable Y N NA
 pH Strips: Y N NA
 Sulfide Freeport Y N NA
 Lead Acetate Strips: Y N NA
 LAB USE ONLY:
 Lab Sample # / Comments:
 021
 022
 003
 004
 005
 006
 007
 000
 009

Customer Sample ID	Matrix #	Collected (or Composite Start) Date Time	Res CI	# of Ctns
Equipment blank DW				
GP-9 (915)		9/28 9:30		
GP-10 (1105)		9:50		
GP-11 (1115)		10:10		
GP-12 (131)		10:25		
GP-13 (145)		11:25		
GP-14 (145)		10:45		
GP-15 (31)		11:05		
HA-1-outfall(115)		12:00		
		12:30		

Lab Sample Temperature Info:
 Temp Blank Received: Y N NA
 Therm ID#: []
 Cooler 1 Temp Upon Receipt: [] °C
 Cooler 1 Therm Corr. Factor: [] °C
 Cooler 2 Temp Upon Receipt: [] °C
 Cooler 2 Therm Corr. Factor: [] °C
 Comments:
 Trip Blank Received: Y N NA
 HCL: MeOH TSP Other
 Non Conformance(s): YES / NO of: []

SHORT/HOLDS PRESENT (72 hours): Y N NA
 Lab Tracking #: 2784650
 Samples received via: FEDEX UPS Client Courier Pace Courier
 Date/Time: []
 Date/Time: 9/27/2022 0825
 Date/Time: []

Relinquished by/Company: (Signature) Date/Time: 9/26/2022 / 400
Relinquished by/Company: (Signature) Date/Time: 9/27/2022 / 0825
Relinquished by/Company: (Signature) Date/Time: []

Relinquished by/Company: (Signature) Date/Time: []

Relinquished by/Company: (Signature) Date/Time: []

Relinquished by/Company: (Signature) Date/Time: []

DC# Title: ENV-FRM-GBAY-0035 v03_Sample Preservation Receipt Form
 Effective Date: 8/16/2022

Client Name: SCS Engineers
 Project # LA52309
 Yes No N/A
 Lab Lot# of pH paper: _____

Initial when completed:
 Lab Lot# of preservation (if pH adjusted): _____

Date/Time: _____

Pace Lab #	Glass				Plastic				Vials				Jars				General				VOA Vials (>6mm)	H2SO4 pH 52	NaOH+Zn Act pH 89	NaOH pH >12	HNO3 pH 52	pH after adjusted	Volume (ml)								
	AG1U	AG1H	AG4S	AG5U	AG2S	AG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U								WG9U	WPFU	SP5T	ZPLC	GN 1	GN 2		
001																																			
002																																			2.5/5
003																																			2.5/5
004																																			2.5/5
005																																			2.5/5
006																																			2.5/5
007																																			2.5/5
008																																			2.5/5
009																																			2.5/5
010																																			2.5/5
011																																			2.5/5
012																																			2.5/5
013																																			2.5/5
014																																			2.5/5
015																																			2.5/5
016																																			2.5/5
017																																			2.5/5
018																																			2.5/5
019																																			2.5/5
020																																			2.5/5

Handwritten note: AP 0129122

Exceptions to preservation check: VOA, Coliform, TOC, TOX, OH, O&G, WI DRO, Phenolics, Other: _____

Headspaces in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	N/A	*If yes look in headspace column
AG1U 1 liter amber glass				
BG1U 1 liter clear glass				
AG1H 1 liter amber glass HCL				
AG4S 125 mL amber glass H2SO4				
AG5U 100 mL amber glass unpres				
AG2S 500 mL amber glass H2SO4				
BG3U 250 mL clear glass unpres				
BP1U 1 liter plastic unpres				
BP3U 250 mL plastic unpres				
BP3B 250 mL plastic NaOH				
BP3N 250 mL plastic HNO3				
BP3S 250 mL plastic H2SO4				
BP2Z 500 mL plastic NaOH + Zn				
VG9C 40 mL clear ascorbic w/ HCL				
DG9T 40 mL amber Na Thio				
VG9U 40 mL clear vial unpres				
VG9H 40 mL clear vial HCL				
VG9M 40 mL clear vial MeOH				
VG9D 40 mL clear vial DI				
JG9U 4 oz amber jar unpres				
WG9U 9 oz amber jar unpres				
WPFU 4 oz clear jar unpres				
SP5T 4 oz plastic jar unpres				
ZPLC 120 mL plastic Na Thiosulfate				
GN 1 ziploc bag				
GN 2				

Sample Condition Upon Receipt Form (SCUR)

Client Name: SCS Engineers

Project #:

WO#: **40252309**



Courier: GS Logistics Fed Ex Speedee UPS Walco
 Client Pace Other: _____

Tracking #: _____

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

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR-118 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 1 / Corr: 1.5

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

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
 Date: 9/29/22 / Initials: TP
 Labeled By Initials: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2.	<u>Pg #</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	<u>TP 9/29/22</u>
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.	
- DI VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.	
Sufficient Volume:		8.	
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.	
Correct Type: Pace <u>Green Bay</u> , Pace IR, Non-Pace			
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix: <u>W, S</u>			
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ If checked, see attached form for additional comments

Comments/ Resolution: _____

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40252309001	EQUIPMENT BLANK	SW3535	34102	MPCA-ID36	B221102B_00
40252309002	GP-9(9')	SW3535	34054	MPCA-ID36	B221018B_02
40252309003	GP-10(10')	SW3535	34054	MPCA-ID36	B221018B_02
40252309004	GP-11(11')	SW3535	34054	MPCA-ID36	B221031A_04
40252309005	GP-12(3')	SW3535	34054	MPCA-ID36	B221018B_02
40252309006	GP-13(14.5')	SW3535	34054	MPCA-ID36	B221018B_02
40252309007	GP-14 (14.5)	SW3535	34054	MPCA-ID36	B221018B_02
40252309008	GP-15 (3')	SW3535	34054	MPCA-ID36	B221018C_01
40252309009	HA-1 OUTFALL (1')	SW3535	34054	MPCA-ID36	B221018C_01



Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Isotope ratio out of specification
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

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www.pacelabs.com

Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID EQUIPMENT BLANK
 Lab Sample ID 40252309001
 Lab File ID B221102B_013
 Matrix Non_Potable_Water
 Collected 09/28/2022 09:30
 Received 10/01/2022 12:38
 Extraction Date 10/26/2022 07:35

Total Amount Extracted 273mL
 Ical ID 221102A02
 CCal File B221102B_009
 Ending CCal File B221102B_023
 Blank File B221109A_011

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	MDL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	4.4	1.8	1.8	0.36	1	375-22-4		11/02/2022 18:14
PFPeA	ND	1.8	1.8	0.37	1	2706-90-3		11/02/2022 18:14
HFPO-DA	ND	1.8	1.8	0.18	1	13252-13-6		11/02/2022 18:14
PFBS	ND	1.6	1.6	0.27	1	375-73-5		11/02/2022 18:14
PFHxA	ND	1.8	1.8	0.25	1	307-24-4		11/02/2022 18:14
4:2 FTS	ND	1.7	1.7	0.18	1	757124-72-4		11/02/2022 18:14
PFPeS	ND	1.7	1.7	0.14	1	2706-91-4		11/02/2022 18:14
PFHpA	ND	1.8	1.8	0.17	1	375-85-9		11/02/2022 18:14
DONA	5.8	1.7	1.7	0.15	1	919005-14-4	N2	11/02/2022 18:14
PFHxS	ND	1.7	1.7	0.17	1	355-46-4		11/02/2022 18:14
PFOA	95	1.8	1.8	0.20	1	335-67-1		11/02/2022 18:14
6:2 FTS	ND	1.7	1.7	0.49	1	27619-97-2		11/02/2022 18:14
PFHpS	ND	1.7	1.7	0.17	1	375-92-8		11/02/2022 18:14
PFNA	ND	1.8	1.8	0.34	1	375-95-1		11/02/2022 18:14
PFOSAm	ND	1.8	1.8	0.16	1	754-91-6		11/02/2022 18:14
PFOS	ND	1.7	1.7	0.35	1	1763-23-1		11/02/2022 18:14
MeFOSA	ND	1.8	1.8	0.18	1	31506-32-8		11/02/2022 18:14
PFDA	ND	1.8	1.8	0.14	1	335-76-2		11/02/2022 18:14
EtFOSAm	ND	1.8	1.8	0.075	1	4151-50-2		11/02/2022 18:14
8:2 FTS	ND	1.8	1.8	0.24	1	39108-34-4		11/02/2022 18:14
9-CI-PF3ON	ND	1.7	1.7	0.13	1	756426-58-1		11/02/2022 18:14
PFNS	ND	1.8	1.8	0.15	1	68259-12-1		11/02/2022 18:14
PFUnDA	ND	1.8	1.8	0.100	1	2058-94-8		11/02/2022 18:14
NMeFOSAA	ND	1.8	1.8	0.14	1	2355-31-9		11/02/2022 18:14
NEtFOSAA	ND	1.8	1.8	0.10	1	2991-50-6		11/02/2022 18:14
PFDS	ND	1.8	1.8	0.095	1	335-77-3		11/02/2022 18:14
PFDOA	ND	1.8	1.8	0.097	1	307-55-1		11/02/2022 18:14
MeFOSE	ND	1.8	1.8	0.10	1	24448-09-7		11/02/2022 18:14
EtFOSE	ND	1.8	1.8	0.12	1	1691-99-2		11/02/2022 18:14
11-CI-PF3OUdS	ND	1.7	1.7	0.11	1	763051-92-9		11/02/2022 18:14
PFTTrDA	ND	1.8	1.8	0.13	1	72629-94-8		11/02/2022 18:14
PFDoS	ND	1.8	1.8	0.14	1	79780-39-5		11/02/2022 18:14
PFTDA	ND	1.8	1.8	0.22	1	376-06-7		11/02/2022 18:14

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID EQUIPMENT BLANK
 Lab Sample ID 40252309001
 Lab File ID B221102B_013
 Matrix Non_Potable_Water
 Collected 09/28/2022 09:30
 Received 10/01/2022 12:38
 Extraction Date 10/26/2022 07:35

Total Amount Extracted 273mL
 Ical ID 221102A02
 CCal File B221102B_009
 Ending CCal File B221102B_023
 Blank File B221109A_011

Injection Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	18	24	132	50-200		11/02/2022 18:14
13C4 PFOA	18	23	125	50-200		11/02/2022 18:14
13C2 PFDA	18	26	144	50-200		11/02/2022 18:14
13C4 PFOS	18	24	139	50-200		11/02/2022 18:14

Extracted Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	18	25	139	50-200		11/02/2022 18:14
13C5 PFPeA	18	24	131	50-200		11/02/2022 18:14
13C3 PFBS	17	23	137	50-200		11/02/2022 18:14
13C2 4:2FTS	17	34	198	50-200		11/02/2022 18:14
13C5 PFHxA	18	23	127	50-200		11/02/2022 18:14
13C4 PFHpA	18	24	132	50-200		11/02/2022 18:14
13C3 PFHxS	17	22	129	50-200		11/02/2022 18:14
13C2 6:2FTS	17	26	148	50-200		11/02/2022 18:14
13C8 PFOA	18	21	115	50-200		11/02/2022 18:14
13C9 PFNA	18	23	126	50-200		11/02/2022 18:14
13C8 PFOS	18	18	101	50-200		11/02/2022 18:14
13C2 8:2FTS	18	21	119	50-200		11/02/2022 18:14
13C6 PFDA	18	21	115	50-200		11/02/2022 18:14
d3-MeFOSAA	18	18	96	50-200		11/02/2022 18:14
13C8 PFOSA	18	18	98	50-200		11/02/2022 18:14
d5-EtFOSAA	18	16	85	50-200		11/02/2022 18:14
13C7 PFUdA	18	20	111	50-200		11/02/2022 18:14
13C2 PFDaA	18	17	94	50-200		11/02/2022 18:14
13C2 PFTeDA	18	17	91	50-200		11/02/2022 18:14
13C3 HFPO-DA	18	22	119	50-200		11/02/2022 18:14
d7-N-MeFOSE	18	16	85	50-200		11/02/2022 18:14
d9-N-EtFOSE	18	8.1	44	50-200	R	11/02/2022 18:14
d3-N-MeFOSA	18	9.7	53	50-200		11/02/2022 18:14
d5-N-EtFOSA	18	8.3	45	50-200	R	11/02/2022 18:14

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID EQUIPMENT BLANK
 Lab Sample ID 40252309001
 Lab File ID B221102B_013
 Matrix Non_Potable_Water
 Collected 09/28/2022 09:30
 Received 10/01/2022 12:38
 Extraction Date 10/26/2022 07:35

Total Amount Extracted 273mL
 Ical ID 221102A02
 CCal File B221102B_009
 Ending CCal File B221102B_023
 Blank File B221109A_011

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.65	5.67	18		11/02/2022 18:14
13C4 PFOA	N/A	N/A	6.88	6.93	19		11/02/2022 18:14
13C2 PFDA	N/A	N/A	8.18	8.24	16		11/02/2022 18:14
13C4 PFOS	N/A	N/A	8.67	8.67	15		11/02/2022 18:14

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.32	4.30	27		11/02/2022 18:14
13C5 PFPeA	N/A	N/A	5.06	5.04	21		11/02/2022 18:14
13C3 PFBS	N/A	N/A	5.90	5.82	14		11/02/2022 18:14
13C2 4:2FTS	N/A	N/A	5.40	5.42	11		11/02/2022 18:14
13C5 PFHxA	N/A	N/A	5.65	5.66	18		11/02/2022 18:14
13C4 PFHpA	N/A	N/A	6.26	6.29	18		11/02/2022 18:14
13C3 PFHxS	N/A	N/A	7.30	7.37	23		11/02/2022 18:14
13C2 6:2FTS	N/A	N/A	6.56	6.59	13		11/02/2022 18:14
13C8 PFOA	N/A	N/A	6.89	6.93	18		11/02/2022 18:14
13C9 PFNA	N/A	N/A	7.53	7.58	21		11/02/2022 18:14
13C8 PFOS	N/A	N/A	8.67	8.76	14		11/02/2022 18:14
13C2 8:2FTS	N/A	N/A	7.80	7.85	82		11/02/2022 18:14
13C6 PFDA	N/A	N/A	8.18	8.24	13		11/02/2022 18:14
d3-MeFOSAA	N/A	N/A	8.08	8.12	12		11/02/2022 18:14
13C8 PFOSA	N/A	N/A	10.72	10.72	11		11/02/2022 18:14
d5-EtFOSAA	N/A	N/A	8.38	8.44	12		11/02/2022 18:14
13C7 PFUdA	N/A	N/A	8.84	8.91	20		11/02/2022 18:14
13C2 PFDoA	N/A	N/A	9.50	9.59	14		11/02/2022 18:14
13C2 PFTeDA	N/A	N/A	10.79	10.89	14		11/02/2022 18:14
13C3 HFPO-DA	N/A	N/A	5.90	5.93	15		11/02/2022 18:14
d7-N-MeFOSE	N/A	N/A	12.45	12.43	57		11/02/2022 18:14
d9-N-EtFOSE	N/A	N/A	12.92	12.92	17	R	11/02/2022 18:14
d3-N-MeFOSA	N/A	N/A	12.66	12.65	59		11/02/2022 18:14
d5-N-EtFOSA	N/A	N/A	13.09	13.08	84	R	11/02/2022 18:14

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	EQUIPMENT BLANK	Total Amount Extracted	273mL
Lab Sample ID	40252309001	Ical ID	221102A02
Lab File ID	B221102B_013	CCal File	B221102B_009
Matrix	Non_Potable_Water	Ending CCal File	B221102B_023
Collected	09/28/2022 09:30	Blank File	B221109A_011
Received	10/01/2022 12:38		
Extraction Date	10/26/2022 07:35		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.32	4.34	16		11/02/2022 18:14
PFPeA	N/A	N/A	5.06	5.08	ND		11/02/2022 18:14
HFPO-DA	0.38	0.31	5.91	5.86	ND		11/02/2022 18:14
PFBS	0.42	0.41	5.91	5.94	ND		11/02/2022 18:14
PFHxA	0.07	0.08	5.66	5.68	ND		11/02/2022 18:14
4:2 FTS	0.00	0.79	0.00	5.42	ND		11/02/2022 18:14
PFPeS	0.46	0.42	6.61	6.67	ND		11/02/2022 18:14
PFHpA	0.36	0.31	6.27	6.30	ND		11/02/2022 18:14
DONA	0.65	0.55	6.49	6.52	13		11/02/2022 18:14
PFHxS	0.33	0.34	7.31	7.37	ND		11/02/2022 18:14
PFOA	0.49	0.42	6.89	6.93	49		11/02/2022 18:14
6:2 FTS	0.70	0.83	6.56	6.49	ND		11/02/2022 18:14
PFHpS	0.46	0.43	8.00	8.08	ND		11/02/2022 18:14
PFNA	0.18	0.17	7.53	7.59	ND		11/02/2022 18:14
PFOSAm	N/A	N/A	10.74	10.74	ND		11/02/2022 18:14
PFOS	0.35	0.34	8.68	8.77	ND		11/02/2022 18:14
MeFOSA	0.00	0.50	0.00	12.67	ND		11/02/2022 18:14
PFDA	0.20	0.19	8.20	8.25	ND		11/02/2022 18:14
EtFOSAm	0.00	0.49	0.00	13.11	ND		11/02/2022 18:14
8:2 FTS	0.00	1.00	0.00	7.86	ND		11/02/2022 18:14
9-CI-PF3ON	0.00	0.05	0.00	9.26	ND		11/02/2022 18:14
PFNS	0.00	0.44	0.00	9.45	ND		11/02/2022 18:14
PFUnDA	0.07	0.13	8.86	8.91	ND		11/02/2022 18:14
NMeFOSAA	0.00	0.75	0.00	8.13	ND		11/02/2022 18:14
NEtFOSAA	0.00	0.64	0.00	8.44	ND		11/02/2022 18:14
PFDS	0.00	0.37	0.00	10.13	ND		11/02/2022 18:14
PFDOA	0.00	0.20	0.00	9.59	ND		11/02/2022 18:14
MeFOSE	N/A	N/A	12.49	12.50	ND		11/02/2022 18:14
EtFOSE	0.00	0.00	12.97	12.97	ND		11/02/2022 18:14
11-CI-PF3OUdS	0.00	0.02	0.00	10.61	ND		11/02/2022 18:14
PFTTrDA	0.05	0.18	10.16	10.26	ND		11/02/2022 18:14
PFDoS	0.00	0.44	0.00	11.36	ND		11/02/2022 18:14
PFTDA	0.26	0.26	10.80	10.90	ND		11/02/2022 18:14

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-9(9')
 Lab Sample ID 40252309002
 Lab File ID B221018C_008
 Matrix Solid
 Collected 09/28/2022 09:50
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.32g
 Ical ID 221017B02
 CCal File B221018B_020
 Ending CCal File B221018C_014
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.047	0.047	0.0051	1	375-22-4		10/18/2022 18:57
PFPeA	ND	0.047	0.047	0.0052	1	2706-90-3		10/18/2022 18:57
HFPO-DA	ND	0.047	0.047	0.0065	1	13252-13-6		10/18/2022 18:57
PFBS	ND	0.042	0.042	0.0056	1	375-73-5		10/18/2022 18:57
PFHxA	ND	0.047	0.047	0.014	1	307-24-4		10/18/2022 18:57
4:2 FTS	ND	0.044	0.044	0.0080	1	757124-72-4		10/18/2022 18:57
PFPeS	ND	0.044	0.044	0.0069	1	2706-91-4		10/18/2022 18:57
PFHpA	ND	0.047	0.047	0.0100	1	375-85-9		10/18/2022 18:57
DONA	ND	0.044	0.044	0.0065	1	919005-14-4	N2	10/18/2022 18:57
PFHxS	ND	0.043	0.043	0.010	1	355-46-4		10/18/2022 18:57
PFOA	ND	0.047	0.047	0.0065	1	335-67-1		10/18/2022 18:57
6:2 FTS	ND	0.045	0.045	0.016	1	27619-97-2		10/18/2022 18:57
PFHpS	ND	0.045	0.045	0.0094	1	375-92-8		10/18/2022 18:57
PFNA	ND	0.047	0.047	0.012	1	375-95-1		10/18/2022 18:57
PFOSAm	ND	0.047	0.047	0.0059	1	754-91-6		10/18/2022 18:57
PFOS	ND	0.044	0.044	0.0082	1	1763-23-1		10/18/2022 18:57
MeFOSA	ND	0.047	0.047	0.014	1	31506-32-8		10/18/2022 18:57
PFDA	ND	0.047	0.047	0.010	1	335-76-2		10/18/2022 18:57
EtFOSAm	ND	0.047	0.047	0.0042	1	4151-50-2		10/18/2022 18:57
8:2 FTS	ND	0.045	0.045	0.016	1	39108-34-4		10/18/2022 18:57
9-CI-PF3ON	ND	0.044	0.044	0.0041	1	756426-58-1		10/18/2022 18:57
PFNS	ND	0.045	0.045	0.012	1	68259-12-1		10/18/2022 18:57
PFUnDA	ND	0.047	0.047	0.0084	1	2058-94-8		10/18/2022 18:57
NMeFOSAA	ND	0.047	0.047	0.011	1	2355-31-9		10/18/2022 18:57
NEtFOSAA	ND	0.047	0.047	0.015	1	2991-50-6		10/18/2022 18:57
PFDS	ND	0.045	0.045	0.0066	1	335-77-3		10/18/2022 18:57
PFDOA	ND	0.047	0.047	0.014	1	307-55-1		10/18/2022 18:57
MeFOSE	ND	0.047	0.047	0.0049	1	24448-09-7		10/18/2022 18:57
EtFOSE	ND	0.047	0.047	0.013	1	1691-99-2		10/18/2022 18:57
11-CI-PF3OUdS	ND	0.044	0.044	0.0064	1	763051-92-9		10/18/2022 18:57
PFTTrDA	ND	0.047	0.047	0.0090	1	72629-94-8		10/18/2022 18:57
PFDoS	ND	0.046	0.046	0.0059	1	79780-39-5		10/18/2022 18:57
PFTDA	ND	0.047	0.047	0.0096	1	376-06-7		10/18/2022 18:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-9(9')	Total Amount Extracted	5.32g
Lab Sample ID	40252309002	Ical ID	221017B02
Lab File ID	B221018C_008	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 09:50	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.94	0.91	96	50-200		10/18/2022 18:57
13C4 PFOA	0.94	0.91	96	50-200		10/18/2022 18:57
13C2 PFDA	0.94	1.3	134	50-200		10/18/2022 18:57
13C4 PFOS	0.90	1.0	112	50-200		10/18/2022 18:57

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.94	0.72	77	50-200		10/18/2022 18:57
13C5 PFPeA	0.94	0.73	77	50-200		10/18/2022 18:57
13C3 PFBS	0.87	0.69	79	50-200		10/18/2022 18:57
13C2 4:2FTS	0.88	0.70	79	50-200		10/18/2022 18:57
13C5 PFHxA	0.94	0.72	77	50-200		10/18/2022 18:57
13C4 PFHpA	0.94	0.74	79	50-200		10/18/2022 18:57
13C3 PFHxS	0.89	0.72	81	50-200		10/18/2022 18:57
13C2 6:2FTS	0.89	0.67	75	50-200		10/18/2022 18:57
13C8 PFOA	0.94	0.72	77	50-200		10/18/2022 18:57
13C9 PFNA	0.94	0.76	81	50-200		10/18/2022 18:57
13C8 PFOS	0.90	0.74	82	50-200		10/18/2022 18:57
13C2 8:2FTS	0.90	0.68	75	50-200		10/18/2022 18:57
13C6 PFDA	0.94	0.86	91	50-200		10/18/2022 18:57
d3-MeFOSAA	0.94	0.68	72	50-200		10/18/2022 18:57
13C8 PFOSA	0.94	0.53	56	50-200		10/18/2022 18:57
d5-EtFOSAA	0.94	0.55	59	50-200		10/18/2022 18:57
13C7 PFUdA	0.94	0.79	84	50-200		10/18/2022 18:57
13C2 PFDoA	0.94	0.73	78	50-200		10/18/2022 18:57
13C2 PFTeDA	0.94	0.66	70	50-200		10/18/2022 18:57
13C3 HFPO-DA	0.94	0.79	84	50-200		10/18/2022 18:57
d7-N-MeFOSE	0.94	0.34	36	50-200	R	10/18/2022 18:57
d9-N-EtFOSE	0.94	0.31	33	50-200	R	10/18/2022 18:57
d3-N-MeFOSA	0.94	0.021	2	50-200	R	10/18/2022 18:57
d5-N-EtFOSA	0.94	0.021	2	50-200	R	10/18/2022 18:57

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-9(9')	Total Amount Extracted	5.32g
Lab Sample ID	40252309002	Ical ID	221017B02
Lab File ID	B221018C_008	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 09:50	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	14		10/18/2022 18:57
13C4 PFOA	N/A	N/A	6.79	6.80	17		10/18/2022 18:57
13C2 PFDA	N/A	N/A	8.01	8.02	14		10/18/2022 18:57
13C4 PFOS	N/A	N/A	8.41	8.42	15		10/18/2022 18:57

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.29	4.30	20		10/18/2022 18:57
13C5 PFPeA	N/A	N/A	5.03	5.04	22		10/18/2022 18:57
13C3 PFBS	N/A	N/A	5.81	5.82	14		10/18/2022 18:57
13C2 4:2FTS	N/A	N/A	5.37	5.38	53		10/18/2022 18:57
13C5 PFHxA	N/A	N/A	5.61	5.62	17		10/18/2022 18:57
13C4 PFHpA	N/A	N/A	6.20	6.20	16		10/18/2022 18:57
13C3 PFHxS	N/A	N/A	7.14	7.15	24		10/18/2022 18:57
13C2 6:2FTS	N/A	N/A	6.49	6.50	12		10/18/2022 18:57
13C8 PFOA	N/A	N/A	6.80	6.80	18		10/18/2022 18:57
13C9 PFNA	N/A	N/A	7.40	7.41	14		10/18/2022 18:57
13C8 PFOS	N/A	N/A	8.42	8.43	20		10/18/2022 18:57
13C2 8:2FTS	N/A	N/A	7.68	7.68	63		10/18/2022 18:57
13C6 PFDA	N/A	N/A	8.01	8.02	17		10/18/2022 18:57
d3-MeFOSAA	N/A	N/A	7.95	7.95	60		10/18/2022 18:57
13C8 PFOSA	N/A	N/A	10.73	10.73	10		10/18/2022 18:57
d5-EtFOSAA	N/A	N/A	8.24	8.24	12		10/18/2022 18:57
13C7 PFUdA	N/A	N/A	8.62	8.63	15		10/18/2022 18:57
13C2 PFDoA	N/A	N/A	9.23	9.24	14		10/18/2022 18:57
13C2 PFTeDA	N/A	N/A	10.46	10.46	11		10/18/2022 18:57
13C3 HFPO-DA	N/A	N/A	5.84	5.85	17		10/18/2022 18:57
d7-N-MeFOSE	N/A	N/A	12.47	12.47	45	R	10/18/2022 18:57
d9-N-EtFOSE	N/A	N/A	12.95	12.95	21	R	10/18/2022 18:57
d3-N-MeFOSA	N/A	N/A	12.68	12.68	14	R	10/18/2022 18:57
d5-N-EtFOSA	N/A	N/A	13.10	13.16	23	R	10/18/2022 18:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-9(9')	Total Amount Extracted	5.32g
Lab Sample ID	40252309002	Ical ID	221017B02
Lab File ID	B221018C_008	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 09:50	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.30	4.31	ND		10/18/2022 18:57
PFPeA	N/A	N/A	5.04	5.04	ND		10/18/2022 18:57
HFPO-DA	0.58	0.33	5.86	5.86	ND		10/18/2022 18:57
PFBS	0.51	0.48	5.82	5.83	ND		10/18/2022 18:57
PFHxA	0.07	0.08	5.62	5.62	ND		10/18/2022 18:57
4:2 FTS	0.00	0.83	0.00	5.39	ND		10/18/2022 18:57
PFPeS	0.00	0.41	0.00	6.50	ND		10/18/2022 18:57
PFHpA	0.00	0.29	0.00	6.21	ND		10/18/2022 18:57
DONA	0.00	0.55	0.00	6.43	ND		10/18/2022 18:57
PFHxS	0.00	0.40	0.00	7.16	ND		10/18/2022 18:57
PFOA	0.00	0.37	0.00	6.81	ND		10/18/2022 18:57
6:2 FTS	0.67	0.82	6.47	6.49	ND		10/18/2022 18:57
PFHpS	0.00	0.36	0.00	7.80	ND		10/18/2022 18:57
PFNA	0.00	0.14	0.00	7.41	ND		10/18/2022 18:57
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 18:57
PFOS	0.00	0.42	0.00	8.43	ND		10/18/2022 18:57
MeFOSA	0.00	0.52	0.00	12.70	ND		10/18/2022 18:57
PFDA	0.00	0.15	0.00	8.02	ND		10/18/2022 18:57
EtFOSAm	0.00	0.55	0.00	13.13	ND		10/18/2022 18:57
8:2 FTS	0.00	0.95	0.00	7.68	ND		10/18/2022 18:57
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 18:57
PFNS	0.00	0.47	0.00	9.05	ND		10/18/2022 18:57
PFUnDA	0.00	0.12	0.00	8.64	ND		10/18/2022 18:57
NMeFOSAA	0.00	0.81	0.00	7.96	ND		10/18/2022 18:57
NEtFOSAA	0.00	0.60	0.00	8.25	ND		10/18/2022 18:57
PFDS	0.00	0.34	0.00	9.66	ND		10/18/2022 18:57
PFDOA	0.00	0.16	0.00	9.25	ND		10/18/2022 18:57
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 18:57
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 18:57
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 18:57
PFTTrDA	0.00	0.16	0.00	9.87	ND		10/18/2022 18:57
PFDoS	0.00	0.45	0.00	10.84	ND		10/18/2022 18:57
PFTDA	0.00	0.27	0.00	10.47	ND		10/18/2022 18:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-10(10')
 Lab Sample ID 40252309003
 Lab File ID B221018C_009
 Matrix Solid
 Collected 09/28/2022 10:10
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.54g
 Ical ID 221017B02
 CCal File B221018B_020
 Ending CCal File B221018C_014
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.045	0.045	0.0049	1	375-22-4		10/18/2022 19:17
PFPeA	ND	0.045	0.045	0.0050	1	2706-90-3		10/18/2022 19:17
HFPO-DA	ND	0.045	0.045	0.0063	1	13252-13-6		10/18/2022 19:17
PFBS	ND	0.040	0.040	0.0054	1	375-73-5		10/18/2022 19:17
PFHxA	ND	0.045	0.045	0.013	1	307-24-4		10/18/2022 19:17
4:2 FTS	ND	0.042	0.042	0.0076	1	757124-72-4		10/18/2022 19:17
PFPeS	ND	0.042	0.042	0.0066	1	2706-91-4		10/18/2022 19:17
PFHpA	ND	0.045	0.045	0.0096	1	375-85-9		10/18/2022 19:17
DONA	ND	0.043	0.043	0.0063	1	919005-14-4	N2	10/18/2022 19:17
PFHxS	ND	0.041	0.041	0.0099	1	355-46-4		10/18/2022 19:17
PFOA	ND	0.045	0.045	0.0063	1	335-67-1		10/18/2022 19:17
6:2 FTS	ND	0.043	0.043	0.015	1	27619-97-2		10/18/2022 19:17
PFHpS	ND	0.043	0.043	0.0090	1	375-92-8		10/18/2022 19:17
PFNA	ND	0.045	0.045	0.011	1	375-95-1		10/18/2022 19:17
PFOSAm	ND	0.045	0.045	0.0057	1	754-91-6		10/18/2022 19:17
PFOS	ND	0.042	0.042	0.0078	1	1763-23-1		10/18/2022 19:17
MeFOSA	ND	0.045	0.045	0.013	1	31506-32-8		10/18/2022 19:17
PFDA	ND	0.045	0.045	0.0098	1	335-76-2		10/18/2022 19:17
EtFOSAm	ND	0.045	0.045	0.0040	1	4151-50-2		10/18/2022 19:17
8:2 FTS	ND	0.043	0.043	0.015	1	39108-34-4		10/18/2022 19:17
9-CI-PF3ON	ND	0.042	0.042	0.0039	1	756426-58-1		10/18/2022 19:17
PFNS	ND	0.043	0.043	0.012	1	68259-12-1		10/18/2022 19:17
PFUnDA	ND	0.045	0.045	0.0081	1	2058-94-8		10/18/2022 19:17
NMeFOSAA	ND	0.045	0.045	0.010	1	2355-31-9		10/18/2022 19:17
NEtFOSAA	ND	0.045	0.045	0.014	1	2991-50-6		10/18/2022 19:17
PFDS	ND	0.044	0.044	0.0064	1	335-77-3		10/18/2022 19:17
PFDOA	ND	0.045	0.045	0.013	1	307-55-1		10/18/2022 19:17
MeFOSE	ND	0.045	0.045	0.0047	1	24448-09-7		10/18/2022 19:17
EtFOSE	ND	0.045	0.045	0.012	1	1691-99-2		10/18/2022 19:17
11-CI-PF3OUdS	ND	0.042	0.042	0.0061	1	763051-92-9		10/18/2022 19:17
PFTTrDA	ND	0.045	0.045	0.0086	1	72629-94-8		10/18/2022 19:17
PFDoS	ND	0.044	0.044	0.0056	1	79780-39-5		10/18/2022 19:17
PFTDA	ND	0.045	0.045	0.0092	1	376-06-7		10/18/2022 19:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-10(10')	Total Amount Extracted	5.54g
Lab Sample ID	40252309003	Ical ID	221017B02
Lab File ID	B221018C_009	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 10:10	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.90	0.80	88	50-200		10/18/2022 19:17
13C4 PFOA	0.90	0.81	90	50-200		10/18/2022 19:17
13C2 PFDA	0.90	0.95	105	50-200		10/18/2022 19:17
13C4 PFOS	0.86	0.90	104	50-200		10/18/2022 19:17

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.90	0.62	68	50-200		10/18/2022 19:17
13C5 PFPeA	0.90	0.64	71	50-200		10/18/2022 19:17
13C3 PFBS	0.84	0.64	76	50-200		10/18/2022 19:17
13C2 4:2FTS	0.84	0.60	71	50-200		10/18/2022 19:17
13C5 PFHxA	0.90	0.61	67	50-200		10/18/2022 19:17
13C4 PFHpA	0.90	0.63	70	50-200		10/18/2022 19:17
13C3 PFHxS	0.85	0.60	70	50-200		10/18/2022 19:17
13C2 6:2FTS	0.86	0.55	64	50-200		10/18/2022 19:17
13C8 PFOA	0.90	0.60	66	50-200		10/18/2022 19:17
13C9 PFNA	0.90	0.64	71	50-200		10/18/2022 19:17
13C8 PFOS	0.86	0.61	71	50-200		10/18/2022 19:17
13C2 8:2FTS	0.86	0.58	67	50-200		10/18/2022 19:17
13C6 PFDA	0.90	0.70	78	50-200		10/18/2022 19:17
d3-MeFOSAA	0.90	0.56	62	50-200		10/18/2022 19:17
13C8 PFOSA	0.90	0.55	60	50-200		10/18/2022 19:17
d5-EtFOSAA	0.90	0.49	54	50-200		10/18/2022 19:17
13C7 PFUdA	0.90	0.68	75	50-200		10/18/2022 19:17
13C2 PFDoA	0.90	0.67	74	50-200		10/18/2022 19:17
13C2 PFTeDA	0.90	0.61	67	50-200		10/18/2022 19:17
13C3 HFPO-DA	0.90	0.67	74	50-200		10/18/2022 19:17
d7-N-MeFOSE	0.90	0.58	64	50-200		10/18/2022 19:17
d9-N-EtFOSE	0.90	0.54	60	50-200		10/18/2022 19:17
d3-N-MeFOSA	0.90	0.39	44	50-200	R	10/18/2022 19:17
d5-N-EtFOSA	0.90	0.35	39	50-200	R	10/18/2022 19:17

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-10(10')	Total Amount Extracted	5.54g
Lab Sample ID	40252309003	Ical ID	221017B02
Lab File ID	B221018C_009	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 10:10	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	18		10/18/2022 19:17
13C4 PFOA	N/A	N/A	6.79	6.80	17		10/18/2022 19:17
13C2 PFDA	N/A	N/A	8.01	8.02	14		10/18/2022 19:17
13C4 PFOS	N/A	N/A	8.42	8.42	22		10/18/2022 19:17

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.30	4.30	20		10/18/2022 19:17
13C5 PFPeA	N/A	N/A	5.03	5.04	20		10/18/2022 19:17
13C3 PFBS	N/A	N/A	5.81	5.82	21		10/18/2022 19:17
13C2 4:2FTS	N/A	N/A	5.38	5.38	63		10/18/2022 19:17
13C5 PFHxA	N/A	N/A	5.61	5.62	13		10/18/2022 19:17
13C4 PFHpA	N/A	N/A	6.20	6.20	12		10/18/2022 19:17
13C3 PFHxS	N/A	N/A	7.15	7.15	20		10/18/2022 19:17
13C2 6:2FTS	N/A	N/A	6.49	6.50	25		10/18/2022 19:17
13C8 PFOA	N/A	N/A	6.80	6.80	24		10/18/2022 19:17
13C9 PFNA	N/A	N/A	7.40	7.41	19		10/18/2022 19:17
13C8 PFOS	N/A	N/A	8.42	8.43	19		10/18/2022 19:17
13C2 8:2FTS	N/A	N/A	7.68	7.68	72		10/18/2022 19:17
13C6 PFDA	N/A	N/A	8.01	8.02	13		10/18/2022 19:17
d3-MeFOSAA	N/A	N/A	7.95	7.95	18		10/18/2022 19:17
13C8 PFOSA	N/A	N/A	10.74	10.73	12		10/18/2022 19:17
d5-EtFOSAA	N/A	N/A	8.23	8.24	89		10/18/2022 19:17
13C7 PFUdA	N/A	N/A	8.62	8.63	15		10/18/2022 19:17
13C2 PFDaA	N/A	N/A	9.23	9.24	18		10/18/2022 19:17
13C2 PFTeDA	N/A	N/A	10.46	10.46	11		10/18/2022 19:17
13C3 HFPO-DA	N/A	N/A	5.84	5.85	14		10/18/2022 19:17
d7-N-MeFOSE	N/A	N/A	12.47	12.47	35		10/18/2022 19:17
d9-N-EtFOSE	N/A	N/A	12.95	12.95	36		10/18/2022 19:17
d3-N-MeFOSA	N/A	N/A	12.69	12.68	61	R	10/18/2022 19:17
d5-N-EtFOSA	N/A	N/A	13.11	13.16	72	R	10/18/2022 19:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-10(10')	Total Amount Extracted	5.54g
Lab Sample ID	40252309003	Ical ID	221017B02
Lab File ID	B221018C_009	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 10:10	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.31	4.31	ND		10/18/2022 19:17
PFPeA	N/A	N/A	5.04	5.04	ND		10/18/2022 19:17
HFPO-DA	0.00	0.33	0.00	5.86	ND		10/18/2022 19:17
PFBS	0.00	0.48	0.00	5.83	ND		10/18/2022 19:17
PFHxA	0.26	0.08	5.62	5.62	ND		10/18/2022 19:17
4:2 FTS	0.00	0.83	0.00	5.39	ND		10/18/2022 19:17
PFPeS	0.00	0.41	0.00	6.50	ND		10/18/2022 19:17
PFHpA	0.00	0.29	0.00	6.21	ND		10/18/2022 19:17
DONA	0.00	0.55	0.00	6.43	ND		10/18/2022 19:17
PFHxS	0.00	0.40	0.00	7.16	ND		10/18/2022 19:17
PFOA	0.48	0.37	6.81	6.81	ND		10/18/2022 19:17
6:2 FTS	1.20	0.82	6.50	6.49	ND		10/18/2022 19:17
PFHpS	0.00	0.36	0.00	7.80	ND		10/18/2022 19:17
PFNA	0.00	0.14	0.00	7.41	ND		10/18/2022 19:17
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 19:17
PFOS	0.00	0.42	0.00	8.43	ND		10/18/2022 19:17
MeFOSA	0.00	0.52	0.00	12.70	ND		10/18/2022 19:17
PFDA	0.00	0.15	0.00	8.02	ND		10/18/2022 19:17
EtFOSAm	0.00	0.55	0.00	13.13	ND		10/18/2022 19:17
8:2 FTS	0.00	0.95	0.00	7.68	ND		10/18/2022 19:17
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 19:17
PFNS	0.00	0.47	0.00	9.05	ND		10/18/2022 19:17
PFUnDA	0.00	0.12	0.00	8.64	ND		10/18/2022 19:17
NMeFOSAA	0.00	0.81	0.00	7.96	ND		10/18/2022 19:17
NEtFOSAA	0.00	0.60	0.00	8.25	ND		10/18/2022 19:17
PFDS	0.00	0.34	0.00	9.66	ND		10/18/2022 19:17
PFDOA	0.00	0.16	0.00	9.25	ND		10/18/2022 19:17
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 19:17
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 19:17
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 19:17
PFTTrDA	0.00	0.16	0.00	9.87	ND		10/18/2022 19:17
PFDoS	0.00	0.45	0.00	10.84	ND		10/18/2022 19:17
PFTDA	0.00	0.27	0.00	10.47	ND		10/18/2022 19:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-11(11')
 Lab Sample ID 40252309004
 Lab File ID B221031A_048
 Matrix Solid
 Collected 09/28/2022 10:25
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.28g
 Ical ID 221024A02
 CCal File B221031A_041
 Ending CCal File B221031A_049
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.047	0.047	0.0051	1	375-22-4		10/31/2022 23:59
PFPeA	ND	0.047	0.047	0.0052	1	2706-90-3		10/31/2022 23:59
HFPO-DA	ND	0.047	0.047	0.0066	1	13252-13-6		10/31/2022 23:59
PFBS	ND	0.042	0.042	0.0056	1	375-73-5		10/31/2022 23:59
PFHxA	ND	0.047	0.047	0.014	1	307-24-4		10/31/2022 23:59
4:2 FTS	ND	0.044	0.044	0.0080	1	757124-72-4		10/31/2022 23:59
PFPeS	ND	0.044	0.044	0.0070	1	2706-91-4		10/31/2022 23:59
PFHpA	ND	0.047	0.047	0.010	1	375-85-9		10/31/2022 23:59
DONA	ND	0.045	0.045	0.0066	1	919005-14-4	N2	10/31/2022 23:59
PFHxS	ND	0.043	0.043	0.010	1	355-46-4		10/31/2022 23:59
PFOA	ND	0.047	0.047	0.0066	1	335-67-1		10/31/2022 23:59
6:2 FTS	ND	0.045	0.045	0.016	1	27619-97-2		10/31/2022 23:59
PFHpS	ND	0.045	0.045	0.0095	1	375-92-8		10/31/2022 23:59
PFNA	ND	0.047	0.047	0.012	1	375-95-1		10/31/2022 23:59
PFOSAm	ND	0.047	0.047	0.0060	1	754-91-6		10/31/2022 23:59
PFOS	ND	0.044	0.044	0.0082	1	1763-23-1		10/31/2022 23:59
MeFOSA	ND	0.047	0.047	0.014	1	31506-32-8		10/31/2022 23:59
PFDA	ND	0.047	0.047	0.010	1	335-76-2		10/31/2022 23:59
EtFOSAm	ND	0.047	0.047	0.0042	1	4151-50-2		10/31/2022 23:59
8:2 FTS	ND	0.045	0.045	0.016	1	39108-34-4		10/31/2022 23:59
9-CI-PF3ON	ND	0.044	0.044	0.0041	1	756426-58-1		10/31/2022 23:59
PFNS	ND	0.045	0.045	0.012	1	68259-12-1		10/31/2022 23:59
PFUnDA	ND	0.047	0.047	0.0085	1	2058-94-8		10/31/2022 23:59
NMeFOSAA	ND	0.047	0.047	0.011	1	2355-31-9		10/31/2022 23:59
NEtFOSAA	ND	0.047	0.047	0.015	1	2991-50-6		10/31/2022 23:59
PFDS	ND	0.046	0.046	0.0067	1	335-77-3		10/31/2022 23:59
PFDOA	ND	0.047	0.047	0.014	1	307-55-1		10/31/2022 23:59
MeFOSE	ND	0.047	0.047	0.0049	1	24448-09-7		10/31/2022 23:59
EtFOSE	ND	0.047	0.047	0.013	1	1691-99-2		10/31/2022 23:59
11-CI-PF3OUdS	ND	0.045	0.045	0.0064	1	763051-92-9		10/31/2022 23:59
PFTTrDA	ND	0.047	0.047	0.0090	1	72629-94-8		10/31/2022 23:59
PFDoS	ND	0.046	0.046	0.0059	1	79780-39-5		10/31/2022 23:59
PFTDA	ND	0.047	0.047	0.0097	1	376-06-7		10/31/2022 23:59

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-11(11')	Total Amount Extracted	5.28g
Lab Sample ID	40252309004	Ical ID	221024A02
Lab File ID	B221031A_048	CCal File	B221031A_041
Matrix	Solid	Ending CCal File	B221031A_049
Collected	09/28/2022 10:25	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.95	0.93	98	50-200		10/31/2022 23:59
13C4 PFOA	0.95	0.84	89	50-200		10/31/2022 23:59
13C2 PFDA	0.95	0.91	96	50-200		10/31/2022 23:59
13C4 PFOS	0.91	1.0	114	50-200		10/31/2022 23:59

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.95	0.70	74	50-200		10/31/2022 23:59
13C5 PFPeA	0.95	0.71	75	50-200		10/31/2022 23:59
13C3 PFBS	0.88	0.71	80	50-200		10/31/2022 23:59
13C2 4:2FTS	0.88	0.75	85	50-200		10/31/2022 23:59
13C5 PFHxA	0.95	0.67	71	50-200		10/31/2022 23:59
13C4 PFHpA	0.95	0.73	77	50-200		10/31/2022 23:59
13C3 PFHxS	0.90	0.64	71	50-200		10/31/2022 23:59
13C2 6:2FTS	0.90	0.65	72	50-200		10/31/2022 23:59
13C8 PFOA	0.95	0.65	68	50-200		10/31/2022 23:59
13C9 PFNA	0.95	0.70	74	50-200		10/31/2022 23:59
13C8 PFOS	0.91	0.76	84	50-200		10/31/2022 23:59
13C2 8:2FTS	0.91	0.74	82	50-200		10/31/2022 23:59
13C6 PFDA	0.95	0.67	71	50-200		10/31/2022 23:59
d3-MeFOSAA	0.95	0.77	81	50-200		10/31/2022 23:59
13C8 PFOSA	0.95	0.40	42	50-200	R	10/31/2022 23:59
d5-EtFOSAA	0.95	0.69	73	50-200		10/31/2022 23:59
13C7 PFUdA	0.95	0.65	69	50-200		10/31/2022 23:59
13C2 PFDoA	0.95	0.66	70	50-200		10/31/2022 23:59
13C2 PFTeDA	0.95	0.57	61	50-200		10/31/2022 23:59
13C3 HFPO-DA	0.95	0.67	70	50-200		10/31/2022 23:59
d7-N-MeFOSE	0.95	0.17	18	50-200	R	10/31/2022 23:59
d9-N-EtFOSE	0.95	0.15	16	50-200	R	10/31/2022 23:59
d3-N-MeFOSA	0.95	0.0083	1	50-200	R	10/31/2022 23:59
d5-N-EtFOSA	0.95	0.0061	1	50-200	R	10/31/2022 23:59

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-11(11')	Total Amount Extracted	5.28g
Lab Sample ID	40252309004	Ical ID	221024A02
Lab File ID	B221031A_048	CCal File	B221031A_041
Matrix	Solid	Ending CCal File	B221031A_049
Collected	09/28/2022 10:25	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.59	5.59	14		10/31/2022 23:59
13C4 PFOA	N/A	N/A	6.74	6.77	18		10/31/2022 23:59
13C2 PFDA	N/A	N/A	7.96	7.97	15		10/31/2022 23:59
13C4 PFOS	N/A	N/A	8.38	8.36	10		10/31/2022 23:59

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.31	4.30	20		10/31/2022 23:59
13C5 PFPeA	N/A	N/A	5.03	5.04	25		10/31/2022 23:59
13C3 PFBS	N/A	N/A	5.80	5.82	24		10/31/2022 23:59
13C2 4:2FTS	N/A	N/A	5.36	5.38	81		10/31/2022 23:59
13C5 PFHxA	N/A	N/A	5.59	5.62	10		10/31/2022 23:59
13C4 PFHpA	N/A	N/A	6.15	6.20	20		10/31/2022 23:59
13C3 PFHxS	N/A	N/A	7.10	7.15	26		10/31/2022 23:59
13C2 6:2FTS	N/A	N/A	6.44	6.50	14		10/31/2022 23:59
13C8 PFOA	N/A	N/A	6.74	6.80	17		10/31/2022 23:59
13C9 PFNA	N/A	N/A	7.34	7.41	21		10/31/2022 23:59
13C8 PFOS	N/A	N/A	8.39	8.43	23		10/31/2022 23:59
13C2 8:2FTS	N/A	N/A	7.62	7.68	87		10/31/2022 23:59
13C6 PFDA	N/A	N/A	7.96	8.02	15		10/31/2022 23:59
d3-MeFOSAA	N/A	N/A	7.90	7.95	15		10/31/2022 23:59
13C8 PFOSA	N/A	N/A	10.80	10.73	10	R	10/31/2022 23:59
d5-EtFOSAA	N/A	N/A	8.19	8.24	73		10/31/2022 23:59
13C7 PFUdA	N/A	N/A	8.58	8.63	20		10/31/2022 23:59
13C2 PFDoA	N/A	N/A	9.20	9.24	17		10/31/2022 23:59
13C2 PFTeDA	N/A	N/A	10.45	10.46	11		10/31/2022 23:59
13C3 HFPO-DA	N/A	N/A	5.81	5.85	13		10/31/2022 23:59
d7-N-MeFOSE	N/A	N/A	12.52	12.47	47	R	10/31/2022 23:59
d9-N-EtFOSE	N/A	N/A	13.00	12.95	24	R	10/31/2022 23:59
d3-N-MeFOSA	N/A	N/A	12.74	12.68	10	R	10/31/2022 23:59
d5-N-EtFOSA	N/A	N/A	13.16	13.09	93	R	10/31/2022 23:59

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-11(11')	Total Amount Extracted	5.28g
Lab Sample ID	40252309004	Ical ID	221024A02
Lab File ID	B221031A_048	CCal File	B221031A_041
Matrix	Solid	Ending CCal File	B221031A_049
Collected	09/28/2022 10:25	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.31	4.31	ND		10/31/2022 23:59
PFPeA	N/A	N/A	5.03	5.04	ND		10/31/2022 23:59
HFPO-DA	0.00	0.29	0.00	5.86	ND		10/31/2022 23:59
PFBS	0.49	0.41	5.81	5.83	ND		10/31/2022 23:59
PFHxA	0.00	0.07	0.00	5.62	ND		10/31/2022 23:59
4:2 FTS	0.00	0.78	0.00	5.39	ND		10/31/2022 23:59
PFPeS	0.00	0.38	0.00	6.50	ND		10/31/2022 23:59
PFHpA	0.00	0.28	0.00	6.21	ND		10/31/2022 23:59
DONA	0.00	0.60	0.00	6.43	ND		10/31/2022 23:59
PFHxS	0.00	0.36	0.00	7.16	ND		10/31/2022 23:59
PFOA	0.00	0.40	0.00	6.81	ND		10/31/2022 23:59
6:2 FTS	0.00	0.94	0.00	6.49	ND		10/31/2022 23:59
PFHpS	0.00	0.39	0.00	7.80	ND		10/31/2022 23:59
PFNA	0.00	0.15	0.00	7.41	ND		10/31/2022 23:59
PFOSAm	N/A	N/A	0.00	10.74	ND		10/31/2022 23:59
PFOS	0.22	0.35	8.39	8.43	ND		10/31/2022 23:59
MeFOSA	0.00	0.53	0.00	12.70	ND		10/31/2022 23:59
PFDA	0.00	0.18	0.00	8.02	ND		10/31/2022 23:59
EtFOSAm	0.00	0.53	0.00	13.13	ND		10/31/2022 23:59
8:2 FTS	0.00	0.82	0.00	7.68	ND		10/31/2022 23:59
9-CI-PF3ON	0.00	0.06	0.00	8.88	ND		10/31/2022 23:59
PFNS	0.00	0.48	0.00	9.05	ND		10/31/2022 23:59
PFUnDA	0.00	0.14	0.00	8.64	ND		10/31/2022 23:59
NMeFOSAA	0.00	0.76	0.00	7.96	ND		10/31/2022 23:59
NEtFOSAA	0.00	0.71	0.00	8.21	ND		10/31/2022 23:59
PFDS	0.00	0.32	0.00	9.59	ND		10/31/2022 23:59
PFDOA	0.00	0.16	0.00	9.19	ND		10/31/2022 23:59
MeFOSE	N/A	N/A	0.00	12.50	ND		10/31/2022 23:59
EtFOSE	0.00	0.00	0.00	12.97	ND		10/31/2022 23:59
11-CI-PF3OUdS	0.00	0.02	0.00	10.03	ND		10/31/2022 23:59
PFTTrDA	0.00	0.16	0.00	9.80	ND		10/31/2022 23:59
PFDoS	0.00	0.42	0.00	10.75	ND		10/31/2022 23:59
PFTDA	0.00	0.24	0.00	10.40	ND		10/31/2022 23:59

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-12(3')	Total Amount Extracted	5.15g
Lab Sample ID	40252309005	Ical ID	221017B02
Lab File ID	B221018C_011	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 11:35	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.049	0.049	0.0053	1	375-22-4		10/18/2022 19:57
PFPeA	ND	0.049	0.049	0.0054	1	2706-90-3		10/18/2022 19:57
HFPO-DA	ND	0.049	0.049	0.0068	1	13252-13-6		10/18/2022 19:57
PFBS	ND	0.043	0.043	0.0058	1	375-73-5		10/18/2022 19:57
PFHxA	ND	0.049	0.049	0.014	1	307-24-4		10/18/2022 19:57
4:2 FTS	ND	0.045	0.045	0.0082	1	757124-72-4		10/18/2022 19:57
PFPeS	ND	0.046	0.046	0.0071	1	2706-91-4		10/18/2022 19:57
PFHpA	ND	0.049	0.049	0.010	1	375-85-9		10/18/2022 19:57
DONA	ND	0.046	0.046	0.0068	1	919005-14-4	N2	10/18/2022 19:57
PFHxS	ND	0.044	0.044	0.011	1	355-46-4		10/18/2022 19:57
PFOA	ND	0.049	0.049	0.0067	1	335-67-1		10/18/2022 19:57
6:2 FTS	ND	0.046	0.046	0.016	1	27619-97-2		10/18/2022 19:57
PFHpS	ND	0.046	0.046	0.0097	1	375-92-8		10/18/2022 19:57
PFNA	ND	0.049	0.049	0.012	1	375-95-1		10/18/2022 19:57
PFOSAm	ND	0.049	0.049	0.0061	1	754-91-6		10/18/2022 19:57
PFOS	0.078	0.045	0.045	0.0084	1	1763-23-1		10/18/2022 19:57
MeFOSA	ND	0.049	0.049	0.014	1	31506-32-8		10/18/2022 19:57
PFDA	ND	0.049	0.049	0.011	1	335-76-2		10/18/2022 19:57
EtFOSAm	ND	0.049	0.049	0.0043	1	4151-50-2		10/18/2022 19:57
8:2 FTS	ND	0.047	0.047	0.016	1	39108-34-4		10/18/2022 19:57
9-CI-PF3ON	ND	0.045	0.045	0.0042	1	756426-58-1		10/18/2022 19:57
PFNS	ND	0.047	0.047	0.013	1	68259-12-1		10/18/2022 19:57
PFUnDA	ND	0.049	0.049	0.0087	1	2058-94-8		10/18/2022 19:57
NMeFOSAA	ND	0.049	0.049	0.011	1	2355-31-9		10/18/2022 19:57
NEtFOSAA	ND	0.049	0.049	0.016	1	2991-50-6		10/18/2022 19:57
PFDS	ND	0.047	0.047	0.0069	1	335-77-3		10/18/2022 19:57
PFDOA	ND	0.049	0.049	0.014	1	307-55-1		10/18/2022 19:57
MeFOSE	ND	0.049	0.049	0.0050	1	24448-09-7		10/18/2022 19:57
EtFOSE	ND	0.049	0.049	0.013	1	1691-99-2		10/18/2022 19:57
11-CI-PF3OUdS	ND	0.046	0.046	0.0066	1	763051-92-9		10/18/2022 19:57
PFTTrDA	ND	0.049	0.049	0.0093	1	72629-94-8		10/18/2022 19:57
PFDoS	ND	0.047	0.047	0.0060	1	79780-39-5		10/18/2022 19:57
PFTDA	ND	0.049	0.049	0.0099	1	376-06-7		10/18/2022 19:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-12(3')	Total Amount Extracted	5.15g
Lab Sample ID	40252309005	Ical ID	221017B02
Lab File ID	B221018C_011	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 11:35	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.97	0.92	95	50-200		10/18/2022 19:57
13C4 PFOA	0.97	0.94	97	50-200		10/18/2022 19:57
13C2 PFDA	0.97	1.1	114	50-200		10/18/2022 19:57
13C4 PFOS	0.93	1.0	111	50-200		10/18/2022 19:57

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.97	0.79	81	50-200		10/18/2022 19:57
13C5 PFPeA	0.97	0.79	81	50-200		10/18/2022 19:57
13C3 PFBS	0.90	0.76	84	50-200		10/18/2022 19:57
13C2 4:2FTS	0.91	0.77	84	50-200		10/18/2022 19:57
13C5 PFHxA	0.97	0.76	78	50-200		10/18/2022 19:57
13C4 PFHpA	0.97	0.81	83	50-200		10/18/2022 19:57
13C3 PFHxS	0.92	0.75	81	50-200		10/18/2022 19:57
13C2 6:2FTS	0.92	0.71	77	50-200		10/18/2022 19:57
13C8 PFOA	0.97	0.77	79	50-200		10/18/2022 19:57
13C9 PFNA	0.97	0.84	87	50-200		10/18/2022 19:57
13C8 PFOS	0.93	0.74	80	50-200		10/18/2022 19:57
13C2 8:2FTS	0.93	0.80	86	50-200		10/18/2022 19:57
13C6 PFDA	0.97	0.82	84	50-200		10/18/2022 19:57
d3-MeFOSAA	0.97	0.78	80	50-200		10/18/2022 19:57
13C8 PFOSA	0.97	0.74	76	50-200		10/18/2022 19:57
d5-EtFOSAA	0.97	0.76	78	50-200		10/18/2022 19:57
13C7 PFUdA	0.97	0.90	93	50-200		10/18/2022 19:57
13C2 PFDoA	0.97	0.84	86	50-200		10/18/2022 19:57
13C2 PFTeDA	0.97	0.80	83	50-200		10/18/2022 19:57
13C3 HFPO-DA	0.97	0.83	85	50-200		10/18/2022 19:57
d7-N-MeFOSE	0.97	0.37	38	50-200	R	10/18/2022 19:57
d9-N-EtFOSE	0.97	0.34	35	50-200	R	10/18/2022 19:57
d3-N-MeFOSA	0.97	0.63	65	50-200		10/18/2022 19:57
d5-N-EtFOSA	0.97	0.56	57	50-200		10/18/2022 19:57

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-12(3')	Total Amount Extracted	5.15g
Lab Sample ID	40252309005	Ical ID	221017B02
Lab File ID	B221018C_011	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 11:35	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	18		10/18/2022 19:57
13C4 PFOA	N/A	N/A	6.79	6.80	17		10/18/2022 19:57
13C2 PFDA	N/A	N/A	8.01	8.02	14		10/18/2022 19:57
13C4 PFOS	N/A	N/A	8.41	8.42	27		10/18/2022 19:57

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.30	4.30	22		10/18/2022 19:57
13C5 PFPeA	N/A	N/A	5.03	5.04	20		10/18/2022 19:57
13C3 PFBS	N/A	N/A	5.81	5.82	24		10/18/2022 19:57
13C2 4:2FTS	N/A	N/A	5.37	5.38	67		10/18/2022 19:57
13C5 PFHxA	N/A	N/A	5.61	5.62	15		10/18/2022 19:57
13C4 PFHpA	N/A	N/A	6.19	6.20	18		10/18/2022 19:57
13C3 PFHxS	N/A	N/A	7.14	7.15	25		10/18/2022 19:57
13C2 6:2FTS	N/A	N/A	6.49	6.50	15		10/18/2022 19:57
13C8 PFOA	N/A	N/A	6.79	6.80	18		10/18/2022 19:57
13C9 PFNA	N/A	N/A	7.40	7.41	18		10/18/2022 19:57
13C8 PFOS	N/A	N/A	8.41	8.43	20		10/18/2022 19:57
13C2 8:2FTS	N/A	N/A	7.67	7.68	80		10/18/2022 19:57
13C6 PFDA	N/A	N/A	8.01	8.02	15		10/18/2022 19:57
d3-MeFOSAA	N/A	N/A	7.95	7.95	14		10/18/2022 19:57
13C8 PFOSA	N/A	N/A	10.74	10.73	10		10/18/2022 19:57
d5-EtFOSAA	N/A	N/A	8.23	8.24	12		10/18/2022 19:57
13C7 PFUdA	N/A	N/A	8.62	8.63	16		10/18/2022 19:57
13C2 PFDoA	N/A	N/A	9.23	9.24	20		10/18/2022 19:57
13C2 PFTeDA	N/A	N/A	10.45	10.46	11		10/18/2022 19:57
13C3 HFPO-DA	N/A	N/A	5.84	5.85	20		10/18/2022 19:57
d7-N-MeFOSE	N/A	N/A	12.47	12.47	35	R	10/18/2022 19:57
d9-N-EtFOSE	N/A	N/A	12.95	12.95	30	R	10/18/2022 19:57
d3-N-MeFOSA	N/A	N/A	12.68	12.68	62		10/18/2022 19:57
d5-N-EtFOSA	N/A	N/A	13.10	13.16	67		10/18/2022 19:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-12(3')	Total Amount Extracted	5.15g
Lab Sample ID	40252309005	Ical ID	221017B02
Lab File ID	B221018C_011	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 11:35	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.30	4.31	ND		10/18/2022 19:57
PFPeA	N/A	N/A	5.04	5.04	ND		10/18/2022 19:57
HFPO-DA	0.67	0.33	5.86	5.86	ND		10/18/2022 19:57
PFBS	0.00	0.48	0.00	5.83	ND		10/18/2022 19:57
PFHxA	0.09	0.08	5.62	5.62	ND		10/18/2022 19:57
4:2 FTS	0.00	0.83	0.00	5.39	ND		10/18/2022 19:57
PFPeS	0.00	0.41	0.00	6.50	ND		10/18/2022 19:57
PFHpA	0.36	0.29	6.20	6.21	ND		10/18/2022 19:57
DONA	0.00	0.55	0.00	6.43	ND		10/18/2022 19:57
PFHxS	0.00	0.40	0.00	7.16	ND		10/18/2022 19:57
PFOA	0.39	0.37	6.80	6.81	ND		10/18/2022 19:57
6:2 FTS	0.59	0.82	6.48	6.49	ND		10/18/2022 19:57
PFHpS	0.00	0.36	0.00	7.80	ND		10/18/2022 19:57
PFNA	0.05	0.14	7.40	7.41	ND		10/18/2022 19:57
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 19:57
PFOS	0.40	0.42	8.42	8.43	37		10/18/2022 19:57
MeFOSA	0.00	0.52	0.00	12.70	ND		10/18/2022 19:57
PFDA	0.11	0.15	8.01	8.02	ND		10/18/2022 19:57
EtFOSAm	0.00	0.55	0.00	13.13	ND		10/18/2022 19:57
8:2 FTS	0.00	0.95	0.00	7.68	ND		10/18/2022 19:57
9-Cl-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 19:57
PFNS	0.00	0.47	0.00	9.05	ND		10/18/2022 19:57
PFUnDA	0.12	0.12	8.62	8.64	ND		10/18/2022 19:57
NMeFOSAA	0.00	0.81	0.00	7.96	ND		10/18/2022 19:57
NEtFOSAA	0.00	0.60	0.00	8.25	ND		10/18/2022 19:57
PFDS	0.39	0.34	9.65	9.66	ND		10/18/2022 19:57
PFDOA	0.15	0.16	9.23	9.25	ND		10/18/2022 19:57
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 19:57
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 19:57
11-Cl-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 19:57
PFTrDA	0.16	0.16	9.85	9.87	ND		10/18/2022 19:57
PFDoS	0.00	0.45	0.00	10.84	ND		10/18/2022 19:57
PFTDA	0.26	0.27	10.45	10.47	ND		10/18/2022 19:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-13(14.5')
 Lab Sample ID 40252309006
 Lab File ID B221018C_012
 Matrix Solid
 Collected 09/28/2022 10:45
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.23g
 Ical ID 221017B02
 CCal File B221018B_020
 Ending CCal File B221018C_014
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.048	0.048	0.0052	1	375-22-4		10/18/2022 20:17
PFPeA	ND	0.048	0.048	0.0053	1	2706-90-3		10/18/2022 20:17
HFPO-DA	ND	0.048	0.048	0.0067	1	13252-13-6		10/18/2022 20:17
PFBS	ND	0.042	0.042	0.0057	1	375-73-5		10/18/2022 20:17
PFHxA	ND	0.048	0.048	0.014	1	307-24-4		10/18/2022 20:17
4:2 FTS	ND	0.045	0.045	0.0081	1	757124-72-4		10/18/2022 20:17
PFPeS	ND	0.045	0.045	0.0070	1	2706-91-4		10/18/2022 20:17
PFHpA	ND	0.048	0.048	0.010	1	375-85-9		10/18/2022 20:17
DONA	ND	0.045	0.045	0.0067	1	919005-14-4	N2	10/18/2022 20:17
PFHxS	ND	0.043	0.043	0.011	1	355-46-4		10/18/2022 20:17
PFOA	ND	0.048	0.048	0.0066	1	335-67-1		10/18/2022 20:17
6:2 FTS	ND	0.045	0.045	0.016	1	27619-97-2		10/18/2022 20:17
PFHpS	ND	0.045	0.045	0.0096	1	375-92-8		10/18/2022 20:17
PFNA	ND	0.048	0.048	0.012	1	375-95-1		10/18/2022 20:17
PFOSAm	ND	0.048	0.048	0.0060	1	754-91-6		10/18/2022 20:17
PFOS	ND	0.044	0.044	0.0083	1	1763-23-1		10/18/2022 20:17
MeFOSA	ND	0.048	0.048	0.014	1	31506-32-8		10/18/2022 20:17
PFDA	ND	0.048	0.048	0.010	1	335-76-2		10/18/2022 20:17
EtFOSAm	ND	0.048	0.048	0.0043	1	4151-50-2		10/18/2022 20:17
8:2 FTS	ND	0.046	0.046	0.016	1	39108-34-4		10/18/2022 20:17
9-CI-PF3ON	ND	0.045	0.045	0.0041	1	756426-58-1		10/18/2022 20:17
PFNS	ND	0.046	0.046	0.012	1	68259-12-1		10/18/2022 20:17
PFUnDA	ND	0.048	0.048	0.0085	1	2058-94-8		10/18/2022 20:17
NMeFOSAA	ND	0.048	0.048	0.011	1	2355-31-9		10/18/2022 20:17
NEtFOSAA	ND	0.048	0.048	0.015	1	2991-50-6		10/18/2022 20:17
PFDS	ND	0.046	0.046	0.0067	1	335-77-3		10/18/2022 20:17
PFDOA	ND	0.048	0.048	0.014	1	307-55-1		10/18/2022 20:17
MeFOSE	ND	0.048	0.048	0.0049	1	24448-09-7		10/18/2022 20:17
EtFOSE	ND	0.048	0.048	0.013	1	1691-99-2		10/18/2022 20:17
11-CI-PF3OUdS	ND	0.045	0.045	0.0065	1	763051-92-9		10/18/2022 20:17
PFTTrDA	ND	0.048	0.048	0.0091	1	72629-94-8		10/18/2022 20:17
PFDoS	ND	0.046	0.046	0.0059	1	79780-39-5		10/18/2022 20:17
PFTDA	ND	0.048	0.048	0.0097	1	376-06-7		10/18/2022 20:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-13(14.5')	Total Amount Extracted	5.23g
Lab Sample ID	40252309006	Ical ID	221017B02
Lab File ID	B221018C_012	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 10:45	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.96	0.89	94	50-200		10/18/2022 20:17
13C4 PFOA	0.96	0.90	94	50-200		10/18/2022 20:17
13C2 PFDA	0.96	1.1	116	50-200		10/18/2022 20:17
13C4 PFOS	0.91	0.93	102	50-200		10/18/2022 20:17

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.96	0.76	79	50-200		10/18/2022 20:17
13C5 PFPeA	0.96	0.76	80	50-200		10/18/2022 20:17
13C3 PFBS	0.89	0.74	84	50-200		10/18/2022 20:17
13C2 4:2FTS	0.89	0.73	81	50-200		10/18/2022 20:17
13C5 PFHxA	0.96	0.76	79	50-200		10/18/2022 20:17
13C4 PFHpA	0.96	0.81	84	50-200		10/18/2022 20:17
13C3 PFHxS	0.90	0.72	79	50-200		10/18/2022 20:17
13C2 6:2FTS	0.91	0.69	76	50-200		10/18/2022 20:17
13C8 PFOA	0.96	0.77	80	50-200		10/18/2022 20:17
13C9 PFNA	0.96	0.81	85	50-200		10/18/2022 20:17
13C8 PFOS	0.91	0.76	83	50-200		10/18/2022 20:17
13C2 8:2FTS	0.92	0.73	79	50-200		10/18/2022 20:17
13C6 PFDA	0.96	0.87	91	50-200		10/18/2022 20:17
d3-MeFOSAA	0.96	0.60	63	50-200		10/18/2022 20:17
13C8 PFOSA	0.96	0.71	74	50-200		10/18/2022 20:17
d5-EtFOSAA	0.96	0.66	69	50-200		10/18/2022 20:17
13C7 PFUdA	0.96	0.78	81	50-200		10/18/2022 20:17
13C2 PFDoA	0.96	0.79	83	50-200		10/18/2022 20:17
13C2 PFTeDA	0.96	0.75	79	50-200		10/18/2022 20:17
13C3 HFPO-DA	0.96	0.84	87	50-200		10/18/2022 20:17
d7-N-MeFOSE	0.96	0.74	77	50-200		10/18/2022 20:17
d9-N-EtFOSE	0.96	0.74	77	50-200		10/18/2022 20:17
d3-N-MeFOSA	0.96	0.57	59	50-200		10/18/2022 20:17
d5-N-EtFOSA	0.96	0.52	54	50-200		10/18/2022 20:17

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-13(14.5')	Total Amount Extracted	5.23g
Lab Sample ID	40252309006	Ical ID	221017B02
Lab File ID	B221018C_012	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 10:45	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	15		10/18/2022 20:17
13C4 PFOA	N/A	N/A	6.79	6.80	23		10/18/2022 20:17
13C2 PFDA	N/A	N/A	8.00	8.02	12		10/18/2022 20:17
13C4 PFOS	N/A	N/A	8.41	8.42	22		10/18/2022 20:17

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.29	4.30	20		10/18/2022 20:17
13C5 PFPeA	N/A	N/A	5.03	5.04	23		10/18/2022 20:17
13C3 PFBS	N/A	N/A	5.81	5.82	21		10/18/2022 20:17
13C2 4:2FTS	N/A	N/A	5.37	5.38	58		10/18/2022 20:17
13C5 PFHxA	N/A	N/A	5.61	5.62	14		10/18/2022 20:17
13C4 PFHpA	N/A	N/A	6.19	6.20	14		10/18/2022 20:17
13C3 PFHxS	N/A	N/A	7.14	7.15	28		10/18/2022 20:17
13C2 6:2FTS	N/A	N/A	6.49	6.50	38		10/18/2022 20:17
13C8 PFOA	N/A	N/A	6.79	6.80	19		10/18/2022 20:17
13C9 PFNA	N/A	N/A	7.39	7.41	16		10/18/2022 20:17
13C8 PFOS	N/A	N/A	8.41	8.43	20		10/18/2022 20:17
13C2 8:2FTS	N/A	N/A	7.67	7.68	13		10/18/2022 20:17
13C6 PFDA	N/A	N/A	8.00	8.02	14		10/18/2022 20:17
d3-MeFOSAA	N/A	N/A	7.94	7.95	12		10/18/2022 20:17
13C8 PFOSA	N/A	N/A	10.73	10.73	13		10/18/2022 20:17
d5-EtFOSAA	N/A	N/A	8.22	8.24	87		10/18/2022 20:17
13C7 PFUdA	N/A	N/A	8.61	8.63	13		10/18/2022 20:17
13C2 PFDoA	N/A	N/A	9.23	9.24	14		10/18/2022 20:17
13C2 PFTeDA	N/A	N/A	10.45	10.46	12		10/18/2022 20:17
13C3 HFPO-DA	N/A	N/A	5.84	5.85	15		10/18/2022 20:17
d7-N-MeFOSE	N/A	N/A	12.47	12.47	37		10/18/2022 20:17
d9-N-EtFOSE	N/A	N/A	12.95	12.95	46		10/18/2022 20:17
d3-N-MeFOSA	N/A	N/A	12.68	12.68	51		10/18/2022 20:17
d5-N-EtFOSA	N/A	N/A	13.10	13.16	71		10/18/2022 20:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-13(14.5')	Total Amount Extracted	5.23g
Lab Sample ID	40252309006	Ical ID	221017B02
Lab File ID	B221018C_012	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 10:45	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.30	4.31	ND		10/18/2022 20:17
PFPeA	N/A	N/A	5.04	5.04	ND		10/18/2022 20:17
HFPO-DA	0.55	0.33	5.85	5.86	ND		10/18/2022 20:17
PFBS	0.00	0.48	0.00	5.83	ND		10/18/2022 20:17
PFHxA	0.00	0.08	0.00	5.62	ND		10/18/2022 20:17
4:2 FTS	0.00	0.83	0.00	5.39	ND		10/18/2022 20:17
PFPeS	0.00	0.41	0.00	6.50	ND		10/18/2022 20:17
PFHpA	0.00	0.29	0.00	6.21	ND		10/18/2022 20:17
DONA	0.00	0.55	0.00	6.43	ND		10/18/2022 20:17
PFHxS	0.00	0.40	0.00	7.16	ND		10/18/2022 20:17
PFOA	0.00	0.37	0.00	6.81	ND		10/18/2022 20:17
6:2 FTS	0.00	0.82	0.00	6.49	ND		10/18/2022 20:17
PFHpS	0.00	0.36	0.00	7.80	ND		10/18/2022 20:17
PFNA	0.00	0.14	0.00	7.41	ND		10/18/2022 20:17
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 20:17
PFOS	0.00	0.42	0.00	8.43	ND		10/18/2022 20:17
MeFOSA	0.00	0.52	0.00	12.70	ND		10/18/2022 20:17
PFDA	0.00	0.15	0.00	8.02	ND		10/18/2022 20:17
EtFOSAm	0.00	0.55	0.00	13.13	ND		10/18/2022 20:17
8:2 FTS	0.00	0.95	0.00	7.68	ND		10/18/2022 20:17
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 20:17
PFNS	0.00	0.47	0.00	9.05	ND		10/18/2022 20:17
PFUnDA	0.00	0.12	0.00	8.64	ND		10/18/2022 20:17
NMeFOSAA	0.00	0.81	0.00	7.96	ND		10/18/2022 20:17
NEtFOSAA	0.00	0.60	0.00	8.25	ND		10/18/2022 20:17
PFDS	0.00	0.34	0.00	9.66	ND		10/18/2022 20:17
PFDOA	0.00	0.16	0.00	9.25	ND		10/18/2022 20:17
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 20:17
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 20:17
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 20:17
PFTTrDA	0.00	0.16	0.00	9.87	ND		10/18/2022 20:17
PFDoS	0.00	0.45	0.00	10.84	ND		10/18/2022 20:17
PFTDA	0.00	0.27	0.00	10.47	ND		10/18/2022 20:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-14 (14.5)
 Lab Sample ID 40252309007
 Lab File ID B221018C_013
 Matrix Solid
 Collected 09/28/2022 11:05
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.23g
 Ical ID 221017B02
 CCal File B221018B_020
 Ending CCal File B221018C_014
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.048	0.048	0.0052	1	375-22-4		10/18/2022 20:37
PFPeA	0.17	0.048	0.048	0.0053	1	2706-90-3		10/18/2022 20:37
HFPO-DA	ND	0.048	0.048	0.0067	1	13252-13-6		10/18/2022 20:37
PFBS	ND	0.042	0.042	0.0057	1	375-73-5		10/18/2022 20:37
PFHxA	0.17	0.048	0.048	0.014	1	307-24-4		10/18/2022 20:37
4:2 FTS	ND	0.045	0.045	0.0081	1	757124-72-4		10/18/2022 20:37
PFPeS	ND	0.045	0.045	0.0070	1	2706-91-4		10/18/2022 20:37
PFHpA	0.18	0.048	0.048	0.010	1	375-85-9		10/18/2022 20:37
DONA	ND	0.045	0.045	0.0067	1	919005-14-4	N2	10/18/2022 20:37
PFHxS	ND	0.044	0.044	0.011	1	355-46-4		10/18/2022 20:37
PFOA	ND	0.048	0.048	0.0066	1	335-67-1		10/18/2022 20:37
6:2 FTS	0.11	0.045	0.045	0.016	1	27619-97-2		10/18/2022 20:37
PFHpS	ND	0.045	0.045	0.0096	1	375-92-8		10/18/2022 20:37
PFNA	ND	0.048	0.048	0.012	1	375-95-1		10/18/2022 20:37
PFOSAm	ND	0.048	0.048	0.0060	1	754-91-6		10/18/2022 20:37
PFOS	ND	0.044	0.044	0.0083	1	1763-23-1		10/18/2022 20:37
MeFOSA	ND	0.048	0.048	0.014	1	31506-32-8		10/18/2022 20:37
PFDA	ND	0.048	0.048	0.010	1	335-76-2		10/18/2022 20:37
EtFOSAm	ND	0.048	0.048	0.0043	1	4151-50-2		10/18/2022 20:37
8:2 FTS	ND	0.046	0.046	0.016	1	39108-34-4		10/18/2022 20:37
9-CI-PF3ON	ND	0.045	0.045	0.0042	1	756426-58-1		10/18/2022 20:37
PFNS	ND	0.046	0.046	0.012	1	68259-12-1		10/18/2022 20:37
PFUnDA	ND	0.048	0.048	0.0086	1	2058-94-8		10/18/2022 20:37
NMeFOSAA	ND	0.048	0.048	0.011	1	2355-31-9		10/18/2022 20:37
NEtFOSAA	ND	0.048	0.048	0.015	1	2991-50-6		10/18/2022 20:37
PFDS	ND	0.046	0.046	0.0068	1	335-77-3		10/18/2022 20:37
PFDOA	ND	0.048	0.048	0.014	1	307-55-1		10/18/2022 20:37
MeFOSE	ND	0.048	0.048	0.0049	1	24448-09-7		10/18/2022 20:37
EtFOSE	ND	0.048	0.048	0.013	1	1691-99-2		10/18/2022 20:37
11-CI-PF3OUdS	ND	0.045	0.045	0.0065	1	763051-92-9		10/18/2022 20:37
PFTTrDA	ND	0.048	0.048	0.0091	1	72629-94-8		10/18/2022 20:37
PFDoS	ND	0.046	0.046	0.0060	1	79780-39-5		10/18/2022 20:37
PFTDA	ND	0.048	0.048	0.0098	1	376-06-7		10/18/2022 20:37

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-14 (14.5)
 Lab Sample ID 40252309007
 Lab File ID B221018C_013
 Matrix Solid
 Collected 09/28/2022 11:05
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.23g
 Ical ID 221017B02
 CCal File B221018B_020
 Ending CCal File B221018C_014
 Blank File B221018D_004

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.96	1.0	105	50-200		10/18/2022 20:37
13C4 PFOA	0.96	0.93	97	50-200		10/18/2022 20:37
13C2 PFDA	0.96	1.1	116	50-200		10/18/2022 20:37
13C4 PFOS	0.92	1.0	114	50-200		10/18/2022 20:37

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.96	0.75	78	50-200		10/18/2022 20:37
13C5 PFPeA	0.96	0.75	78	50-200		10/18/2022 20:37
13C3 PFBS	0.89	0.73	82	50-200		10/18/2022 20:37
13C2 4:2FTS	0.89	0.72	80	50-200		10/18/2022 20:37
13C5 PFHxA	0.96	0.72	75	50-200		10/18/2022 20:37
13C4 PFHpA	0.96	0.80	84	50-200		10/18/2022 20:37
13C3 PFHxS	0.91	0.73	80	50-200		10/18/2022 20:37
13C2 6:2FTS	0.91	0.68	75	50-200		10/18/2022 20:37
13C8 PFOA	0.96	0.75	78	50-200		10/18/2022 20:37
13C9 PFNA	0.96	0.79	83	50-200		10/18/2022 20:37
13C8 PFOS	0.92	0.74	81	50-200		10/18/2022 20:37
13C2 8:2FTS	0.92	0.71	77	50-200		10/18/2022 20:37
13C6 PFDA	0.96	0.87	91	50-200		10/18/2022 20:37
d3-MeFOSAA	0.96	0.70	73	50-200		10/18/2022 20:37
13C8 PFOSA	0.96	0.66	69	50-200		10/18/2022 20:37
d5-EtFOSAA	0.96	0.73	76	50-200		10/18/2022 20:37
13C7 PFUdA	0.96	0.82	85	50-200		10/18/2022 20:37
13C2 PFDoA	0.96	0.86	89	50-200		10/18/2022 20:37
13C2 PFTeDA	0.96	0.75	79	50-200		10/18/2022 20:37
13C3 HFPO-DA	0.96	0.79	82	50-200		10/18/2022 20:37
d7-N-MeFOSE	0.96	0.58	61	50-200		10/18/2022 20:37
d9-N-EtFOSE	0.96	0.54	56	50-200		10/18/2022 20:37
d3-N-MeFOSA	0.96	0.14	15	50-200	R	10/18/2022 20:37
d5-N-EtFOSA	0.96	0.13	13	50-200	R	10/18/2022 20:37

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-14 (14.5)	Total Amount Extracted	5.23g
Lab Sample ID	40252309007	Ical ID	221017B02
Lab File ID	B221018C_013	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 11:05	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	14		10/18/2022 20:37
13C4 PFOA	N/A	N/A	6.79	6.80	23		10/18/2022 20:37
13C2 PFDA	N/A	N/A	8.00	8.02	10		10/18/2022 20:37
13C4 PFOS	N/A	N/A	8.41	8.42	17		10/18/2022 20:37

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.29	4.30	21		10/18/2022 20:37
13C5 PFPeA	N/A	N/A	5.03	5.04	24		10/18/2022 20:37
13C3 PFBS	N/A	N/A	5.81	5.82	25		10/18/2022 20:37
13C2 4:2FTS	N/A	N/A	5.37	5.38	66		10/18/2022 20:37
13C5 PFHxA	N/A	N/A	5.61	5.62	16		10/18/2022 20:37
13C4 PFHpA	N/A	N/A	6.19	6.20	14		10/18/2022 20:37
13C3 PFHxS	N/A	N/A	7.14	7.15	22		10/18/2022 20:37
13C2 6:2FTS	N/A	N/A	6.49	6.50	12		10/18/2022 20:37
13C8 PFOA	N/A	N/A	6.79	6.80	22		10/18/2022 20:37
13C9 PFNA	N/A	N/A	7.39	7.41	18		10/18/2022 20:37
13C8 PFOS	N/A	N/A	8.41	8.43	17		10/18/2022 20:37
13C2 8:2FTS	N/A	N/A	7.67	7.68	43		10/18/2022 20:37
13C6 PFDA	N/A	N/A	8.00	8.02	15		10/18/2022 20:37
d3-MeFOSAA	N/A	N/A	7.95	7.95	13		10/18/2022 20:37
13C8 PFOSA	N/A	N/A	10.73	10.73	11		10/18/2022 20:37
d5-EtFOSAA	N/A	N/A	8.23	8.24	98		10/18/2022 20:37
13C7 PFUdA	N/A	N/A	8.62	8.63	16		10/18/2022 20:37
13C2 PFDaA	N/A	N/A	9.23	9.24	23		10/18/2022 20:37
13C2 PFTeDA	N/A	N/A	10.45	10.46	10		10/18/2022 20:37
13C3 HFPO-DA	N/A	N/A	5.84	5.85	16		10/18/2022 20:37
d7-N-MeFOSE	N/A	N/A	12.47	12.47	42		10/18/2022 20:37
d9-N-EtFOSE	N/A	N/A	12.95	12.95	39		10/18/2022 20:37
d3-N-MeFOSA	N/A	N/A	12.68	12.68	40	R	10/18/2022 20:37
d5-N-EtFOSA	N/A	N/A	13.10	13.16	42	R	10/18/2022 20:37

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-14 (14.5)	Total Amount Extracted	5.23g
Lab Sample ID	40252309007	Ical ID	221017B02
Lab File ID	B221018C_013	CCal File	B221018B_020
Matrix	Solid	Ending CCal File	B221018C_014
Collected	09/28/2022 11:05	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.30	4.31	ND		10/18/2022 20:37
PFPeA	N/A	N/A	5.04	5.04	28		10/18/2022 20:37
HFPO-DA	0.40	0.33	5.86	5.86	ND		10/18/2022 20:37
PFBS	0.00	0.48	0.00	5.83	ND		10/18/2022 20:37
PFHxA	0.08	0.08	5.62	5.62	14		10/18/2022 20:37
4:2 FTS	0.00	0.83	0.00	5.39	ND		10/18/2022 20:37
PFPeS	0.00	0.41	0.00	6.50	ND		10/18/2022 20:37
PFHpA	0.29	0.29	6.20	6.21	23		10/18/2022 20:37
DONA	0.00	0.55	0.00	6.43	ND		10/18/2022 20:37
PFHxS	0.46	0.40	7.15	7.16	ND		10/18/2022 20:37
PFOA	0.37	0.37	6.79	6.81	ND		10/18/2022 20:37
6:2 FTS	0.98	0.82	6.49	6.49	16		10/18/2022 20:37
PFHpS	0.00	0.36	0.00	7.80	ND		10/18/2022 20:37
PFNA	0.15	0.14	7.40	7.41	ND		10/18/2022 20:37
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 20:37
PFOS	0.36	0.42	8.42	8.43	ND		10/18/2022 20:37
MeFOSA	0.00	0.52	0.00	12.70	ND		10/18/2022 20:37
PFDA	0.00	0.15	0.00	8.02	ND		10/18/2022 20:37
EtFOSAm	0.00	0.55	0.00	13.13	ND		10/18/2022 20:37
8:2 FTS	0.00	0.95	0.00	7.68	ND		10/18/2022 20:37
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 20:37
PFNS	0.00	0.47	0.00	9.05	ND		10/18/2022 20:37
PFUnDA	0.00	0.12	0.00	8.64	ND		10/18/2022 20:37
NMeFOSAA	0.00	0.81	0.00	7.96	ND		10/18/2022 20:37
NEtFOSAA	0.00	0.60	0.00	8.25	ND		10/18/2022 20:37
PFDS	0.00	0.34	0.00	9.66	ND		10/18/2022 20:37
PFDOA	0.00	0.16	0.00	9.25	ND		10/18/2022 20:37
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 20:37
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 20:37
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 20:37
PFTTrDA	0.00	0.16	0.00	9.87	ND		10/18/2022 20:37
PFDoS	0.00	0.45	0.00	10.84	ND		10/18/2022 20:37
PFTDA	0.00	0.27	0.00	10.47	ND		10/18/2022 20:37

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID GP-15 (3')
 Lab Sample ID 40252309008
 Lab File ID B221018C_015
 Matrix Solid
 Collected 09/28/2022 12:00
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.08g
 Ical ID 221017B02
 CCal File B221018C_014
 Ending CCal File B221018D_002
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.049	0.049	0.0054	1	375-22-4		10/18/2022 21:17
PFPeA	ND	0.049	0.049	0.0054	1	2706-90-3		10/18/2022 21:17
HFPO-DA	ND	0.049	0.049	0.0068	1	13252-13-6		10/18/2022 21:17
PFBS	ND	0.044	0.044	0.0059	1	375-73-5		10/18/2022 21:17
PFHxA	ND	0.049	0.049	0.014	1	307-24-4		10/18/2022 21:17
4:2 FTS	ND	0.046	0.046	0.0083	1	757124-72-4		10/18/2022 21:17
PFPeS	ND	0.046	0.046	0.0072	1	2706-91-4		10/18/2022 21:17
PFHpA	ND	0.049	0.049	0.010	1	375-85-9		10/18/2022 21:17
DONA	ND	0.046	0.046	0.0068	1	919005-14-4	N2	10/18/2022 21:17
PFHxS	ND	0.045	0.045	0.011	1	355-46-4		10/18/2022 21:17
PFOA	ND	0.049	0.049	0.0068	1	335-67-1		10/18/2022 21:17
6:2 FTS	ND	0.047	0.047	0.016	1	27619-97-2		10/18/2022 21:17
PFHpS	ND	0.047	0.047	0.0098	1	375-92-8		10/18/2022 21:17
PFNA	ND	0.049	0.049	0.012	1	375-95-1		10/18/2022 21:17
PFOSAm	ND	0.049	0.049	0.0062	1	754-91-6		10/18/2022 21:17
PFOS	ND	0.046	0.046	0.0086	1	1763-23-1		10/18/2022 21:17
MeFOSA	ND	0.049	0.049	0.014	1	31506-32-8		10/18/2022 21:17
PFDA	ND	0.049	0.049	0.011	1	335-76-2		10/18/2022 21:17
EtFOSAm	ND	0.049	0.049	0.0044	1	4151-50-2		10/18/2022 21:17
8:2 FTS	ND	0.047	0.047	0.017	1	39108-34-4		10/18/2022 21:17
9-CI-PF3ON	ND	0.046	0.046	0.0043	1	756426-58-1		10/18/2022 21:17
PFNS	ND	0.047	0.047	0.013	1	68259-12-1		10/18/2022 21:17
PFUnDA	ND	0.049	0.049	0.0088	1	2058-94-8		10/18/2022 21:17
NMeFOSAA	ND	0.049	0.049	0.011	1	2355-31-9		10/18/2022 21:17
NEtFOSAA	ND	0.049	0.049	0.016	1	2991-50-6		10/18/2022 21:17
PFDS	ND	0.047	0.047	0.0069	1	335-77-3		10/18/2022 21:17
PFDOA	ND	0.049	0.049	0.014	1	307-55-1		10/18/2022 21:17
MeFOSE	ND	0.049	0.049	0.0051	1	24448-09-7		10/18/2022 21:17
EtFOSE	ND	0.049	0.049	0.013	1	1691-99-2		10/18/2022 21:17
11-CI-PF3OUdS	ND	0.046	0.046	0.0067	1	763051-92-9		10/18/2022 21:17
PFTTrDA	ND	0.049	0.049	0.0094	1	72629-94-8		10/18/2022 21:17
PFDoS	ND	0.048	0.048	0.0061	1	79780-39-5		10/18/2022 21:17
PFTDA	ND	0.049	0.049	0.010	1	376-06-7		10/18/2022 21:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-15 (3')	Total Amount Extracted	5.08g
Lab Sample ID	40252309008	Ical ID	221017B02
Lab File ID	B221018C_015	CCal File	B221018C_014
Matrix	Solid	Ending CCal File	B221018D_002
Collected	09/28/2022 12:00	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.98	1.0	103	50-200		10/18/2022 21:17
13C4 PFOA	0.98	0.99	101	50-200		10/18/2022 21:17
13C2 PFDA	0.98	1.2	120	50-200		10/18/2022 21:17
13C4 PFOS	0.94	1.1	114	50-200		10/18/2022 21:17

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.98	0.75	77	50-200		10/18/2022 21:17
13C5 PFPeA	0.98	0.78	79	50-200		10/18/2022 21:17
13C3 PFBS	0.91	0.71	77	50-200		10/18/2022 21:17
13C2 4:2FTS	0.92	0.82	89	50-200		10/18/2022 21:17
13C5 PFHxA	0.98	0.73	74	50-200		10/18/2022 21:17
13C4 PFHpA	0.98	0.80	82	50-200		10/18/2022 21:17
13C3 PFHxS	0.93	0.75	81	50-200		10/18/2022 21:17
13C2 6:2FTS	0.93	0.71	76	50-200		10/18/2022 21:17
13C8 PFOA	0.98	0.83	84	50-200		10/18/2022 21:17
13C9 PFNA	0.98	0.81	82	50-200		10/18/2022 21:17
13C8 PFOS	0.94	0.73	78	50-200		10/18/2022 21:17
13C2 8:2FTS	0.94	0.78	82	50-200		10/18/2022 21:17
13C6 PFDA	0.98	0.87	89	50-200		10/18/2022 21:17
d3-MeFOSAA	0.98	0.81	82	50-200		10/18/2022 21:17
13C8 PFOSA	0.98	0.69	71	50-200		10/18/2022 21:17
d5-EtFOSAA	0.98	0.73	74	50-200		10/18/2022 21:17
13C7 PFUdA	0.98	0.81	82	50-200		10/18/2022 21:17
13C2 PFDoA	0.98	0.81	83	50-200		10/18/2022 21:17
13C2 PFTeDA	0.98	0.75	76	50-200		10/18/2022 21:17
13C3 HFPO-DA	0.98	0.80	82	50-200		10/18/2022 21:17
d7-N-MeFOSE	0.98	0.56	57	50-200		10/18/2022 21:17
d9-N-EtFOSE	0.98	0.51	52	50-200		10/18/2022 21:17
d3-N-MeFOSA	0.98	0.15	15	50-200	R	10/18/2022 21:17
d5-N-EtFOSA	0.98	0.11	11	50-200	R	10/18/2022 21:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-15 (3')	Total Amount Extracted	5.08g
Lab Sample ID	40252309008	Ical ID	221017B02
Lab File ID	B221018C_015	CCal File	B221018C_014
Matrix	Solid	Ending CCal File	B221018D_002
Collected	09/28/2022 12:00	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	18		10/18/2022 21:17
13C4 PFOA	N/A	N/A	6.79	6.80	17		10/18/2022 21:17
13C2 PFDA	N/A	N/A	8.00	8.02	15		10/18/2022 21:17
13C4 PFOS	N/A	N/A	8.41	8.42	22		10/18/2022 21:17

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.30	4.30	20		10/18/2022 21:17
13C5 PFPeA	N/A	N/A	5.03	5.04	19		10/18/2022 21:17
13C3 PFBS	N/A	N/A	5.81	5.82	14		10/18/2022 21:17
13C2 4:2FTS	N/A	N/A	5.37	5.38	59		10/18/2022 21:17
13C5 PFHxA	N/A	N/A	5.61	5.62	15		10/18/2022 21:17
13C4 PFHpA	N/A	N/A	6.19	6.20	13		10/18/2022 21:17
13C3 PFHxS	N/A	N/A	7.14	7.15	27		10/18/2022 21:17
13C2 6:2FTS	N/A	N/A	6.49	6.50	95		10/18/2022 21:17
13C8 PFOA	N/A	N/A	6.79	6.80	23		10/18/2022 21:17
13C9 PFNA	N/A	N/A	7.39	7.41	16		10/18/2022 21:17
13C8 PFOS	N/A	N/A	8.41	8.43	23		10/18/2022 21:17
13C2 8:2FTS	N/A	N/A	7.67	7.68	37		10/18/2022 21:17
13C6 PFDA	N/A	N/A	8.00	8.02	16		10/18/2022 21:17
d3-MeFOSAA	N/A	N/A	7.94	7.95	63		10/18/2022 21:17
13C8 PFOSA	N/A	N/A	10.74	10.73	97		10/18/2022 21:17
d5-EtFOSAA	N/A	N/A	8.23	8.24	85		10/18/2022 21:17
13C7 PFUdA	N/A	N/A	8.61	8.63	18		10/18/2022 21:17
13C2 PFDaA	N/A	N/A	9.23	9.24	15		10/18/2022 21:17
13C2 PFTeDA	N/A	N/A	10.45	10.46	94		10/18/2022 21:17
13C3 HFPO-DA	N/A	N/A	5.84	5.85	16		10/18/2022 21:17
d7-N-MeFOSE	N/A	N/A	12.47	12.47	41		10/18/2022 21:17
d9-N-EtFOSE	N/A	N/A	12.95	12.95	40		10/18/2022 21:17
d3-N-MeFOSA	N/A	N/A	12.68	12.68	38	R	10/18/2022 21:17
d5-N-EtFOSA	N/A	N/A	13.11	13.16	49	R	10/18/2022 21:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	GP-15 (3')	Total Amount Extracted	5.08g
Lab Sample ID	40252309008	Ical ID	221017B02
Lab File ID	B221018C_015	CCal File	B221018C_014
Matrix	Solid	Ending CCal File	B221018D_002
Collected	09/28/2022 12:00	Blank File	B221018D_004
Received	10/01/2022 12:38		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.30	4.31	ND		10/18/2022 21:17
PFPeA	N/A	N/A	5.04	5.04	ND		10/18/2022 21:17
HFPO-DA	0.50	0.34	5.85	5.86	ND		10/18/2022 21:17
PFBS	0.00	0.42	0.00	5.83	ND		10/18/2022 21:17
PFHxA	0.00	0.08	0.00	5.62	ND		10/18/2022 21:17
4:2 FTS	0.00	0.81	0.00	5.39	ND		10/18/2022 21:17
PFPeS	0.00	0.42	0.00	6.50	ND		10/18/2022 21:17
PFHpA	0.00	0.29	0.00	6.21	ND		10/18/2022 21:17
DONA	0.00	0.57	0.00	6.43	ND		10/18/2022 21:17
PFHxS	0.46	0.39	7.14	7.16	ND		10/18/2022 21:17
PFOA	0.70	0.37	6.80	6.81	ND		10/18/2022 21:17
6:2 FTS	0.58	0.87	6.46	6.49	ND		10/18/2022 21:17
PFHpS	0.00	0.38	0.00	7.80	ND		10/18/2022 21:17
PFNA	0.00	0.16	0.00	7.41	ND		10/18/2022 21:17
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 21:17
PFOS	0.00	0.39	0.00	8.43	ND		10/18/2022 21:17
MeFOSA	0.00	0.59	0.00	12.70	ND		10/18/2022 21:17
PFDA	0.00	0.13	0.00	8.02	ND		10/18/2022 21:17
EtFOSAm	0.00	0.53	0.00	13.13	ND		10/18/2022 21:17
8:2 FTS	0.00	0.98	0.00	7.68	ND		10/18/2022 21:17
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 21:17
PFNS	0.00	0.43	0.00	9.05	ND		10/18/2022 21:17
PFUnDA	0.00	0.11	0.00	8.64	ND		10/18/2022 21:17
NMeFOSAA	0.00	0.91	0.00	7.96	ND		10/18/2022 21:17
NEtFOSAA	0.00	0.69	0.00	8.25	ND		10/18/2022 21:17
PFDS	0.00	0.31	0.00	9.66	ND		10/18/2022 21:17
PFDOA	0.00	0.15	0.00	9.25	ND		10/18/2022 21:17
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 21:17
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 21:17
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 21:17
PFTTrDA	0.00	0.16	0.00	9.87	ND		10/18/2022 21:17
PFDoS	0.00	0.46	0.00	10.84	ND		10/18/2022 21:17
PFTDA	0.00	0.24	0.00	10.47	ND		10/18/2022 21:17

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID HA-1 OUTFALL (1')
 Lab Sample ID 40252309009
 Lab File ID B221018C_016
 Matrix Solid
 Collected 09/28/2022 12:30
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.71g
 Ical ID 221017B02
 CCal File B221018C_014
 Ending CCal File B221018D_002
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.044	0.044	0.0048	1	375-22-4		10/18/2022 21:38
PFPeA	ND	0.044	0.044	0.0048	1	2706-90-3		10/18/2022 21:38
HFPO-DA	ND	0.044	0.044	0.0061	1	13252-13-6		10/18/2022 21:38
PFBS	ND	0.039	0.039	0.0052	1	375-73-5		10/18/2022 21:38
PFHxA	ND	0.044	0.044	0.013	1	307-24-4		10/18/2022 21:38
4:2 FTS	ND	0.041	0.041	0.0074	1	757124-72-4		10/18/2022 21:38
PFPeS	ND	0.041	0.041	0.0064	1	2706-91-4		10/18/2022 21:38
PFHpA	ND	0.044	0.044	0.0093	1	375-85-9		10/18/2022 21:38
DONA	ND	0.041	0.041	0.0061	1	919005-14-4	N2	10/18/2022 21:38
PFHxS	ND	0.040	0.040	0.0096	1	355-46-4		10/18/2022 21:38
PFOA	0.12	0.044	0.044	0.0061	1	335-67-1		10/18/2022 21:38
6:2 FTS	ND	0.042	0.042	0.015	1	27619-97-2		10/18/2022 21:38
PFHpS	ND	0.042	0.042	0.0088	1	375-92-8		10/18/2022 21:38
PFNA	0.063	0.044	0.044	0.011	1	375-95-1		10/18/2022 21:38
PFOSAm	ND	0.044	0.044	0.0055	1	754-91-6		10/18/2022 21:38
PFOS	0.44	0.041	0.041	0.0076	1	1763-23-1		10/18/2022 21:38
MeFOSA	ND	0.044	0.044	0.013	1	31506-32-8		10/18/2022 21:38
PFDA	0.069	0.044	0.044	0.0095	1	335-76-2		10/18/2022 21:38
EtFOSAm	ND	0.044	0.044	0.0039	1	4151-50-2		10/18/2022 21:38
8:2 FTS	ND	0.042	0.042	0.015	1	39108-34-4		10/18/2022 21:38
9-CI-PF3ON	ND	0.041	0.041	0.0038	1	756426-58-1		10/18/2022 21:38
PFNS	ND	0.042	0.042	0.011	1	68259-12-1		10/18/2022 21:38
PFUnDA	ND	0.044	0.044	0.0078	1	2058-94-8		10/18/2022 21:38
NMeFOSAA	ND	0.044	0.044	0.010	1	2355-31-9		10/18/2022 21:38
NEtFOSAA	ND	0.044	0.044	0.014	1	2991-50-6		10/18/2022 21:38
PFDS	0.055	0.042	0.042	0.0062	1	335-77-3		10/18/2022 21:38
PFDOA	ND	0.044	0.044	0.013	1	307-55-1		10/18/2022 21:38
MeFOSE	ND	0.044	0.044	0.0045	1	24448-09-7		10/18/2022 21:38
EtFOSE	ND	0.044	0.044	0.012	1	1691-99-2		10/18/2022 21:38
11-CI-PF3OUdS	ND	0.041	0.041	0.0059	1	763051-92-9		10/18/2022 21:38
PFTTrDA	ND	0.044	0.044	0.0084	1	72629-94-8		10/18/2022 21:38
PFDoS	ND	0.042	0.042	0.0054	1	79780-39-5		10/18/2022 21:38
PFTDA	ND	0.044	0.044	0.0089	1	376-06-7		10/18/2022 21:38

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID HA-1 OUTFALL (1')
 Lab Sample ID 40252309009
 Lab File ID B221018C_016
 Matrix Solid
 Collected 09/28/2022 12:30
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.71g
 Ical ID 221017B02
 CCal File B221018C_014
 Ending CCal File B221018D_002
 Blank File B221018D_004

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.88	0.86	98	50-200		10/18/2022 21:38
13C4 PFOA	0.88	0.89	102	50-200		10/18/2022 21:38
13C2 PFDA	0.88	1.1	121	50-200		10/18/2022 21:38
13C4 PFOS	0.84	0.96	115	50-200		10/18/2022 21:38

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.88	0.73	83	50-200		10/18/2022 21:38
13C5 PFPeA	0.88	0.73	83	50-200		10/18/2022 21:38
13C3 PFBS	0.81	0.68	84	50-200		10/18/2022 21:38
13C2 4:2FTS	0.82	0.87	106	50-200		10/18/2022 21:38
13C5 PFHxA	0.88	0.69	78	50-200		10/18/2022 21:38
13C4 PFHpA	0.88	0.76	87	50-200		10/18/2022 21:38
13C3 PFHxS	0.83	0.73	89	50-200		10/18/2022 21:38
13C2 6:2FTS	0.83	0.72	87	50-200		10/18/2022 21:38
13C8 PFOA	0.88	0.73	83	50-200		10/18/2022 21:38
13C9 PFNA	0.88	0.84	96	50-200		10/18/2022 21:38
13C8 PFOS	0.84	0.74	89	50-200		10/18/2022 21:38
13C2 8:2FTS	0.84	0.73	87	50-200		10/18/2022 21:38
13C6 PFDA	0.88	0.86	98	50-200		10/18/2022 21:38
d3-MeFOSAA	0.88	0.81	92	50-200		10/18/2022 21:38
13C8 PFOSA	0.88	0.68	77	50-200		10/18/2022 21:38
d5-EtFOSAA	0.88	0.77	88	50-200		10/18/2022 21:38
13C7 PFUdA	0.88	0.93	106	50-200		10/18/2022 21:38
13C2 PFDaA	0.88	0.87	100	50-200		10/18/2022 21:38
13C2 PFTeDA	0.88	0.76	86	50-200		10/18/2022 21:38
13C3 HFPO-DA	0.88	0.80	91	50-200		10/18/2022 21:38
d7-N-MeFOSE	0.88	0.37	43	50-200	R	10/18/2022 21:38
d9-N-EtFOSE	0.88	0.40	45	50-200	R	10/18/2022 21:38
d3-N-MeFOSA	0.88	0.36	41	50-200	R	10/18/2022 21:38
d5-N-EtFOSA	0.88	0.24	27	50-200	R	10/18/2022 21:38

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Sample Analysis Summary
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Client Sample ID HA-1 OUTFALL (1')
 Lab Sample ID 40252309009
 Lab File ID B221018C_016
 Matrix Solid
 Collected 09/28/2022 12:30
 Received 10/01/2022 12:38
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.71g
 Ical ID 221017B02
 CCal File B221018C_014
 Ending CCal File B221018D_002
 Blank File B221018D_004

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	13		10/18/2022 21:38
13C4 PFOA	N/A	N/A	6.79	6.80	22		10/18/2022 21:38
13C2 PFDA	N/A	N/A	8.00	8.02	18		10/18/2022 21:38
13C4 PFOS	N/A	N/A	8.41	8.42	11		10/18/2022 21:38

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.30	4.30	18		10/18/2022 21:38
13C5 PFPeA	N/A	N/A	5.03	5.04	23		10/18/2022 21:38
13C3 PFBS	N/A	N/A	5.81	5.82	14		10/18/2022 21:38
13C2 4:2FTS	N/A	N/A	5.37	5.38	47		10/18/2022 21:38
13C5 PFHxA	N/A	N/A	5.61	5.62	11		10/18/2022 21:38
13C4 PFHpA	N/A	N/A	6.19	6.20	16		10/18/2022 21:38
13C3 PFHxS	N/A	N/A	7.14	7.15	15		10/18/2022 21:38
13C2 6:2FTS	N/A	N/A	6.49	6.50	70		10/18/2022 21:38
13C8 PFOA	N/A	N/A	6.79	6.80	21		10/18/2022 21:38
13C9 PFNA	N/A	N/A	7.39	7.41	18		10/18/2022 21:38
13C8 PFOS	N/A	N/A	8.41	8.43	12		10/18/2022 21:38
13C2 8:2FTS	N/A	N/A	7.67	7.68	81		10/18/2022 21:38
13C6 PFDA	N/A	N/A	8.01	8.02	19		10/18/2022 21:38
d3-MeFOSAA	N/A	N/A	7.94	7.95	32		10/18/2022 21:38
13C8 PFOSA	N/A	N/A	10.74	10.73	11		10/18/2022 21:38
d5-EtFOSAA	N/A	N/A	8.23	8.24	14		10/18/2022 21:38
13C7 PFUdA	N/A	N/A	8.62	8.63	21		10/18/2022 21:38
13C2 PFDoA	N/A	N/A	9.23	9.24	18		10/18/2022 21:38
13C2 PFTeDA	N/A	N/A	10.45	10.46	14		10/18/2022 21:38
13C3 HFPO-DA	N/A	N/A	5.84	5.85	15		10/18/2022 21:38
d7-N-MeFOSE	N/A	N/A	12.47	12.47	39	R	10/18/2022 21:38
d9-N-EtFOSE	N/A	N/A	12.95	12.95	40	R	10/18/2022 21:38
d3-N-MeFOSA	N/A	N/A	12.68	12.68	59	R	10/18/2022 21:38
d5-N-EtFOSA	N/A	N/A	13.11	13.16	59	R	10/18/2022 21:38

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 MPCA Guidance PFCs

Client Sample ID HA-1 OUTFALL (1')
 Lab Sample ID 40252309009
 Lab File ID B221018C_016
 Matrix Solid
 Collected 09/28/2022 12:30
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 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.71g
 Ical ID 221017B02
 CCal File B221018C_014
 Ending CCal File B221018D_002
 Blank File B221018D_004

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.31	4.31	ND		10/18/2022 21:38
PFPeA	N/A	N/A	5.04	5.04	ND		10/18/2022 21:38
HFPO-DA	1.00	0.34	5.86	5.86	ND		10/18/2022 21:38
PFBS	0.53	0.42	5.82	5.83	ND		10/18/2022 21:38
PFHxA	0.05	0.08	5.62	5.62	ND		10/18/2022 21:38
4:2 FTS	0.00	0.81	0.00	5.39	ND		10/18/2022 21:38
PFPeS	0.00	0.42	0.00	6.50	ND		10/18/2022 21:38
PFHpA	0.22	0.29	6.20	6.21	ND		10/18/2022 21:38
DONA	0.00	0.57	0.00	6.43	ND		10/18/2022 21:38
PFHxS	0.46	0.39	7.15	7.16	ND		10/18/2022 21:38
PFOA	0.34	0.37	6.79	6.81	14		10/18/2022 21:38
6:2 FTS	0.89	0.87	6.48	6.49	ND		10/18/2022 21:38
PFHpS	0.00	0.38	0.00	7.80	ND		10/18/2022 21:38
PFNA	0.16	0.16	7.40	7.41	17		10/18/2022 21:38
PFOSAm	N/A	N/A	10.74	10.74	ND		10/18/2022 21:38
PFOS	0.43	0.39	8.42	8.43	87		10/18/2022 21:38
MeFOSA	0.00	0.59	0.00	12.70	ND		10/18/2022 21:38
PFDA	0.17	0.13	8.01	8.02	18		10/18/2022 21:38
EtFOSAm	0.00	0.53	0.00	13.13	ND		10/18/2022 21:38
8:2 FTS	0.00	0.98	0.00	7.68	ND		10/18/2022 21:38
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 21:38
PFNS	0.00	0.43	0.00	9.05	ND		10/18/2022 21:38
PFUnDA	0.12	0.11	8.62	8.64	ND		10/18/2022 21:38
NMeFOSAA	1.10	0.91	7.96	7.96	ND		10/18/2022 21:38
NEtFOSAA	0.32	0.69	8.23	8.25	ND		10/18/2022 21:38
PFDS	0.38	0.31	9.65	9.66	24		10/18/2022 21:38
PFDOA	0.13	0.15	9.23	9.25	ND		10/18/2022 21:38
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 21:38
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 21:38
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 21:38
PFTTrDA	0.17	0.16	9.85	9.87	ND		10/18/2022 21:38
PFDoS	0.00	0.46	0.00	10.84	ND		10/18/2022 21:38
PFTDA	0.22	0.24	10.46	10.47	ND		10/18/2022 21:38

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID BLKNJ
 Lab Sample ID BLANK-101801
 Lab File ID B221018D_004
 Matrix Soil
 Collected 10/11/2022 17:06
 Received 10/11/2022 17:06
 Extraction Date 10/12/2022 12:05

Total Amount Extracted 5.61g
 Ical ID 221017B02
 CCal File B221018D_002
 Ending CCal File B221018D_014
 Blank File B221018D_004

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.045	0.045	0.0048	1	375-22-4		10/18/2022 23:58
PFPeA	ND	0.045	0.045	0.0049	1	2706-90-3		10/18/2022 23:58
HFPO-DA	ND	0.045	0.045	0.0062	1	13252-13-6		10/18/2022 23:58
PFBS	ND	0.039	0.039	0.0053	1	375-73-5		10/18/2022 23:58
PFHxA	ND	0.045	0.045	0.013	1	307-24-4		10/18/2022 23:58
4:2 FTS	ND	0.042	0.042	0.0075	1	757124-72-4		10/18/2022 23:58
PFPeS	ND	0.042	0.042	0.0065	1	2706-91-4		10/18/2022 23:58
PFHpA	ND	0.045	0.045	0.0094	1	375-85-9		10/18/2022 23:58
DONA	ND	0.042	0.042	0.0062	1	919005-14-4	N2	10/18/2022 23:58
PFHxS	ND	0.041	0.041	0.0098	1	355-46-4		10/18/2022 23:58
PFOA	ND	0.045	0.045	0.0062	1	335-67-1		10/18/2022 23:58
6:2 FTS	ND	0.042	0.042	0.015	1	27619-97-2		10/18/2022 23:58
PFHpS	ND	0.042	0.042	0.0089	1	375-92-8		10/18/2022 23:58
PFNA	ND	0.045	0.045	0.011	1	375-95-1		10/18/2022 23:58
PFOSAm	ND	0.045	0.045	0.0056	1	754-91-6		10/18/2022 23:58
PFOS	ND	0.041	0.041	0.0077	1	1763-23-1		10/18/2022 23:58
MeFOSA	ND	0.045	0.045	0.013	1	31506-32-8		10/18/2022 23:58
PFDA	ND	0.045	0.045	0.0097	1	335-76-2		10/18/2022 23:58
EtFOSAm	ND	0.045	0.045	0.0040	1	4151-50-2		10/18/2022 23:58
8:2 FTS	ND	0.043	0.043	0.015	1	39108-34-4		10/18/2022 23:58
9-CI-PF3ON	ND	0.042	0.042	0.0039	1	756426-58-1		10/18/2022 23:58
PFNS	ND	0.043	0.043	0.012	1	68259-12-1		10/18/2022 23:58
PFUnDA	ND	0.045	0.045	0.0080	1	2058-94-8		10/18/2022 23:58
NMeFOSAA	ND	0.045	0.045	0.010	1	2355-31-9		10/18/2022 23:58
NEtFOSAA	ND	0.045	0.045	0.014	1	2991-50-6		10/18/2022 23:58
PFDS	ND	0.043	0.043	0.0063	1	335-77-3		10/18/2022 23:58
PFDOA	ND	0.045	0.045	0.013	1	307-55-1		10/18/2022 23:58
MeFOSE	ND	0.045	0.045	0.0046	1	24448-09-7		10/18/2022 23:58
EtFOSE	ND	0.045	0.045	0.012	1	1691-99-2		10/18/2022 23:58
11-CI-PF3OUdS	ND	0.042	0.042	0.0060	1	763051-92-9		10/18/2022 23:58
PFTTrDA	ND	0.045	0.045	0.0085	1	72629-94-8		10/18/2022 23:58
PFDoS	ND	0.043	0.043	0.0055	1	79780-39-5		10/18/2022 23:58
PFTDA	ND	0.045	0.045	0.0091	1	376-06-7		10/18/2022 23:58

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	BLKNJ	Total Amount Extracted	5.61g
Lab Sample ID	BLANK-101801	Ical ID	221017B02
Lab File ID	B221018D_004	CCal File	B221018D_002
Matrix	Soil	Ending CCal File	B221018D_014
Collected	10/11/2022 17:06	Blank File	B221018D_004
Received	10/11/2022 17:06		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.89	0.99	111	50-200		10/18/2022 23:58
13C4 PFOA	0.89	1.0	114	50-200		10/18/2022 23:58
13C2 PFDA	0.89	1.3	146	50-200		10/18/2022 23:58
13C4 PFOS	0.85	1.0	122	50-200		10/18/2022 23:58

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.89	0.82	92	50-200		10/18/2022 23:58
13C5 PFPeA	0.89	0.81	91	50-200		10/18/2022 23:58
13C3 PFBS	0.83	0.76	92	50-200		10/18/2022 23:58
13C2 4:2FTS	0.83	0.88	105	50-200		10/18/2022 23:58
13C5 PFHxA	0.89	0.80	89	50-200		10/18/2022 23:58
13C4 PFHpA	0.89	0.80	90	50-200		10/18/2022 23:58
13C3 PFHxS	0.84	0.80	94	50-200		10/18/2022 23:58
13C2 6:2FTS	0.85	0.80	95	50-200		10/18/2022 23:58
13C8 PFOA	0.89	0.83	93	50-200		10/18/2022 23:58
13C9 PFNA	0.89	0.85	95	50-200		10/18/2022 23:58
13C8 PFOS	0.85	0.80	94	50-200		10/18/2022 23:58
13C2 8:2FTS	0.85	0.81	95	50-200		10/18/2022 23:58
13C6 PFDA	0.89	1.0	114	50-200		10/18/2022 23:58
d3-MeFOSAA	0.89	0.88	98	50-200		10/18/2022 23:58
13C8 PFOSA	0.89	0.76	85	50-200		10/18/2022 23:58
d5-EtFOSAA	0.89	0.83	94	50-200		10/18/2022 23:58
13C7 PFUdA	0.89	0.88	99	50-200		10/18/2022 23:58
13C2 PFDoA	0.89	0.88	99	50-200		10/18/2022 23:58
13C2 PFTeDA	0.89	0.79	89	50-200		10/18/2022 23:58
13C3 HFPO-DA	0.89	0.84	94	50-200		10/18/2022 23:58
d7-N-MeFOSE	0.89	0.57	64	50-200		10/18/2022 23:58
d9-N-EtFOSE	0.89	0.56	63	50-200		10/18/2022 23:58
d3-N-MeFOSA	0.89	0.43	48	50-200	R	10/18/2022 23:58
d5-N-EtFOSA	0.89	0.42	48	50-200	R	10/18/2022 23:58

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	BLKNJ	Total Amount Extracted	5.61g
Lab Sample ID	BLANK-101801	Ical ID	221017B02
Lab File ID	B221018D_004	CCal File	B221018D_002
Matrix	Soil	Ending CCal File	B221018D_014
Collected	10/11/2022 17:06	Blank File	B221018D_004
Received	10/11/2022 17:06		
Extraction Date	10/12/2022 12:05		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.61	5.61	14		10/18/2022 23:58
13C4 PFOA	N/A	N/A	6.79	6.80	19		10/18/2022 23:58
13C2 PFDA	N/A	N/A	8.00	8.02	19		10/18/2022 23:58
13C4 PFOS	N/A	N/A	8.41	8.42	22		10/18/2022 23:58

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.30	4.30	22		10/18/2022 23:58
13C5 PFPeA	N/A	N/A	5.03	5.04	24		10/18/2022 23:58
13C3 PFBS	N/A	N/A	5.82	5.82	41		10/18/2022 23:58
13C2 4:2FTS	N/A	N/A	5.38	5.38	70		10/18/2022 23:58
13C5 PFHxA	N/A	N/A	5.61	5.62	14		10/18/2022 23:58
13C4 PFHpA	N/A	N/A	6.20	6.20	10		10/18/2022 23:58
13C3 PFHxS	N/A	N/A	7.14	7.15	27		10/18/2022 23:58
13C2 6:2FTS	N/A	N/A	6.49	6.50	27		10/18/2022 23:58
13C8 PFOA	N/A	N/A	6.79	6.80	24		10/18/2022 23:58
13C9 PFNA	N/A	N/A	7.40	7.41	21		10/18/2022 23:58
13C8 PFOS	N/A	N/A	8.41	8.43	22		10/18/2022 23:58
13C2 8:2FTS	N/A	N/A	7.67	7.68	57		10/18/2022 23:58
13C6 PFDA	N/A	N/A	8.01	8.02	17		10/18/2022 23:58
d3-MeFOSAA	N/A	N/A	7.94	7.95	23		10/18/2022 23:58
13C8 PFOSA	N/A	N/A	10.74	10.73	12		10/18/2022 23:58
d5-EtFOSAA	N/A	N/A	8.23	8.24	15		10/18/2022 23:58
13C7 PFUdA	N/A	N/A	8.62	8.63	19		10/18/2022 23:58
13C2 PFDoA	N/A	N/A	9.23	9.24	17		10/18/2022 23:58
13C2 PFTeDA	N/A	N/A	10.45	10.46	11		10/18/2022 23:58
13C3 HFPO-DA	N/A	N/A	5.84	5.85	17		10/18/2022 23:58
d7-N-MeFOSE	N/A	N/A	12.47	12.47	42		10/18/2022 23:58
d9-N-EtFOSE	N/A	N/A	12.94	12.95	45		10/18/2022 23:58
d3-N-MeFOSA	N/A	N/A	12.68	12.68	48	R	10/18/2022 23:58
d5-N-EtFOSA	N/A	N/A	13.10	13.11	63	R	10/18/2022 23:58

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	BLKNJ	Total Amount Extracted	5.61g
Lab Sample ID	BLANK-101801	Ical ID	221017B02
Lab File ID	B221018D_004	CCal File	B221018D_002
Matrix	Soil	Ending CCal File	B221018D_014
Collected	10/11/2022 17:06	Blank File	B221018D_004
Received	10/11/2022 17:06		
Extraction Date	10/12/2022 12:05		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.29	4.31	ND		10/18/2022 23:58
PFPeA	N/A	N/A	5.03	5.04	ND		10/18/2022 23:58
HFPO-DA	0.35	0.31	5.85	5.86	ND		10/18/2022 23:58
PFBS	0.00	0.47	0.00	5.83	ND		10/18/2022 23:58
PFHxA	0.22	0.07	5.62	5.62	ND		10/18/2022 23:58
4:2 FTS	0.00	0.82	0.00	5.39	ND		10/18/2022 23:58
PFPeS	0.00	0.44	0.00	6.50	ND		10/18/2022 23:58
PFHpA	0.00	0.26	0.00	6.21	ND		10/18/2022 23:58
DONA	0.00	0.53	0.00	6.43	ND		10/18/2022 23:58
PFHxS	0.00	0.38	0.00	7.16	ND		10/18/2022 23:58
PFOA	0.38	0.36	6.81	6.81	ND		10/18/2022 23:58
6:2 FTS	0.50	0.80	6.47	6.49	ND		10/18/2022 23:58
PFHpS	0.00	0.39	0.00	7.80	ND		10/18/2022 23:58
PFNA	0.00	0.14	0.00	7.41	ND		10/18/2022 23:58
PFOSAm	N/A	N/A	0.00	10.74	ND		10/18/2022 23:58
PFOS	0.00	0.38	0.00	8.43	ND		10/18/2022 23:58
MeFOSA	0.00	0.57	0.00	12.70	ND		10/18/2022 23:58
PFDA	0.00	0.15	0.00	8.02	ND		10/18/2022 23:58
EtFOSAm	0.00	0.52	0.00	13.13	ND		10/18/2022 23:58
8:2 FTS	0.00	0.81	0.00	7.68	ND		10/18/2022 23:58
9-CI-PF3ON	0.00	0.05	0.00	8.88	ND		10/18/2022 23:58
PFNS	0.00	0.44	0.00	9.05	ND		10/18/2022 23:58
PFUnDA	0.00	0.11	0.00	8.64	ND		10/18/2022 23:58
NMeFOSAA	0.00	0.80	0.00	7.96	ND		10/18/2022 23:58
NEtFOSAA	0.00	0.65	0.00	8.25	ND		10/18/2022 23:58
PFDS	0.00	0.33	0.00	9.66	ND		10/18/2022 23:58
PFDOA	0.00	0.16	0.00	9.25	ND		10/18/2022 23:58
MeFOSE	N/A	N/A	0.00	12.51	ND		10/18/2022 23:58
EtFOSE	0.00	0.00	0.00	12.99	ND		10/18/2022 23:58
11-CI-PF3OUdS	0.00	0.02	0.00	10.11	ND		10/18/2022 23:58
PFTTrDA	0.00	0.16	0.00	9.87	ND		10/18/2022 23:58
PFDoS	0.00	0.43	0.00	10.84	ND		10/18/2022 23:58
PFTDA	0.00	0.26	0.00	10.47	ND		10/18/2022 23:58

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID BLKPE
 Lab Sample ID BLANK-101938
 Lab File ID B221109A_011
 Matrix Water
 Collected 10/18/2022 19:21
 Received 10/18/2022 19:21
 Extraction Date 10/26/2022 07:35

Total Amount Extracted 493mL
 Ical ID 221107A02
 CCal File B221109A_010
 Ending CCal File B221109A_014
 Blank File

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	MDL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.51	0.51	0.20	1	375-22-4		11/09/2022 16:14
PFPeA	ND	0.51	0.51	0.20	1	2706-90-3		11/09/2022 16:14
HFPO-DA	ND	0.51	0.51	0.10	1	13252-13-6		11/09/2022 16:14
PFBS	ND	0.45	0.45	0.15	1	375-73-5		11/09/2022 16:14
PFHxA	ND	0.51	0.51	0.14	1	307-24-4		11/09/2022 16:14
4:2 FTS	ND	0.47	0.47	0.098	1	757124-72-4		11/09/2022 16:14
PFPeS	ND	0.48	0.48	0.079	1	2706-91-4		11/09/2022 16:14
PFHpA	ND	0.51	0.51	0.094	1	375-85-9		11/09/2022 16:14
DONA	ND	0.48	0.48	0.084	1	919005-14-4	N2	11/09/2022 16:14
PFHxS	ND	0.46	0.46	0.094	1	355-46-4		11/09/2022 16:14
PFOA	ND	0.51	0.51	0.11	1	335-67-1		11/09/2022 16:14
6:2 FTS	ND	0.48	0.48	0.27	1	27619-97-2		11/09/2022 16:14
PFHpS	ND	0.48	0.48	0.095	1	375-92-8		11/09/2022 16:14
PFNA	ND	0.51	0.51	0.19	1	375-95-1		11/09/2022 16:14
PFOSAm	ND	0.51	0.51	0.090	1	754-91-6		11/09/2022 16:14
PFOS	ND	0.47	0.47	0.19	1	1763-23-1		11/09/2022 16:14
MeFOSA	ND	0.51	0.51	0.099	1	31506-32-8		11/09/2022 16:14
PFDA	ND	0.51	0.51	0.077	1	335-76-2		11/09/2022 16:14
EtFOSAm	ND	0.51	0.51	0.042	1	4151-50-2		11/09/2022 16:14
8:2 FTS	ND	0.49	0.49	0.13	1	39108-34-4		11/09/2022 16:14
9-CI-PF3ON	ND	0.47	0.47	0.070	1	756426-58-1		11/09/2022 16:14
PFNS	ND	0.49	0.49	0.081	1	68259-12-1		11/09/2022 16:14
PFUnDA	ND	0.51	0.51	0.055	1	2058-94-8		11/09/2022 16:14
NMeFOSAA	ND	0.51	0.51	0.078	1	2355-31-9		11/09/2022 16:14
NEtFOSAA	ND	0.51	0.51	0.056	1	2991-50-6		11/09/2022 16:14
PFDS	ND	0.49	0.49	0.053	1	335-77-3		11/09/2022 16:14
PFDOA	ND	0.51	0.51	0.054	1	307-55-1		11/09/2022 16:14
MeFOSE	ND	0.51	0.51	0.057	1	24448-09-7		11/09/2022 16:14
EtFOSE	ND	0.51	0.51	0.065	1	1691-99-2		11/09/2022 16:14
11-CI-PF3OUdS	ND	0.48	0.48	0.059	1	763051-92-9		11/09/2022 16:14
PFTTrDA	ND	0.51	0.51	0.074	1	72629-94-8		11/09/2022 16:14
PFDoS	ND	0.49	0.49	0.076	1	79780-39-5		11/09/2022 16:14
PFTDA	ND	0.51	0.51	0.12	1	376-06-7		11/09/2022 16:14

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	BLKPE	Total Amount Extracted	493mL
Lab Sample ID	BLANK-101938	Ical ID	221107A02
Lab File ID	B221109A_011	CCal File	B221109A_010
Matrix	Water	Ending CCal File	B221109A_014
Collected	10/18/2022 19:21	Blank File	
Received	10/18/2022 19:21		
Extraction Date	10/26/2022 07:35		

Injection Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	10	10	103	50-200		11/09/2022 16:14
13C4 PFOA	10	9.7	95	50-200		11/09/2022 16:14
13C2 PFDA	10	9.9	98	50-200		11/09/2022 16:14
13C4 PFOS	9.7	9.5	98	50-200		11/09/2022 16:14

Extracted Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	10	9.9	98	50-200		11/09/2022 16:14
13C5 PFPeA	10	9.1	90	50-200		11/09/2022 16:14
13C3 PFBS	9.4	9.1	97	50-200		11/09/2022 16:14
13C2 4:2FTS	9.5	9.4	99	50-200		11/09/2022 16:14
13C5 PFHxA	10	9.1	90	50-200		11/09/2022 16:14
13C4 PFHpA	10	9.4	93	50-200		11/09/2022 16:14
13C3 PFHxS	9.6	8.1	84	50-200		11/09/2022 16:14
13C2 6:2FTS	9.6	7.8	81	50-200		11/09/2022 16:14
13C8 PFOA	10	8.9	88	50-200		11/09/2022 16:14
13C9 PFNA	10	8.3	82	50-200		11/09/2022 16:14
13C8 PFOS	9.7	8.2	84	50-200		11/09/2022 16:14
13C2 8:2FTS	9.7	6.6	68	50-200		11/09/2022 16:14
13C6 PFDA	10	7.6	75	50-200		11/09/2022 16:14
d3-MeFOSAA	10	6.0	59	50-200		11/09/2022 16:14
13C8 PFOSA	10	8.3	82	50-200		11/09/2022 16:14
d5-EtFOSAA	10	6.2	62	50-200		11/09/2022 16:14
13C7 PFUdA	10	7.6	75	50-200		11/09/2022 16:14
13C2 PFDaA	10	8.7	86	50-200		11/09/2022 16:14
13C2 PFTeDA	10	7.4	73	50-200		11/09/2022 16:14
13C3 HFPO-DA	10	9.3	91	50-200		11/09/2022 16:14
d7-N-MeFOSE	10	6.2	61	50-200		11/09/2022 16:14
d9-N-EtFOSE	10	6.2	61	50-200		11/09/2022 16:14
d3-N-MeFOSA	10	4.2	41	50-200	R	11/09/2022 16:14
d5-N-EtFOSA	10	3.9	39	50-200	R	11/09/2022 16:14

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	BLKPE	Total Amount Extracted	493mL
Lab Sample ID	BLANK-101938	Ical ID	221107A02
Lab File ID	B221109A_011	CCal File	B221109A_010
Matrix	Water	Ending CCal File	B221109A_014
Collected	10/18/2022 19:21	Blank File	
Received	10/18/2022 19:21		
Extraction Date	10/26/2022 07:35		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.53	5.59	14		11/09/2022 16:14
13C4 PFOA	N/A	N/A	6.68	6.76	19		11/09/2022 16:14
13C2 PFDA	N/A	N/A	7.91	8.01	99		11/09/2022 16:14
13C4 PFOS	N/A	N/A	8.32	8.43	15		11/09/2022 16:14

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.24	4.30	23		11/09/2022 16:14
13C5 PFPeA	N/A	N/A	4.97	5.04	21		11/09/2022 16:14
13C3 PFBS	N/A	N/A	5.72	5.82	21		11/09/2022 16:14
13C2 4:2FTS	N/A	N/A	5.30	5.38	10		11/09/2022 16:14
13C5 PFHxA	N/A	N/A	5.53	5.62	15		11/09/2022 16:14
13C4 PFHpA	N/A	N/A	6.10	6.17	17		11/09/2022 16:14
13C3 PFHxS	N/A	N/A	7.02	7.14	20		11/09/2022 16:14
13C2 6:2FTS	N/A	N/A	6.39	6.48	15		11/09/2022 16:14
13C8 PFOA	N/A	N/A	6.68	6.76	20		11/09/2022 16:14
13C9 PFNA	N/A	N/A	7.29	7.29	18		11/09/2022 16:14
13C8 PFOS	N/A	N/A	8.31	8.44	14		11/09/2022 16:14
13C2 8:2FTS	N/A	N/A	7.57	7.66	31		11/09/2022 16:14
13C6 PFDA	N/A	N/A	7.91	8.01	11		11/09/2022 16:14
d3-MeFOSAA	N/A	N/A	7.86	7.94	11		11/09/2022 16:14
13C8 PFOSA	N/A	N/A	10.71	10.72	17		11/09/2022 16:14
d5-EtFOSAA	N/A	N/A	8.15	8.23	10		11/09/2022 16:14
13C7 PFUdA	N/A	N/A	8.54	8.65	15		11/09/2022 16:14
13C2 PFDoA	N/A	N/A	9.17	9.29	13		11/09/2022 16:14
13C2 PFTeDA	N/A	N/A	10.42	10.54	11		11/09/2022 16:14
13C3 HFPO-DA	N/A	N/A	5.75	5.82	15		11/09/2022 16:14
d7-N-MeFOSE	N/A	N/A	12.48	12.43	37		11/09/2022 16:14
d9-N-EtFOSE	N/A	N/A	12.96	12.92	37		11/09/2022 16:14
d3-N-MeFOSA	N/A	N/A	12.70	12.65	66	R	11/09/2022 16:14
d5-N-EtFOSA	N/A	N/A	13.12	13.08	72	R	11/09/2022 16:14

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 MPCA Guidance PFCs

Client Sample ID	BLKPE	Total Amount Extracted	493mL
Lab Sample ID	BLANK-101938	Ical ID	221107A02
Lab File ID	B221109A_011	CCal File	B221109A_010
Matrix	Water	Ending CCal File	B221109A_014
Collected	10/18/2022 19:21	Blank File	
Received	10/18/2022 19:21		
Extraction Date	10/26/2022 07:35		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.24	4.24	ND		11/09/2022 16:14
PFPeA	N/A	N/A	4.98	5.05	ND		11/09/2022 16:14
HFPO-DA	0.71	0.35	5.77	5.86	ND		11/09/2022 16:14
PFBS	0.43	0.43	5.73	5.82	ND		11/09/2022 16:14
PFHxA	0.10	0.08	5.54	5.62	ND		11/09/2022 16:14
4:2 FTS	0.97	0.84	5.31	5.32	ND		11/09/2022 16:14
PFPeS	0.00	0.43	0.00	6.48	ND		11/09/2022 16:14
PFHpA	0.38	0.33	6.10	6.19	ND		11/09/2022 16:14
DONA	0.58	0.57	6.32	6.40	ND		11/09/2022 16:14
PFHxS	0.46	0.35	7.03	7.14	ND		11/09/2022 16:14
PFOA	0.49	0.44	6.69	6.79	ND		11/09/2022 16:14
6:2 FTS	0.80	0.84	6.39	6.48	ND		11/09/2022 16:14
PFHpS	0.00	0.41	0.00	7.81	ND		11/09/2022 16:14
PFNA	0.11	0.14	7.29	7.41	ND		11/09/2022 16:14
PFOSAm	N/A	N/A	10.71	10.73	ND		11/09/2022 16:14
PFOS	0.21	0.42	8.33	8.47	ND		11/09/2022 16:14
MeFOSA	0.00	0.50	0.00	12.67	ND		11/09/2022 16:14
PFDA	0.00	0.20	0.00	8.04	ND		11/09/2022 16:14
EtFOSAm	0.00	0.49	0.00	13.11	ND		11/09/2022 16:14
8:2 FTS	0.00	0.86	0.00	7.69	ND		11/09/2022 16:14
9-CI-PF3ON	0.00	0.05	0.00	8.94	ND		11/09/2022 16:14
PFNS	0.00	0.54	0.00	9.11	ND		11/09/2022 16:14
PFUnDA	0.00	0.15	0.00	8.68	ND		11/09/2022 16:14
NMeFOSAA	1.10	0.92	7.85	7.98	ND		11/09/2022 16:14
NEtFOSAA	0.00	0.67	0.00	8.28	ND		11/09/2022 16:14
PFDS	0.00	0.39	0.00	9.75	ND		11/09/2022 16:14
PFDOA	0.00	0.18	0.00	9.31	ND		11/09/2022 16:14
MeFOSE	N/A	N/A	0.00	12.50	ND		11/09/2022 16:14
EtFOSE	0.00	0.00	0.00	12.97	ND		11/09/2022 16:14
11-CI-PF3OUdS	0.00	0.02	0.00	10.20	ND		11/09/2022 16:14
PFTTrDA	0.00	0.17	0.00	9.92	ND		11/09/2022 16:14
PFDoS	0.00	0.44	0.00	10.94	ND		11/09/2022 16:14
PFTDA	0.26	0.27	10.42	10.55	ND		11/09/2022 16:14

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID	LCS-101802	Instrument ID	10LCMS02
Run File Name	B221018D_005	Column ID	125GA90033
Analyzed	10/19/2022 00:18	Ical ID	221017B02
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc. ug/Kg	Conc. Found ug/Kg	%Recovery	Recovery Limits	Qualifiers
13C2 PFHxA	0.98	1.1	110	50-200	
13C4 PFOA	0.98	1.1	112	50-200	
13C2 PFDA	0.98	1.3	134	50-200	
13C4 PFOS	0.94	1.2	131	50-200	

Extracted Internal Standards

Compound	Known Conc. ug/Kg	Conc. Found ug/Kg	%Recovery	Recovery Limits	Qualifiers
13C4 PFBA	0.98	0.92	94	50-200	
13C5 PFPeA	0.98	0.93	95	50-200	
13C3 PFBS	0.91	0.92	101	50-200	
13C2 4:2FTS	0.92	0.92	100	50-200	
13C5 PFHxA	0.98	0.91	93	50-200	
13C4 PFHpA	0.98	1.00	102	50-200	
13C3 PFHxS	0.93	0.92	99	50-200	
13C2 6:2FTS	0.93	0.98	105	50-200	
13C8 PFOA	0.98	0.91	92	50-200	
13C9 PFNA	0.98	0.98	100	50-200	
13C8 PFOS	0.94	0.85	91	50-200	
13C2 8:2FTS	0.94	0.94	100	50-200	
13C6 PFDA	0.98	1.1	111	50-200	
d3-MeFOSAA	0.98	1.0	104	50-200	
13C8 PFOSA	0.98	0.91	93	50-200	
d5-EtFOSAA	0.98	0.94	96	50-200	
13C7 PFUdA	0.98	1.0	107	50-200	
13C2 PFDoA	0.98	1.0	105	50-200	
13C2 PFTeDA	0.98	0.96	98	50-200	
13C3 HFPO-DA	0.98	1.0	104	50-200	
d7-N-MeFOSE	0.98	0.78	79	50-200	
d9-N-EtFOSE	0.98	0.79	80	50-200	
d3-N-MeFOSA	0.98	0.72	73	50-200	
d5-N-EtFOSA	0.98	0.67	68	50-200	

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LCS Analysis Summary
 MPCA Guidance PFCs

Page 2 of 4

Lab Sample ID LCS-101802
 Run File Name B221018D_005
 Analyzed 10/19/2022 00:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level L

Native Analytes

Compound	Known Conc. ug/Kg	Conc. Found ug/Kg	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	0.39	0.42	107	70-130		375-22-4
PFPeA	0.39	0.43	109	70-130		2706-90-3
HFPO-DA	0.39	0.40	101	70-130		13252-13-6
PFBS	0.35	0.39	111	70-130		375-73-5
PFHxA	0.39	0.43	110	70-130		307-24-4
4:2 FTS	0.37	0.37	102	70-130		757124-72-4
PFPeS	0.37	0.40	108	70-130		2706-91-4
PFHpA	0.39	0.41	104	70-130		375-85-9
DONA	0.37	0.40	108	70-130		919005-14-4
PFHxS	0.36	0.37	104	70-130		355-46-4
PFOA	0.39	0.43	110	70-130		335-67-1
6:2 FTS	0.37	0.34	90	70-130		27619-97-2
PFHpS	0.37	0.41	110	70-130		375-92-8
PFNA	0.39	0.41	103	70-130		375-95-1
PFOSAm	0.39	0.41	105	70-130		754-91-6
PFOS	0.36	0.39	107	70-130		1763-23-1
MeFOSA	0.39	0.40	103	70-130		31506-32-8
PFDA	0.39	0.39	100	70-130		335-76-2
EtFOSAm	0.39	0.42	107	70-130		4151-50-2
8:2 FTS	0.38	0.35	93	70-130		39108-34-4
9-CI-PF3ON	0.37	0.39	106	70-130		756426-58-1
PFNS	0.38	0.43	114	70-130		68259-12-1
PFUnDA	0.39	0.40	102	70-130		2058-94-8
NMeFOSAA	0.39	0.45	114	70-130		2355-31-9
NEtFOSAA	0.39	0.40	102	70-130		2991-50-6
PFDS	0.38	0.43	114	70-130		335-77-3
PFDOA	0.39	0.42	107	70-130		307-55-1
MeFOSE	0.39	0.43	109	70-130		24448-09-7
EtFOSE	0.39	0.42	108	70-130		1691-99-2
11-CI-PF3OUdS	0.37	0.40	108	70-130		763051-92-9
PFTrDA	0.39	0.36	92	70-130		72629-94-8
PFDoS	0.38	0.41	109	70-130		79780-39-5
PFTDA	0.39	0.41	104	70-130		376-06-7

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID LCS-101802
 Run File Name B221018D_005
 Analyzed 10/19/2022 00:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	5.61	5.61	1368	
13C4 PFOA	N/A	N/A	6.79	6.80	2240	
13C2 PFDA	N/A	N/A	8.01	8.02	1519	
13C4 PFOS	N/A	N/A	8.41	8.42	2100	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	4.29	4.30	2176	
13C5 PFPeA	N/A	N/A	5.03	5.04	2513	
13C3 PFBS	N/A	N/A	5.81	5.82	2926	
13C2 4:2FTS	N/A	N/A	5.37	5.38	744	
13C5 PFHxA	N/A	N/A	5.61	5.62	1746	
13C4 PFHpA	N/A	N/A	6.19	6.20	1268	
13C3 PFHxS	N/A	N/A	7.14	7.15	2321	
13C2 6:2FTS	N/A	N/A	6.49	6.50	2078	
13C8 PFOA	N/A	N/A	6.79	6.80	2601	
13C9 PFNA	N/A	N/A	7.40	7.41	1743	
13C8 PFOS	N/A	N/A	8.41	8.43	2612	
13C2 8:2FTS	N/A	N/A	7.67	7.68	7954	
13C6 PFDA	N/A	N/A	8.01	8.02	1255	
d3-MeFOSAA	N/A	N/A	7.94	7.95	1627	
13C8 PFOSA	N/A	N/A	10.73	10.73	1186	
d5-EtFOSAA	N/A	N/A	8.23	8.24	1260	
13C7 PFUdA	N/A	N/A	8.62	8.63	1903	
13C2 PFDoA	N/A	N/A	9.23	9.24	1810	
13C2 PFTeDA	N/A	N/A	10.45	10.46	1184	
13C3 HFPO-DA	N/A	N/A	5.84	5.85	1646	
d7-N-MeFOSE	N/A	N/A	12.47	12.47	43	
d9-N-EtFOSE	N/A	N/A	12.94	12.95	397	
d3-N-MeFOSA	N/A	N/A	12.68	12.68	469	
d5-N-EtFOSA	N/A	N/A	13.10	13.11	714	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID LCS-101802
 Run File Name B221018D_005
 Analyzed 10/19/2022 00:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	4.30	4.31	195	
PFPeA	N/A	N/A	5.04	5.04	406	
HFPO-DA	0.33	0.31	5.85	5.86	805	
PFBS	0.44	0.47	5.82	5.83	1507	
PFHxA	0.07	0.07	5.62	5.62	247	
4:2 FTS	0.82	0.82	5.38	5.39	33628	
PFPeS	0.41	0.44	6.49	6.50	1888	
PFHpA	0.27	0.26	6.20	6.21	21	
DONA	0.55	0.53	6.42	6.43	1983	
PFHxS	0.35	0.38	7.15	7.16	3704	
PFOA	0.40	0.36	6.80	6.81	259	
6:2 FTS	0.84	0.80	6.49	6.49	448	
PFHpS	0.40	0.39	7.79	7.80	4001	
PFNA	0.15	0.14	7.40	7.41	493	
PFOSAm	N/A	N/A	10.74	10.74	1114	
PFOS	0.40	0.38	8.42	8.43	1243	
MeFOSA	0.57	0.57	12.70	12.70	708	
PFDA	0.17	0.15	8.01	8.02	399	
EtFOSAm	0.54	0.52	13.13	13.13	910	
8:2 FTS	1.10	0.81	7.68	7.68	4309004	
9-CI-PF3ON	0.06	0.05	8.87	8.88	1329	
PFNS	0.46	0.44	9.04	9.05	2586	
PFUnDA	0.12	0.11	8.63	8.64	582	
NMeFOSAA	0.67	0.80	7.95	7.96	4033	
NEtFOSAA	0.65	0.65	8.24	8.25	349	
PFDS	0.33	0.33	9.65	9.66	2647	
PFDOA	0.16	0.16	9.23	9.25	450	
MeFOSE	N/A	N/A	12.51	12.51	510	
EtFOSE	0.00	0.00	12.99	12.99	446	
11-CI-PF3OUdS	0.02	0.02	10.10	10.11	795	
PFTrDA	0.17	0.16	9.85	9.87	63	
PFDoS	0.42	0.43	10.83	10.84	2062	
PFTDA	0.26	0.26	10.46	10.47	340	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID	LCS-101939	Instrument ID	10LCMS02
Run File Name	B221102B_011	Column ID	125GA90033
Analyzed	11/02/2022 17:34	Ical ID	221102A02
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc. ng/L	Conc. Found ng/L	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	10	12	120	50-200	
13C4_PFOA	10	13	125	50-200	
13C2_PFDA	10	14	139	50-200	
13C4_PFOS	9.7	13	135	50-200	

Extracted Internal Standards

Compound	Known Conc. ng/L	Conc. Found ng/L	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	10	13	132	50-200	
13C5_PFPeA	10	12	118	50-200	
13C3_PFBFS	9.4	10	109	50-200	
13C2_4:2FTS	9.4	17	178	50-200	
13C5_PFHxA	10	12	115	50-200	
13C4_PFHpA	10	12	116	50-200	
13C3_PFHxS	9.5	11	120	50-200	
13C2_6:2FTS	9.6	11	116	50-200	
13C8_PFOA	10	11	107	50-200	
13C9_PFNA	10	11	113	50-200	
13C8_PFOS	9.7	11	111	50-200	
13C2_8:2FTS	9.7	11	112	50-200	
13C6_PFDA	10	13	125	50-200	
d3-MeFOSAA	10	9.7	96	50-200	
13C8_PFOA	10	9.7	97	50-200	
d5-EtFOSAA	10	10.0	99	50-200	
13C7_PFUdA	10	12	114	50-200	
13C2_PFDaA	10	11	107	50-200	
13C2_PFTeDA	10	9.4	94	50-200	
13C3_HFPO-DA	10	11	112	50-200	
d7-N-MeFOSE	10	8.2	81	50-200	
d9-N-EtFOSE	10	4.6	46	50-200	R
d3-N-MeFOSA	10	5.8	58	50-200	
d5-N-EtFOSA	10	5.5	55	50-200	

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LCS Analysis Summary
 MPCA Guidance PFCs

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Lab Sample ID LCS-101939
 Run File Name B221102B_011
 Analyzed 11/02/2022 17:34
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221102A02
 Level L

Native Analytes

Compound	Known Conc. ng/L	Conc. Found ng/L	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	4.0	4.1	101	70-130		375-22-4
PFPeA	4.0	4.0	98	70-130		2706-90-3
HFPO-DA	4.0	3.9	98	70-130		13252-13-6
PFBS	3.6	3.8	107	70-130		375-73-5
PFHxA	4.0	4.1	103	70-130		307-24-4
4:2 FTS	3.8	3.4	91	70-130		757124-72-4
PFPeS	3.8	3.7	98	70-130		2706-91-4
PFHpA	4.0	4.1	100	70-130		375-85-9
DONA	3.8	4.1	107	70-130		919005-14-4
PFHxS	3.7	3.8	104	70-130		355-46-4
PFOA	4.0	4.6	113	70-130		335-67-1
6:2 FTS	3.8	4.0	105	70-130		27619-97-2
PFHpS	3.8	3.9	101	70-130		375-92-8
PFNA	4.0	4.5	113	70-130		375-95-1
PFOSAm	4.0	4.0	99	70-130		754-91-6
PFOS	3.7	3.6	97	70-130		1763-23-1
MeFOSA	4.0	4.0	99	70-130		31506-32-8
PFDA	4.0	4.1	101	70-130		335-76-2
EtFOSAm	4.0	3.9	97	70-130		4151-50-2
8:2 FTS	3.9	3.8	98	70-130		39108-34-4
9-CI-PF3ON	3.8	3.2	85	70-130		756426-58-1
PFNS	3.9	3.6	92	70-130		68259-12-1
PFUnDA	4.0	4.4	110	70-130		2058-94-8
NMeFOSAA	4.0	3.9	96	70-130		2355-31-9
NEtFOSAA	4.0	3.7	92	70-130		2991-50-6
PFDS	3.9	3.5	89	70-130		335-77-3
PFDOA	4.0	3.6	89	70-130		307-55-1
MeFOSE	4.0	4.1	102	70-130		24448-09-7
EtFOSE	4.0	3.7	91	70-130		1691-99-2
11-CI-PF3OUdS	3.8	3.3	88	70-130		763051-92-9
PFTrDA	4.0	3.8	94	70-130		72629-94-8
PFDoS	3.9	3.5	88	70-130		79780-39-5
PFTDA	4.0	4.1	101	70-130		376-06-7

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID LCS-101939
 Run File Name B221102B_011
 Analyzed 11/02/2022 17:34
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221102A02
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	5.65	5.67	1891	
13C4 PFOA	N/A	N/A	6.89	6.93	2431	
13C2 PFDA	N/A	N/A	8.19	8.24	1623	
13C4 PFOS	N/A	N/A	8.69	8.76	1904	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	4.31	4.30	2858	
13C5 PFPeA	N/A	N/A	5.05	5.04	2379	
13C3 PFBS	N/A	N/A	5.90	5.82	1654	
13C2 4:2FTS	N/A	N/A	5.40	5.42	1240	
13C5 PFHxA	N/A	N/A	5.65	5.66	1988	
13C4 PFHpA	N/A	N/A	6.26	6.29	1951	
13C3 PFHxS	N/A	N/A	7.31	7.37	2101	
13C2 6:2FTS	N/A	N/A	6.56	6.59	1587	
13C8 PFOA	N/A	N/A	6.89	6.93	2492	
13C9 PFNA	N/A	N/A	7.53	7.58	2049	
13C8 PFOS	N/A	N/A	8.69	8.76	2523	
13C2 8:2FTS	N/A	N/A	7.81	7.85	716	
13C6 PFDA	N/A	N/A	8.19	8.24	1700	
d3-MeFOSAA	N/A	N/A	8.09	8.12	1679	
13C8 PFOSA	N/A	N/A	10.72	10.72	1079	
d5-EtFOSAA	N/A	N/A	8.40	8.44	1042	
13C7 PFUdA	N/A	N/A	8.86	8.91	2818	
13C2 PFDoA	N/A	N/A	9.52	9.59	1449	
13C2 PFTeDA	N/A	N/A	10.81	10.89	1338	
13C3 HFPO-DA	N/A	N/A	5.90	5.93	1675	
d7-N-MeFOSE	N/A	N/A	12.45	12.43	41	
d9-N-EtFOSE	N/A	N/A	12.92	12.92	186	R
d3-N-MeFOSA	N/A	N/A	12.66	12.65	619	
d5-N-EtFOSA	N/A	N/A	13.09	13.08	1037	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID LCS-101939
 Run File Name B221102B_011
 Analyzed 11/02/2022 17:34
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221102A02
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	4.32	4.34	238	
PFPeA	N/A	N/A	5.06	5.08	415	
HFPO-DA	0.31	0.31	5.91	5.86	964	
PFBS	0.45	0.41	5.91	5.94	971	
PFHxA	0.07	0.08	5.66	5.68	348	
4:2 FTS	0.78	0.79	5.40	5.42	3210	
PFPeS	0.42	0.42	6.62	6.67	1208	
PFHpA	0.32	0.31	6.27	6.30	18	
DONA	0.58	0.55	6.49	6.52	1625	
PFHxS	0.36	0.34	7.32	7.37	1150	
PFOA	0.41	0.42	6.90	6.93	344	
6:2 FTS	0.84	0.83	6.56	6.49	43	
PFHpS	0.33	0.43	8.01	8.08	1277	
PFNA	0.16	0.17	7.54	7.59	591	
PFOSAm	N/A	N/A	10.73	10.74	904	
PFOS	0.37	0.34	8.70	8.77	605	
MeFOSA	0.48	0.50	12.68	12.67	655	
PFDA	0.18	0.19	8.20	8.25	509	
EtFOSAm	0.48	0.49	13.11	13.11	764	
8:2 FTS	0.87	1.00	7.82	7.86	2303	
9-CI-PF3ON	0.05	0.05	9.19	9.26	1845	
PFNS	0.48	0.44	9.37	9.45	948	
PFUnDA	0.12	0.13	8.87	8.91	901	
NMeFOSAA	0.80	0.75	8.10	8.13	687	
NEtFOSAA	0.67	0.64	8.41	8.44	332	
PFDS	0.38	0.37	10.03	10.13	1601	
PFDOA	0.20	0.20	9.52	9.59	714	
MeFOSE	N/A	N/A	12.49	12.50	104	
EtFOSE	0.00	0.00	12.96	12.97	179	
11-CI-PF3OUdS	0.02	0.02	10.50	10.61	1423	
PFTrDA	0.17	0.18	10.17	10.26	674	
PFDoS	0.41	0.44	11.26	11.36	1790	
PFTDA	0.27	0.26	10.81	10.90	746	

REPORT OF LABORATORY ANALYSIS

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MS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID 40252309009-MS
 Run File Name B221018C_017
 Analyzed 10/18/2022 21:58
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	0.93	0.92	99	50-200	
13C4_PFOA	0.93	0.90	97	50-200	
13C2_PFDA	0.93	1.2	131	50-200	
13C4_PFOS	0.89	0.99	111	50-200	

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	0.93	0.70	76	50-200	
13C5_PFPeA	0.93	0.72	78	50-200	
13C3_PFBS	0.86	0.68	78	50-200	
13C2_4:2FTS	0.87	0.91	105	50-200	
13C5_PFHxA	0.93	0.69	74	50-200	
13C4_PFHpA	0.93	0.77	83	50-200	
13C3_PFHxS	0.88	0.71	81	50-200	
13C2_6:2FTS	0.88	0.74	84	50-200	
13C8_PFOA	0.93	0.76	82	50-200	
13C9_PFNA	0.93	0.80	86	50-200	
13C8_PFOS	0.89	0.72	81	50-200	
13C2_8:2FTS	0.89	0.75	85	50-200	
13C6_PFDA	0.93	0.91	97	50-200	
d3-MeFOSAA	0.93	0.82	88	50-200	
13C8_PFOA	0.93	0.65	70	50-200	
d5-EtFOSAA	0.93	0.78	84	50-200	
13C7_PFUdA	0.93	0.87	94	50-200	
13C2_PFDaA	0.93	0.85	92	50-200	
13C2_PFTeDA	0.93	0.80	86	50-200	
13C3_HFPO-DA	0.93	0.72	78	50-200	
d7-N-MeFOSE	0.93	0.47	50	50-200	
d9-N-EtFOSE	0.93	0.46	50	50-200	
d3-N-MeFOSA	0.93	0.47	50	50-200	
d5-N-EtFOSA	0.93	0.39	42	50-200	R

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MS Analysis Summary
 MPCA Guidance PFCs

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Lab Sample ID 40252309009-MS
 Run File Name B221018C_017
 Analyzed 10/18/2022 21:58
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Native Analytes

Compound	Sample Conc. (ug/Kg)	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	0.00	0.37	0.38	102	70-130		375-22-4
PFPeA	0.00	0.37	0.38	102	70-130		2706-90-3
HFPO-DA	0.00	0.37	0.37	100	70-130		13252-13-6
PFBS	0.00	0.33	0.34	103	70-130		375-73-5
PFHxA	0.00	0.37	0.38	103	70-130		307-24-4
4:2 FTS	0.00	0.35	0.33	94	70-130		757124-72-4
PFPeS	0.00	0.35	0.32	93	70-130		2706-91-4
PFHpA	0.00	0.37	0.39	106	70-130		375-85-9
DONA	0.00	0.35	0.30	84	70-130		919005-14-4
PFHxS	0.00	0.34	0.32	94	70-130		355-46-4
PFOA	0.12	0.37	0.49	99	70-130		335-67-1
6:2 FTS	0.00	0.35	0.33	93	70-130		27619-97-2
PFHpS	0.00	0.35	0.35	100	70-130		375-92-8
PFNA	0.063	0.37	0.40	90	70-130		375-95-1
PFOSAm	0.00	0.37	0.36	96	70-130		754-91-6
PFOS	0.44	0.34	0.71	79	70-130		1763-23-1
MeFOSA	0.00	0.37	0.36	96	70-130		31506-32-8
PFDA	0.069	0.37	0.42	94	70-130		335-76-2
EtFOSAm	0.00	0.37	0.36	96	70-130		4151-50-2
8:2 FTS	0.00	0.36	0.35	98	70-130		39108-34-4
9-CI-PF3ON	0.00	0.35	0.32	91	70-130		756426-58-1
PFNS	0.00	0.36	0.34	96	70-130		68259-12-1
PFUnDA	0.00	0.37	0.37	100	70-130		2058-94-8
NMeFOSAA	0.00	0.37	0.33	90	70-130		2355-31-9
NEtFOSAA	0.00	0.37	0.37	99	70-130		2991-50-6
PFDS	0.055	0.36	0.38	89	70-130		335-77-3
PFDOA	0.00	0.37	0.40	108	70-130		307-55-1
MeFOSE	0.00	0.37	0.36	97	70-130		24448-09-7
EtFOSE	0.00	0.37	0.35	93	70-130		1691-99-2
11-CI-PF3OUdS	0.00	0.35	0.30	85	70-130		763051-92-9
PFTTrDA	0.00	0.37	0.32	86	70-130		72629-94-8
PFDoS	0.00	0.36	0.32	88	70-130		79780-39-5
PFTDA	0.00	0.37	0.35	93	70-130		376-06-7

REPORT OF LABORATORY ANALYSIS

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MS Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID 40252309009-MS
 Run File Name B221018C_017
 Analyzed 10/18/2022 21:58
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	5.61	5.61	1271	
13C4 PFOA	N/A	N/A	6.79	6.80	2241	
13C2 PFDA	N/A	N/A	8.00	8.02	2171	
13C4 PFOS	N/A	N/A	8.41	8.42	1414	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	4.30	4.30	1991	
13C5 PFPeA	N/A	N/A	5.03	5.04	2200	
13C3 PFBS	N/A	N/A	5.81	5.82	1943	
13C2 4:2FTS	N/A	N/A	5.37	5.38	392	
13C5 PFHxA	N/A	N/A	5.61	5.62	1090	
13C4 PFHpA	N/A	N/A	6.19	6.20	1452	
13C3 PFHxS	N/A	N/A	7.14	7.15	1548	
13C2 6:2FTS	N/A	N/A	6.49	6.50	568	
13C8 PFOA	N/A	N/A	6.79	6.80	2152	
13C9 PFNA	N/A	N/A	7.39	7.41	1919	
13C8 PFOS	N/A	N/A	8.41	8.43	1093	
13C2 8:2FTS	N/A	N/A	7.67	7.68	1044	
13C6 PFDA	N/A	N/A	8.00	8.02	1697	
d3-MeFOSAA	N/A	N/A	7.94	7.95	1527	
13C8 PFOSA	N/A	N/A	10.74	10.73	1282	
d5-EtFOSAA	N/A	N/A	8.22	8.24	1430	
13C7 PFUdA	N/A	N/A	8.62	8.63	1755	
13C2 PFDoA	N/A	N/A	9.23	9.24	1811	
13C2 PFTeDA	N/A	N/A	10.45	10.46	1334	
13C3 HFPO-DA	N/A	N/A	5.84	5.85	1515	
d7-N-MeFOSE	N/A	N/A	12.47	12.47	44	
d9-N-EtFOSE	N/A	N/A	12.95	12.95	338	
d3-N-MeFOSA	N/A	N/A	12.68	12.68	493	
d5-N-EtFOSA	N/A	N/A	13.11	13.16	660	R

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MS Analysis Summary
 MPCA Guidance PFCs

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Lab Sample ID 40252309009-MS
 Run File Name B221018C_017
 Analyzed 10/18/2022 21:58
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	4.30	4.31	173	
PFPeA	N/A	N/A	5.04	5.04	299	
HFPO-DA	0.32	0.34	5.85	5.86	922	
PFBS	0.40	0.42	5.82	5.83	776	
PFHxA	0.08	0.08	5.62	5.62	190	
4:2 FTS	0.82	0.81	5.38	5.39	685	
PFPeS	0.44	0.42	6.49	6.50	545	
PFHpA	0.27	0.29	6.20	6.21	17	
DONA	0.59	0.57	6.42	6.43	1692	
PFHxS	0.38	0.39	7.15	7.16	545	
PFOA	0.32	0.37	6.79	6.81	227	
6:2 FTS	0.87	0.87	6.49	6.49	308	
PFHpS	0.36	0.38	7.79	7.80	644	
PFNA	0.15	0.16	7.40	7.41	538	
PFOSAm	N/A	N/A	10.75	10.74	951	
PFOS	0.40	0.39	8.42	8.43	739	
MeFOSA	0.58	0.59	12.71	12.70	641	
PFDA	0.16	0.13	8.01	8.02	489	
EtFOSAm	0.52	0.53	13.13	13.13	565	
8:2 FTS	0.91	0.98	7.67	7.68	24704	
9-CI-PF3ON	0.05	0.05	8.87	8.88	1379	
PFNS	0.42	0.43	9.04	9.05	811	
PFUnDA	0.11	0.11	8.62	8.64	536	
NMeFOSAA	0.82	0.91	7.95	7.96	2568	
NEtFOSAA	0.58	0.69	8.24	8.25	280	
PFDS	0.33	0.31	9.65	9.66	635	
PFDOA	0.16	0.15	9.23	9.25	465	
MeFOSE	N/A	N/A	12.51	12.51	305	
EtFOSE	0.00	0.00	12.99	12.99	251	
11-CI-PF3OUdS	0.02	0.02	10.10	10.11	812	
PFTrDA	0.16	0.16	9.85	9.87	395	
PFDoS	0.46	0.46	10.83	10.84	1193	
PFTDA	0.23	0.24	10.46	10.47	365	

REPORT OF LABORATORY ANALYSIS

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MSD Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID 40252309009-MSD
 Run File Name B221018C_018
 Analyzed 10/18/2022 22:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	RPD	Qualifiers
13C2_PFHxA	0.94	0.92	98	50-200	1.3	
13C4_PFOA	0.94	0.90	96	50-200	1.1	
13C2_PFDA	0.94	1.1	119	50-200	9.8	
13C4_PFOS	0.90	1.0	112	50-200	0.1	

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	RPD	Qualifiers
13C4_PFBa	0.94	0.68	72	50-200	5.0	
13C5_PFPeA	0.94	0.71	76	50-200	2.5	
13C3_PFBs	0.87	0.65	74	50-200	5.0	
13C2_4:2Fts	0.88	0.88	100	50-200	4.8	
13C5_PFHxA	0.94	0.66	70	50-200	6.0	
13C4_PFHpA	0.94	0.71	75	50-200	10.1	
13C3_PFHxS	0.89	0.71	79	50-200	1.6	
13C2_6:2Fts	0.89	0.81	90	50-200	7.3	
13C8_PFOA	0.94	0.73	77	50-200	5.4	
13C9_PFNA	0.94	0.75	80	50-200	7.5	
13C8_PFOS	0.90	0.72	81	50-200	0.1	
13C2_8:2Fts	0.90	0.75	83	50-200	1.6	
13C6_PFDA	0.94	0.86	91	50-200	6.6	
d3-MeFOSAA	0.94	0.79	84	50-200	4.8	
13C8_PFOsA	0.94	0.64	68	50-200	2.5	
d5-EtFOSAA	0.94	0.78	83	50-200	0.4	
13C7_PFUdA	0.94	0.88	93	50-200	0.6	
13C2_PFDaA	0.94	0.81	86	50-200	6.9	
13C2_PFTeDA	0.94	0.77	82	50-200	4.4	
13C3_HFPO-DA	0.94	0.70	74	50-200	4.6	
d7-N-MeFOSE	0.94	0.53	56	50-200	12.0	
d9-N-EtFOSE	0.94	0.51	54	50-200	8.6	
d3-N-MeFOSA	0.94	0.56	59	50-200	16.8	
d5-N-EtFOSA	0.94	0.49	52	50-200	22.6	

REPORT OF LABORATORY ANALYSIS

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MSD Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID 40252309009-MSD
 Run File Name B221018C_018
 Analyzed 10/18/2022 22:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Native Analytes

Compound	Sample Conc. (ug/Kg)	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	RPD	Qualifiers	CAS No.
PFBA	0.00	0.38	0.41	108	70-130	6.0		375-22-4
PFPeA	0.00	0.38	0.39	104	70-130	2.3		2706-90-3
HFPO-DA	0.00	0.38	0.38	102	70-130	2.3		13252-13-6
PFBS	0.00	0.33	0.34	101	70-130	2.3		375-73-5
PFHxA	0.00	0.38	0.42	113	70-130	9.3		307-24-4
4:2 FTS	0.00	0.35	0.36	101	70-130	7.3		757124-72-4
PFPeS	0.00	0.35	0.34	95	70-130	2.7		2706-91-4
PFHpA	0.00	0.38	0.44	116	70-130	9.1		375-85-9
DONA	0.00	0.36	0.32	90	70-130	6.5		919005-14-4
PFHxS	0.00	0.34	0.33	96	70-130	1.8		355-46-4
PFOA	0.12	0.38	0.49	97	70-130	1.5		335-67-1
6:2 FTS	0.00	0.36	0.29	82	70-130	13.0		27619-97-2
PFHpS	0.00	0.36	0.34	95	70-130	5.5		375-92-8
PFNA	0.063	0.38	0.42	95	70-130	4.4		375-95-1
PFOSAm	0.00	0.38	0.37	99	70-130	2.8		754-91-6
PFOS	0.44	0.35	0.74	89	70-130	4.1		1763-23-1
MeFOSA	0.00	0.38	0.38	101	70-130	5.1		31506-32-8
PFDA	0.069	0.38	0.44	98	70-130	3.6		335-76-2
EtFOSAm	0.00	0.38	0.37	97	70-130	1.6		4151-50-2
8:2 FTS	0.00	0.36	0.36	101	70-130	2.9		39108-34-4
9-CI-PF3ON	0.00	0.35	0.33	93	70-130	2.0		756426-58-1
PFNS	0.00	0.36	0.34	94	70-130	1.8		68259-12-1
PFUnDA	0.00	0.38	0.38	100	70-130	0.3		2058-94-8
NMeFOSAA	0.00	0.38	0.33	87	70-130	3.1		2355-31-9
NEtFOSAA	0.00	0.38	0.36	95	70-130	4.7		2991-50-6
PFDS	0.055	0.36	0.36	84	70-130	5.5		335-77-3
PFDOA	0.00	0.38	0.42	112	70-130	4.0		307-55-1
MeFOSE	0.00	0.38	0.35	94	70-130	3.3		24448-09-7
EtFOSE	0.00	0.38	0.36	95	70-130	1.9		1691-99-2
11-CI-PF3OUdS	0.00	0.35	0.31	89	70-130	4.3		763051-92-9
PFTrDA	0.00	0.38	0.35	94	70-130	8.9		72629-94-8
PFDoS	0.00	0.36	0.33	91	70-130	3.0		79780-39-5
PFTDA	0.00	0.38	0.37	98	70-130	5.2		376-06-7

REPORT OF LABORATORY ANALYSIS

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MSD Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID 40252309009-MSD
 Run File Name B221018C_018
 Analyzed 10/18/2022 22:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	5.61	5.61	2010	
13C4 PFOA	N/A	N/A	6.79	6.80	2359	
13C2 PFDA	N/A	N/A	8.01	8.02	1560	
13C4 PFOS	N/A	N/A	8.41	8.42	803	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	4.30	4.30	2009	
13C5 PFPeA	N/A	N/A	5.04	5.04	2290	
13C3 PFBS	N/A	N/A	5.82	5.82	1090	
13C2 4:2FTS	N/A	N/A	5.38	5.38	397	
13C5 PFHxA	N/A	N/A	5.61	5.62	1282	
13C4 PFHpA	N/A	N/A	6.20	6.20	1549	
13C3 PFHxS	N/A	N/A	7.15	7.15	1576	
13C2 6:2FTS	N/A	N/A	6.49	6.50	484	
13C8 PFOA	N/A	N/A	6.79	6.80	2205	
13C9 PFNA	N/A	N/A	7.40	7.41	1618	
13C8 PFOS	N/A	N/A	8.42	8.43	822	
13C2 8:2FTS	N/A	N/A	7.67	7.68	604	
13C6 PFDA	N/A	N/A	8.01	8.02	1563	
d3-MeFOSAA	N/A	N/A	7.94	7.95	1114	
13C8 PFOSA	N/A	N/A	10.74	10.73	1259	
d5-EtFOSAA	N/A	N/A	8.23	8.24	1417	
13C7 PFUdA	N/A	N/A	8.62	8.63	1877	
13C2 PFDoA	N/A	N/A	9.23	9.24	1483	
13C2 PFTeDA	N/A	N/A	10.45	10.46	1515	
13C3 HFPO-DA	N/A	N/A	5.84	5.85	1844	
d7-N-MeFOSE	N/A	N/A	12.47	12.47	39	
d9-N-EtFOSE	N/A	N/A	12.95	12.95	368	
d3-N-MeFOSA	N/A	N/A	12.69	12.68	540	
d5-N-EtFOSA	N/A	N/A	13.11	13.16	743	

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MSD Analysis Summary
 MPCA Guidance PFCs

Lab Sample ID 40252309009-MSD
 Run File Name B221018C_018
 Analyzed 10/18/2022 22:18
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 221017B02
 Level

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	4.31	4.31	197	
PFPeA	N/A	N/A	5.04	5.04	268	
HFPO-DA	0.30	0.34	5.86	5.86	875	
PFBS	0.44	0.42	5.83	5.83	471	
PFHxA	0.07	0.08	5.62	5.62	221	
4:2 FTS	0.83	0.81	5.38	5.39	984	
PFPeS	0.43	0.42	6.50	6.50	482	
PFHpA	0.25	0.29	6.21	6.21	19	
DONA	0.57	0.57	6.42	6.43	1607	
PFHxS	0.40	0.39	7.15	7.16	520	
PFOA	0.35	0.37	6.80	6.81	276	
6:2 FTS	0.97	0.87	6.50	6.49	306	
PFHpS	0.36	0.38	7.80	7.80	436	
PFNA	0.15	0.16	7.40	7.41	516	
PFOSAm	N/A	N/A	10.75	10.74	853	
PFOS	0.37	0.39	8.42	8.43	645	
MeFOSA	0.55	0.59	12.71	12.70	496	
PFDA	0.15	0.13	8.01	8.02	400	
EtFOSAm	0.53	0.53	13.13	13.13	645	
8:2 FTS	0.96	0.98	7.68	7.68	17889	
9-CI-PF3ON	0.05	0.05	8.87	8.88	993	
PFNS	0.45	0.43	9.05	9.05	743	
PFUnDA	0.12	0.11	8.63	8.64	513	
NMeFOSAA	0.91	0.91	7.95	7.96	650	
NEtFOSAA	0.58	0.69	8.24	8.25	268	
PFDS	0.37	0.31	9.66	9.66	592	
PFDOA	0.16	0.15	9.24	9.25	534	
MeFOSE	N/A	N/A	12.51	12.51	323	
EtFOSE	0.00	0.00	12.99	12.99	292	
11-CI-PF3OUdS	0.02	0.02	10.10	10.11	1093	
PFTrDA	0.16	0.16	9.85	9.87	432	
PFDoS	0.43	0.46	10.83	10.84	1197	
PFTDA	0.24	0.24	10.46	10.47	381	

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