Supplemental Data Gaps Report

Former Fire Training Pit
Supplemental Data Gaps Investigation
Snohomish County Airport
Everett, Washington

for
Snohomish County Airports

October 31, 2025

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List of Abbreviations and Acronyms

5:3 FTCA	5:3 fluorotelomer carboxylic acid, or 5:3 fluorotelomer carboxylate
6:2 FTS	6:2 fluorotelomer sulfonic acid, or 6:2 fluorotelomer sulfonate
Airport	Paine Field / Snohomish County Airport
AO	Agreed Order
AFFF	aqueous film forming foam
ASTM	ASTM International
bgs	below ground surface
CAP	Cleanup Action Plan
CDM	Camp Dresser & McKee Inc.; CDM Smith
COC	chain of custody
COCs	contaminants of concern
CSM	Conceptual Site Model
DOT	Department of Transportation
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FTP	Fire Training Pit
FS	Feasibility Study
HFPO-DA (GenX)	hexafluoropropylene oxide dimer acid, or ammonium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propanoate
HSA	hollow-stem auger
IDW	investigation derived waste
µg/kg	micrograms per kilogram
MCL	Maximum Contaminant Level
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
ND	nondetect
NFA	no further action
ng/L	nanograms per Liter
NPDWR	National Primary Drinking Water Regulation
Pace	Pace Analytical Services of Minneapolis, Minnesota
PCULs	preliminary cleanup levels
PFAS	per- and polyfluoroalkyl substances
PFBS	perfluorobutanesulfonic acid, or perfluorobutane sulfonate
PFDA	perfluorodecanoic acid, or perfluorodecanoate
PFHpA	perfluoroheptanoic acid, or perfluoroheptanoate

PFHxA	perfluorohexanoic acid, or perfluorohexanoate
PFHxS	perfluorohexane sulfonic acid, or perfluorohexane sulfonate
PFNA	perfluorononanoic acid, or perfluorononanoate
PFOA	perfluorooctanoic acid, or perfluorooctanoate
PFOS	perfluorooctane sulfonic acid, or perfluorooctane sulfonate
PFPeA	perfluoropentanoic acid, or perfluoropentanoate
PFPeS	perfluoropentanesulfonic acid, or perfluoropentanesulfnoate
PID	photoionization detector
ppm	parts per million
PVC	polyvinyl chloride
RI	Remedial Investigation
SALs	State Action Levels
Site	former Fire Training Pit Site
Study Area	former Fire Training Pit study area
TPH	total petroleum hydrocarbons

1.0 Introduction

This Supplemental Data Gaps Report describes the results of environmental drilling and sampling conducted in 2025 at the former Fire Training Pit (FTP) Study Area (Study Area) located at Paine Field/Snohomish County Airport (Paine Field/Airport) in Everett, Washington (Figure 1) to further characterize and address data gaps and to support development of a Remedial Investigation (RI), Feasibility Study (FS) and Cleanup Action Plan (CAP) for the former Fire Training Pit Site (Site). This Supplemental Data Gaps Report includes relevant data from previous investigations, including the 2024 Initial Data Gaps Investigation, to inform the nature and extent of impacts and update the preliminary conceptual site model (CSM) for the Site. Throughout this report, the term "Study Area" is used to describe the area of investigation at the Airport and the term "Site" is used to describe the area where per- and polyfluoroalkyl substances (PFAS) have been detected in soil, groundwater or surface water at concentrations greater than applicable cleanup standards.

The FTP Study Area is located in the southwestern portion of Paine Field adjacent to the Mukilteo Speedway and Bernie Webber Drive and extends to the boundary road north of Wetlands 17 and 19 (Figures 1 and 2).

The Study Area has been the subject of several investigations since at least 1989. Prior investigations and remedial actions completed at the FTP Study Area between 1989 and 2006 identified and addressed total petroleum hydrocarbons (TPH) and lead in soil; the Site received a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology) in 2007 (Cleanup Site ID: 3234). An investigation conducted in 2018 at the FTP Study Area identified PFAS in soil and groundwater, which were attributed to the historical use of PFAS-containing aqueous film forming foam (AFFF). The results of the 2018 investigation by Camp Dresser & McKee Inc (CDM), the subsequent 2022/2023 investigation by Shannon and Wilson, and the 2024 Data Gaps Investigation by GeoEngineers, Inc. (GeoEngineers) are summarized in Section 3.0. Ecology assigned a Cleanup Site ID for the Paine Field Fire Training Pit PFAS Site (Cleanup Site ID: 16912; Facility/Site ID: 49626114). The Data Gaps Report (GeoEngineers 2024) summarizes the regulatory framework and property conditions for the Study Area.

1.1 OBJECTIVES

Objectives for the Supplemental Data Gaps Investigation included the following:

- Evaluate solids from catch basins in the stormwater conveyance system as a potential secondary source of impacts to surface water.
- Characterize and assess known and potential sources of PFAS and evaluate contaminants of concern (COC) fate and transport through environmental evaluation of soil, catch basin solids, groundwater and surface water samples.
- Support the continued development of a CSM for the former FTP that will be used to evaluate the need for and scope of cleanup actions, as warranted. A summary of investigations completed for the FTP Study Area is presented in Section 3.0.

1.2 REGULATORY FRAMEWORK

The Supplemental Data Gaps Investigation was conducted as an independent action in accordance with Ecology guidance and Model Toxics Control Act (MTCA) regulations. A summary of previous investigations can be found in GeoEngineers' 2024 Data Gaps Report. An Agreed Order (AO) is being negotiated by Snohomish County and Ecology and is expected to be in place in late Fall 2025. At the time this investigation was conducted, the Site was not under regulatory oversight.

2.0 Property Conditions

The following summary includes information from prior reports regarding current and historical land use and the environmental setting for the Site. Figure 1 shows the general Site location and Figure 2 shows the Site layout and exploration locations for this Supplemental Data Gaps Investigation. The Airport is zoned by Snohomish County for light industrial use. The Study Area is generally undeveloped vegetated land surrounded by Airport runway/taxiway and other paved surfaces and associated Airport stormwater infrastructure (Figure 2). Stormwater captured on Airport property in the Study Area is collected in catch basins and conveyed in a series of stormwater pipes and wetlands that discharge to Big Gulch Creek and ultimately Puget Sound.

2.1 LOCATION AND CURRENT LAND USE

The FTP Study Area is located along the western boundary of Paine Field, adjacent to Mukilteo Speedway (Figure 2). The area lies primarily on an elevated plateau constructed with fill during runway development. Key features include Taxi Lane K-6 at the eastern end, private/commercial hangars along the southern boundary and a stormwater detention pond at the base of a steep western slope that discharges to Big Gulch Creek. The southern portion of the site is a grass-covered field sloping west, while the northern portion is vegetated with wetlands, seasonal ponds and drainage ditches. A triangular soil mound, approximately 20 feet high, is located northeast of the former FTP. No changes to area use have been documented since the 2024 Data Gaps Report.

2.2 HISTORICAL LAND USE

The Study Area was historically used for firefighting training as well as fire truck calibration and FAA compliance testing. Training at the former FTP (see Figure 2) involved burning petroleum and other flammable materials in a pit (i.e., FTP) and extinguishing the flames with PFAS-containing AFFF (CDM 2007). In 2006, the FTP was excavated and backfilled during remedial activities to clean up petroleum impacts as described in Section 3.1.

Paine Field Fire Department also conducted annual calibration and compliance testing by spraying AFFF on the ground near the soil mound (see Figure 2); these practices were modified in June 2019 after the Airport purchased a testing system that does not discharge AFFF to the ground.

2.3 STORMWATER UTILITY NETWORK

Utility infrastructure at the Study Area includes enclosed pipes, catch basins and a stormwater detention pond that discharges stormwater off Airport property into Big Gulch Creek to the west of Mukilteo Speedway (Figure 2). The stormwater detention pond at the base of the slope west of the former FTP receives outfall from enclosed pipes and open channels on the western side of the Airport that collect stormwater from the undeveloped fields surrounding the former FTP and mound, Taxiway K-6 and additional infrastructure on the western side of the Airport. Stormwater originating from Wetland 25 is conveyed through an isolated utility pipe that flows directly to Big Gulch Creek and does not enter the stormwater detention pond. The stormwater detention pond is also directed to the west into Big Gulch Creek but primarily receives stormwater runoff from the west side of the Airport runway.

The northern portion of the Study Area includes several small wetlands, including wetlands identified by the Airport as Wetlands 16, 17, 19, 23, 26, 27, 29 and 30 that collect stormwater from surrounding areas. Surface water in these wetlands generally flows to the north and west, moving through open channels and into Wetland 17 near the northwestern corner of the Study Area before discharging to the stormwater conveyance system beneath Mukilteo Speedway near the northwestern corner of the Study Area and into Big Gulch Creek (Figure 2). Big Gulch Creek flows north and west through Mukilteo and enters surface water in the Puget Sound approximately 10,000 feet downstream.

3.0 Previous Investigations and Site Characterization

Environmental investigations at the former FTP progressed over several decades, from identification of petroleum hydrocarbon and metals impacts in soil and surface water in the 1980s followed by soil remediation in 2006. More recent work has focused on characterizing and addressing PFAS impacts in soil, groundwater and surface water. The following subsections provide a brief overview of key investigations completed to date, including work conducted in 2024 to address data gaps and refine the CSM.

3.1 PREVIOUS INVESTIGATIONS

- **Early Environmental Investigations** (Pre-2000): Initial studies in the late 1980s and 1990s identified petroleum hydrocarbons and metals in soil and surface water at the former FTP. These early findings provided the first evidence of contamination at the site.
- **FTP Soil Remediation Summary Report** (CDM 2007): In 2006, approximately 170 cubic yards of petroleum- and lead-impacted soil were excavated from the FTP and disposed of off-site. The area was backfilled with clean soil and Ecology issued a NFA determination in 2007 (Ecology 2007).
- **PFAS Investigation** (CDM 2018): Subsequent investigations identified PFAS in soil and groundwater near the FTP. The most frequently detected compounds were PFOA, PFOS, PFNA and PFHxS.
- **Supplemental PFAS Investigation** (SWI 2023): Additional investigations in 2022–2023 further characterized PFAS impacts to soil and groundwater in the area surrounding the FTP.
- **Summary Report for SourceStop® Treatment** (REGENESIS 2023, 2024, 2025): A pilot soil treatment using powdered activated carbon and SourceStop® was conducted to test PFAS sequestration. Post-treatment sampling through early 2024 showed greater than 99 percent reductions in soil leachate and measurable decreases in porewater and groundwater concentrations. The long-term effectiveness of this technology remains under evaluation.

- **Data Gaps Investigation** (GeoEngineers 2024): In 2024, GeoEngineers completed a Data Gaps Investigation that included the collection of soil, groundwater and surface water samples for laboratory analysis using United States Environmental Protection Agency (EPA) Method 1633. The objectives of the investigation were to document the extent of PFAS detected in soil and groundwater during previous investigations at the FTP, assess and document groundwater quality and flow direction and evaluate surface water conditions, including in adjacent wetlands, in the stormwater detention pond, and groundwater seeps located west of the former FTP. Sample locations for soil borings, monitoring wells and surface water samples included:
  - Ten soil borings (FP-B1 through FP-B3 and FP-MW7 through FP-MW13) were advanced to assess lateral and vertical extent of PFAS.
  - Seven groundwater monitoring wells were installed (FP-MW7 through FP-MW13) to assess groundwater conditions in areas that had not been previously evaluated.
  - Five surface water samples (FP-SW1 through FP-SW5) were collected in the wetlands north of the former FTP.
  - One groundwater seep sample (FP-SEEP) was collected where groundwater was observed emerging from the hillside east of the stormwater detention pond to evaluate conditions in surface water.

Following completion of the 2024 Data Gaps Investigation, the following data gaps were identified and evaluated during the Supplemental Data Gaps Investigation described in this report.

- Extent of PFAS greater than PCULs in soil at the former FTP.
- Extent of PFAS greater than PCULs in groundwater at the FTP.
- Extent of PFAS in surface Water at the FTP.
- PFAS in solids and water within the stormwater conveyance system at the former FTP.

3.2 SUPPLEMENTAL DATA GAPS INVESTIGATION (GEOENGINEERS 2025)

In June 2025, GeoEngineers completed a Supplemental Data Gaps Investigation that included the collection of soil, groundwater, surface water and stormwater conveyance system samples for laboratory analysis. The objectives of the investigation were to document the extent of PFAS detected in soil and groundwater greater than preliminary cleanup levels (PCULs; discussed in Section 4.0), the extent of PFAS in surface water, including in adjacent wetlands and the stormwater detention pond located west of the former FTP, and assess and evaluate the presence of PFAS in solids and water within the stormwater conveyance system.

Drilling and monitoring well installation activities and soil, groundwater and surface water sampling were conducted between June 3, 4, 9 and 10, 2025. Drilling and monitoring well installation activities were completed by a licensed driller, Holocene Drilling of Puyallup, Washington. Soil, groundwater and surface water samples were delivered to Pace Analytical Services (Pace) in Minneapolis, Minnesota for analysis of PFAS by EPA Method 1633. Exploration locations are shown in Figure 2. Soil boring logs and monitoring well construction logs are presented in Appendix A, groundwater sampling field data are presented in Appendix B, laboratory analytical reports are included in Appendix C, and field procedures are presented in Appendix D. Analytical results are discussed in Section 5.

3.2.1.1 SOIL SAMPLING

Seven soil borings were advanced to assess and document the lateral and vertical extent of PFAS in soil at the FTP (Figure 3); the seven soil borings (FP-MW14 through FP-MW20) were drilled to depths between 20.5 and 45.5 feet below ground surface (bgs) using hollow-stem auger (HSA) techniques. Soil borings FP-MW14 and FP-MW15 were completed along Bernie Webber Drive just south of the Airport perimeter gate W-10, south of previously installed wells. Borings FP-MW16, FP-MW17 and FP-MW18 were completed along the West Perimeter Road to the east of the FTP, east of the previously installed wells. Boring FP-MW19 was installed along the Airport road north of the Wetland 19 area. Boring FP-MW20 was completed along the Airport road to the west of Wetland 16 immediately east of the Airport perimeter fence and Mukilteo Speedway. Three hand auger borings (FP-GEI-1 through FP-GEI-3) were completed in Wetland 19 area to the northwest of the FTP to a depth of 1.0-foot bgs.

Up to three soil samples were collected from each soil boring at selected depth intervals between 1 and 41.5 feet bgs for laboratory analysis. Twenty-five soil samples collected from the Study Area were submitted to Pace for analysis of PFAS by EPA Method 1633.

3.2.1.2 SURFACE WATER SAMPLING

Four surface water samples, FP-SW2, FP-SW6, FP-SW7 and FP-SW8 were collected from the Study Area (Figure 4). Sample FP-SW2 was collected from the stormwater detention pond located west and immediately downgradient from the FTP. Samples FP-SW6, FP-SW7 and FP-SW8 were collected from standing water within the Wetland 19 area. The four surface water samples were submitted to Pace for analysis of PFAS by EPA Method 1633.

3.2.1.3 GROUNDWATER SAMPLING

Groundwater monitoring wells were installed in seven soil borings (FP-MW14 through FP-MW20; see Figure 2) to assess the extent of PFAS impacts in groundwater. The monitoring wells were installed to depths between 20 and 45 feet bgs and were constructed with 2-inch-diameter polyvinyl chloride (PVC) casing with 10- or 15-foot-long 0.010-slot screens and flush-mount monuments.

The casing rim elevation of each new monitoring well was surveyed relative to North American Vertical Datum of 1988 (NAVD 88). Depth to groundwater was measured during sampling of the newly installed and previously installed monitoring wells, and a site-wide groundwater elevation survey was completed on June 9 and 10, 2025 (Figure 5). The June 2025 groundwater elevations were used to evaluate and reassess the groundwater flow direction and gradient at the former FTP; based on these data groundwater flow is generally toward the southwest across the central portion of the former FTP becoming westerly near the western end of the former FTP.

Groundwater samples were collected for laboratory analysis from the seven newly installed monitoring wells (FP-MW14 through FP-MW20) and six previously installed monitoring wells (FP-MW5, FP-MW7, FP-MW10, FP-MW11, FP-MW12 and FP-MW14) as part of the investigation. Fourteen groundwater samples (13 samples plus one duplicate), as well as one equipment rinsate blank, were submitted to Pace for analysis of PFAS by EPA Method 1633.

3.2.1.4 STORMWATER UTILITY SAMPLING

Two grab samples (FP-CB4 and FP-CB5) of solid material (granular sand and silt) and five water samples (FP-CB1 through FP-CB4 and FP-CB-6) were collected from stormwater conveyance system catch basins at the locations shown in Figure 4. Water sample FP-CB1 was collected from a catch basin at the stormwater detention pond outlet where water is conveyed westward below Mukilteo Speedway and then into Big Gulch Creek. Water samples FP-CB2 and FP-CB3 were collected from catch basins just south of the FTP. Solid material samples FP-CB4 and FP-CB5 were collected from catch basins located on the Airport road to the north of Wetland 19. Water sample FP-CB6 was collected from the catch basin located west of the Airport perimeter fence Wetlands 16 and 19 just east of Mukilteo Speedway. The two solid material and five water samples collected from the stormwater conveyance system were submitted to Pace for analysis of PFAS by EPA Method 1633.

3.3 INVESTIGATION DERIVED WASTE

Investigation derived waste (IDW), including soil and water generated during the Supplemental Data Gaps Investigation drilling and sampling activities, was containerized in Department of Transportation (DOT)-approved 55-gallon drums and temporarily stored on site pending characterization and disposal. Soil and purge water IDW were characterized using the soil, water and catch basin sample data presented in Tables 2, 3 and 4. Transport and disposal of IDW at an off-site facility licensed to receive the material was completed on August 21, 2025. A signed copy of the transport manifest in provided in Appendix E.

4.0 Preliminary Cleanup Standards

The cleanup standards presented in this report were provided by Ecology in a PCUL workbook prepared for the Site (Appendix F). The PCULs presented in the workbook draw from the CLARC spreadsheet applying the Method B potable groundwater cleanup framework for soil and groundwater (CLARC 2025). The PCULs for surface water presented in Ecology's workbook are based on the groundwater to surface water pathway for protection of fresh surface water. Stormwater utility samples (solids and water) do not have specified cleanup standards. Stormwater utility solids samples are compared to the sediment PCUL for PFOS provided in the workbook, which is based on the direct contact pathway. Water samples collected from the stormwater system are compared to the PCULs for fresh surface water provided in the workbook.

Since 2001, Ecology has designated PFAS as hazardous substances under MTCA, adopted State Action Levels (SALs) for five PFAS compounds, and published guidance recommending cleanup levels for eight PFAS compounds in groundwater, surface water and soil (Ecology 2023). On April 10, 2024, the EPA announced the final National Primary Drinking Water Regulation (NPDWR), which established Maximum Contaminant Levels (MCLs) for drinking water for the following five PFAS: PFOA, PFOS, PFHxS, PFNA and HFPO-DA. Additionally, a Hazard Index MCL was established for mixtures containing two or more of PFHxS, PFNA, HFPO-DA and PFBS. Ecology revised the June 2023 groundwater PCULs to match the new EPA MCLs. Ecology has made subsequent revisions to the PCULs to include 6:2 FTS and PFDA, and update toxicity values for PFHxS. The revised soil and groundwater PCULs were published in Ecology's CLARC data tables in February 2025. In the summer of 2025, Ecology adopted EPA's MCLs for PFOA, PFOS and PFNA set at the nationwide practical quantitation limit as the Method B cleanup levels. As of October 2025, the federal MCLs are in the process of revision, though it is anticipated that any future revisions to the federal MCLs are unlikely to affect the MCL-derived cleanup levels established by Ecology.

The PCULs for ten PFAS compounds (PFOA, PFOS, PFNA, PFHxS, PFBS, PFBA, PFHxA, HFPO-DA, PFDA and 6:2 FTS) are used to evaluate the impacts at the subject property in this report. The Hazard Index is used to assess the cumulative non-cancer health risk from multiple PFAS compounds with a value of one commonly used as a threshold for potential concern. While individual PFAS compounds are compared to their respective PCULs, the Hazard Index provides an additional risk-based evaluation to determine whether additive risks from multiple chemicals of concern. Recommended cleanup levels have not been established for other PFAS compounds at the time of publication of this report. The PCULs for soil are shown in Table 2, PCULs for groundwater and surface water are shown in Table 3, and the PCUL for sediment at freshwater sites is shown in Table 4 for catch basin solids.

5.0 Results

The following section describes the results of PFAS analysis in soil, surface water, groundwater and catch basin solids and water at the Study Area during the 2025 investigation. As discussed in Section 4.0, Ecology has established PCULs for the following ten PFAS compounds: PFOA, PFOS, PFNA, PFHxS, HFPO-DA, PFHxA, PFBS, PFBA, PFDA and 6:2 FTS, and a threshold of 1.0 for the Hazard Index. The findings are presented to show regulated PFAS compounds and Hazard Index values individually, detections of non-regulated PFAS compounds individually, and cumulative PFAS concentrations (sum of all detected PFAS) to provide an integrated understanding of impacts.

Summary result figures displaying cumulative PFAS and PFOS concentrations for soil, surface water, groundwater and the stormwater utility system are presented in Figures 3, 4, 6 and 7. PFOS is highlighted alongside cumulative totals in these figures because it is the primary compound associated with legacy AFFF use at the Site and therefore provides important context for interpreting cumulative results. Analytical data for soil, water and stormwater utility samples collected during the 2025 investigation are presented in Tables 2, 3 and 4. Laboratory analytical reports are presented in Appendix C.

5.1 SOIL ANALYTICAL RESULTS

During the 2025 investigation, 25 soil samples were collected and submitted for PFAS analysis (Table 2, Figure 3). These samples were collected from seven HSA borings completed as monitoring wells and three hand auger borings completed in the wetland area.

5.1.1 HSA Borings

PFOS was detected in soil at three HSA boring locations (FP-MW14, FP-MW15 and FP-MW18) and PFHxS was detected in soil at FP-MW14. PFAS were not detected in the soil samples collected from the remaining four HSA soil boring (FP-MW16, FP-MW17, FP-MW19 and FP-MW20).

- **PFOS** was detected in soil at depths of 15 feet and 40 feet bgs at FP-MW14 (concentration of 0.48 micrograms per kilogram [µg/kg] and 0.28 µg/kg, respectively), at 5.0 feet bgs at FP-MW15 (0.39 µg/kg), and at 5.0 feet bgs at FP-MW18 (0.21 µg/kg). All detections of PFOS exceeded the PCUL for soil protective of potable groundwater in both vadose and saturated zone samples.
- **PFHxS** was detected in soil at a depth of 15 feet bgs at FP-MW14 (0.35 µg/kg); at concentrations greater than the PCUL for soil protective of potable groundwater in a vadose zone soil sample.

No other PFAS compounds, including six regulated compounds (PFOA, PFNA, PFBS, PFBA, HFPO-DA [GenX], PFDA and 6:2 FTS), were detected in the 2025 soil samples. Laboratory reporting limits for PFOA, PFOS, PFNA, PFHxS, HFPO-DA and PFDA were greater than their respective PCULs.

Cumulative PFAS concentrations, including both regulated and unregulated compounds, ranged from non-detect (ND) to 0.83 µg/kg in soil borings advanced using HSA drilling (Table 2 and Figure 3). These borings were primarily installed to support monitoring well construction and to address groundwater plume data gaps rather than to target areas of expected higher soil concentrations.

5.1.2 Hand Auger Borings

One or more PFAS were detected in wetland soil samples from two of the three boring locations (FP-GEI-1 and FP-GEI-2); no PFAS was detected in wetland soil from location FP-GEI-3.

Exceedances of regulated PFAS compounds in wetland soil samples are listed below:

- **PFOA** exceedance of PCUL in samples from FP-GEI-1 (0.31 µg/kg) and FP-GEI-2 (0.56 µg/kg).
- **PFOS** exceedance of PCUL in samples from FP-GEI-1 (0.80 µg/kg) and FP-GEI-2 (2.2 µg/kg).
- **PFHxS** exceedance of PCUL in sample from FP-GEI-2 (0.96 µg/kg).
- **PFHxA** exceedance for PCUL in sample from FP-GEI-2 (6.7 µg/kg).

One or more non-regulated compounds (PFPeA, PFHpA and 5:3 FTCA) were detected in two samples (FP-GEI-1-1.0 and FP-GEI-2-1.0).

Cumulative PFAS concentrations ranged from nondetect (ND) at wetland soil boring FP-GEI3 to 44.3 µg/kg in wetland soil boring FP-GEI-2 at 1-foot bgs located nearest to the former FTP (Table 2 and Figure 3). The highest cumulative concentrations were observed in wetland samples collected closest to the former FTP consistent with its role as the primary historical PFAS source area.

5.2 SURFACE WATER ANALYTICAL RESULTS

Four surface water samples were analyzed for PFAS. Two or more PFAS compounds were detected in surface water samples FP-SW2, FP-SW7 and FP-SW8, including exceedances of MTCA Method B PCULs for PFHxS and the Hazard Index. PFAS were not detected in surface water sample FP-SW6.

Exceedances of regulated PFAS compounds in surface water samples are listed below:

- **PFOS** exceedance of MTCA Method B PCUL sample from FP-SW7 (7.2 nanograms per liter [ng/L]).
- **PFHxS** exceedance of MTCA Method B PCUL sample from FP-SW8 (283 ng/L).
- **Hazard Index** exceedance of the 1.0 threshold in samples from FP-SW2 and FP-SW8,

In addition, surface water samples FP-SW2, FP-SW7 and FP-SW8 had detections of one or more regulated compounds PFOS, PFBS, PFBA and PFHxA were found at concentrations less than PCULs. Two samples, FP-SW2 and FP-SW6 had ND results for PFOS, however the reporting limit exceeded ten times the MDL. In accordance with WAC 173-340-830(2), when the reporting limit is greater than ten times the MDL the

cleanup level is considered not attained (see blue shaded cells in Table 3). There were no detections of PFOA, PFNA, HFPO-DA (GenX), PFDA or 6:2 FTS in any surface water samples. Detections of one or more non-regulated compounds PFPeA, PFHpA and PFPeS were identified in surface water samples FP-SW2 and FP-SW8.

Cumulative PFAS concentrations ranged from ND in the eastern wetland surface water sample FP-SW6 to 11,203 ng/L at FP-SW2 collected within the Stormwater Detention Pond (Table 3 and Figure 4). The highest cumulative concentrations greater than 1,000 ng/L were observed in two samples: FP-SW8 (3,548.4 ng/L) in the wetland area and FP-SW2 (11,203 ng/L) collected from the Stormwater Detention Pond.

5.3 GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS

Groundwater elevations were measured on June 9, 2025 to evaluate groundwater gradients and flow conditions with the addition of seven new monitoring wells. Elevation contours of the groundwater table are shown in Figure 5. Overall, groundwater flows westward toward the Puget Sound, generally following the surface topography of the area. Within the wetland, groundwater flow is interpreted to shift to the west-northwest toward the tributary of Big Gulch Creek north of Harbour Pointe Boulevard.

Fourteen groundwater samples were analyzed for PFAS (Table 3, Figure 6), including six samples from previously installed monitoring wells, seven samples from newly installed monitoring wells and one duplicate sample. One or more PFAS compounds were detected in the groundwater samples from all previously installed wells that were sampled in 2025 (FP-MW5, FP-MW7, FP-MW8, FP-MW10, FP-MW11 and FP-MW12) and in groundwater samples from five of the seven newly installed monitoring wells (FP-14 through FP-17 and FP-19). There were no detections of PFAS in the samples from FP-MW18, FP-MW20 or the equipment rinsate blank analyzed in accordance with the quality assurance project plan (QAPP).

Regulated PFAS compounds detected in groundwater samples at concentrations greater than their respective PCULs are listed below:

- **PFOA** exceedance of MTCA Method B PCUL: FP-MW8 (187 ng/L), FP-MW10 (131 ng/L), FP-MW11 (18.7 ng/L), FP-MW12 (20.8 ng/L), FP-MW14 (122 ng/L) and FP-MW16 (20.6 ng/L, and 22.0 ng/L in the duplicate).
- **PFOS** exceedance of MTCA Method B PCUL: FP-MW8 (301 ng/L), FP-MW10 (357 ng/L), FP-MW11 (303 ng/L), FP-MW12 (11.2 ng/L) and FP-MW14 (316 ng/L).
- **PFNA** exceedance of MTCA Method B PCUL: FP-MW8 (11.5 ng/L).
- **PFHxS** exceedance of MTCA Method B PCUL: FP-MW7 (1.9 ng/L), FP-MW8 (879 ng/L), FP-MW10 (469 ng/L), FP-MW11 (265 ng/L), FP-MW12 (850 ng/L), FP-MW14 (277 ng/L), FP-MW15 (47.4 ng/L), FP-MW16 (4.8 ng/L, and 5.1 ng/L in the duplicate), FP-MW17 (1.9 ng/L) and FP-MW19 (28.7 ng/L) .
- **Hazard Index** (HI) exceedance: FP-MW8 (HI 89), FP-MW10 (HI 48), FP-MW11 (HI 27), FP-MW12 (HI 85), FP-MW14 (HI 28), FP-MW15 (HI 5) and FP-MW19 (HI 3).

In addition, one of more of the regulated compounds including PFBS, PFBA, PFHxA and 6:2 FTS were detected in samples but did not exceed corresponding PCULs. There were no detections of HFPO-DA (GenX) or PFDA in any groundwater samples, however, the reporting limit exceeded ten times the MDL. In accordance with WAC 173-340-830(2), when the reporting limit is greater than ten times the MDL the cleanup level is considered not attained (see blue shaded cells in Table 3). Because neither compound was detected in any sample analyzed during this project, they are not considered chemicals of concern at this site. Non-regulated compounds, including PFPeA, PFHpA, PFPeS and PFHpS, were detected in select groundwater samples.

Cumulative PFAS concentrations ranged from 1.6 ng/L at FP-MW5 along the western perimeter access road to 4,109.3 ng/L at FP-MW8 located approximately 200 feet from of the FTP (Table 3 and Figure 6). The highest cumulative concentrations greater than 1,000 ng/L were observed in four samples, FP-MW12 (1,073.7 ng/L), FP-MW10 (2,521.3 ng/L), FP-MW14 (3,084.3 ng/L) and FP-MW8 (4,109.3 ng/L) collected from the wells nearest to the former FTP. Seasonal sampling at additional locations within the existing groundwater plume would improve characterization of temporal variability in groundwater concentrations.

5.4 STORMWATER UTILITY ANALYTICAL RESULTS

Seven samples were collected from the stormwater conveyance system and analyzed for PFAS, including two solids samples and five water samples (Table 4, Figure 7). Catch basin solids analytical results were screened using the PCUL for PFOS in sediment at freshwater sites (SMS Lower Tier Beach Play, Direct Contact SCO SWAC), as directed by Ecology (email, September 23, 2025); PCULs for other PFAS in sediment at freshwater sites are not available. Screening levels for catch basin water samples are not available and have not been provided by Ecology.

5.4.1 Catch Basin Solids Results

Two catch basin solid samples were analyzed for PFAS. One or more PFAS were detected in both catch basin solid samples (FP-CB4 and FP-CB5) listed below:

- **PFOS** detected in solids sample from FP-CB5 (0.22 µg/kg). The detected concentration was less than the PCUL.
- **PFHxA** detected in solids sample from FP-CB4 (2.1 µg/kg).
- **PFPeA** detected in solids sample from FP-CB4 (4.3 µg/kg).

5.4.2 Catch Basin Water Results

Five water samples collected from catch basins that are part of the Airport's stormwater conveyance system were analyzed for PFAS. Two or more PFAS compounds were detected in all five catch basin water samples. Detections of PFAS compounds that are regulated by Ecology for soil, surface water and groundwater are listed below:

- **PFOA** detected in water samples from FP-CB1 (189 ng/L), FP-CB2 (4.5 ng/L), and FP-CB3 (22.7 ng/L).
- **PFOS** detected in water samples from FP-CB1 (2,950 ng/L), FP-CB2 (26.5 ng/L), and FP-CB3 (54.4 ng/L).

- **PFNA** detected in water sample from FP-CB1 (256 ng/L) and FP-CB3 (6.5 ng/L).
- **PFHxS** detected in water samples from FP-CB1 (947 ng/L), FP-CB2 (39.8 ng/L), FP-CB3 (46.0 ng/L) and FP-CB6 (74.0 ng/L).
- **PFBS** detected in water samples from FP-CB1 (89.4 ng/L) and FP-CB6 (11.4 ng/L).
- **PFBA** detected in water samples from FP-CB1 (125 ng/L) and FP-CB6 (83.0 ng/L).
- **PFHxA** detected in water samples from FP-CB1 (404 ng/L), FP-CB2 (9.1 ng/L), FP-CB3 (52.5 ng/L), FP-CB4 (185 ng/L) and FP-CB6 (202 ng/L).
- **6:2 FTS** detected in water samples from FP-CB1 (654 ng/L) and FP-CB3 (73.3 ng/L).
- **Hazard Index** greater than 1.0 in all catch basin water samples (FP-CB1, FP-CB2, FP-CB3, FP-CB4, FP-CB6).

There were no detections of HFPO-DA (GenX) or PFDA in any catch basin water samples. Detections of two or more non-regulated compounds PFPeA, PFHpA, PFPeS and PFHpS were identified in catch basin samples FP-CB1, FP-CB3, FP-CB4 and FP-CB6.

Cumulative PFAS concentrations ranged from 79.9 ng/L in the catch basin water sample FP-CB2 to 6,250.2 ng/L in the catch basin water sample from FP-CB1 (Table 4 and Figure 7).

6.0 Summary and Data Gaps

The 2025 investigation was conducted to address the data gaps identified in Section 3.1 above. New monitoring wells were installed to refine groundwater plume extent. Additional soil, surface water, catch basin water and solids samples were collected to provide a more complete understanding of PFAS distribution and transport in Site media. Analytical results were evaluated for regulated PFAS compounds, non-regulated PFAS compounds and cumulative PFAS concentrations with PFOS highlighted as a key indicator due to its strong association with historical AFFF use at the former FTP.

A total of 25 soil samples were collected from seven HSA borings completed as new monitoring wells, and three hand auger borings completed in the wetland area. Detections exceeding soil PCULs protective of potable groundwater included PFOA in soil samples from two boring locations, PFOS in soil samples collected from five boring locations, PFHxS in soil samples from two boring locations and PFHxA in a soil sample collected from one boring location. Cumulative PFAS concentrations in soil were low overall (ND to 44.3 µg/kg) with the highest detections occurring in hand auger borings collected in the wetland area. These findings suggest soil impacts are well defined surrounding the FTP.

PFAS were detected in three of four surface water samples collected with exceedance of PCUL for PFHxS in the sample FP-SW8 (283 ng/L) and Hazard Index thresholds in the surface water samples FP-SW2 and FP-SW8. Cumulative PFAS concentrations ranged from ND in the eastern wetland (FP-SW6) to 11,203 ng/L in the stormwater detention pond (FP-SW2), downgradient of the FTP. These findings confirm surface water is a significant transport pathway for PFAS at the Site. Surface water at the Site is not currently used as a source of drinking water and is unlikely to be used as a future source of drinking water based on the findings of a Beneficial Water Users Survey completed in 2023 (Shannon & Wilson 2023).

Groundwater elevations were measured at new and existing wells, and 14 groundwater samples were analyzed. PFAS were detected in all but two wells (FP-MW18 and FP-MW20) with exceedances of PFOA, PFOS, PFHxS PCULs and the Hazard Index threshold. Cumulative PFAS concentrations ranged from ND at FP-MW18 and FP-MW20 to 4,109.3 ng/L at FP-MW8, located approximately 200 feet away from the FTP. Four wells recorded cumulative concentrations greater than 1,000 ng/L all located nearest to the FTP. These results confirm the FTP as the primary source and demonstrate significant groundwater impacts with migration toward the west and northwest. Groundwater at the Site is not currently used as a source of drinking water, and no active water rights were identified within a 1-mile radius of the Site based on the results of the 2023 Beneficial Water Users Survey,

Stormwater utility sampling included two catch basin solid samples and five catch basin water samples. PFAS were detected in all stormwater utility samples, including detections of PFOA, PFOS, PFHxS and PFHxA. Variability in these initial results highlights the need for further testing to refine the understanding of PFAS distribution in the stormwater utility system.

The following data gaps remain for the Site:

1. **Extent of PFAS Greater than PCULs in Soil**. The lateral and vertical extent of PFAS in soil has not been delineated at the former FTP based on the results of investigations completed to date.
2. **Extent of PFAS Greater than PCULs in Groundwater**. The extent of PFAS in groundwater to the southwest of FP-MW14 and at locations off-Airport Property has not been evaluated.
3. **Extent of PFAS in Surface Water**. The extent of PFAS in surface water at locations off-Airport Property has not been evaluated.
4. **Solids in Stormwater Conveyance System**. The extent of PFAS in Airport stormwater conveyance system solids and water has not been delineated.

Additional work is also needed to address the data gaps described above, further characterize PFAS in wetlands and assess seasonal variability in both surface water and groundwater. These refinements will support the development of interim actions under an agreed order with Ecology and inform the forthcoming Remedial Investigation/Feasibility Study (RI/FS).

7.0 Limitations

We have prepared this report for the exclusive use of the Snohomish County Airport and their authorized agents and regulatory agencies. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to Appendix G, Report Limitations and Guidelines for Use, for additional information pertaining to use of this report.

8.0 References

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Tables

Table 1

Monitoring Well Construction Details and Groundwater Elevations

Former Fire Training Pit Study Area at Snohomish County Airport

Everett, Washington

Well Identification	Top of Casing Elevation	Screened Interval (ft bgs)	Top of Screen Elevation (ft NAVD 88)	Base of Screen Elevation (ft NAVD 88)	Date Installed	Date Measured	Groundwater Depth (ft BTOC)	Groundwater Elevation (ft NAVD 88)	Ecology Well ID
2025 Monitoring Wells									
FP-MW14	558.83	30.0 - 45.0	528.83	513.83	6/4/2025	6/9/2025	33.49	525.34	BQL-425
FP-MW15	567.92	15.0 - 30.0	552.92	522.92	6/4/2025	6/9/2025	22.87	545.05	BQL-426
FP-MW16	574.46	10.0 - 25.0	564.46	529.46	6/3/2025	6/9/2025	10.76	563.70	BQL-422
FP-MW17	575.62	10.0 - 25.0	565.62	530.62	6/3/2025	6/9/2025	12.35	563.27	BQL-423
FP-MW18	572.22	5.0 - 20.0	567.22	527.22	6/2/2025	6/9/2025	7.85	564.37	BQL-421
FP-MW19	550.15	15.0 - 30.0	535.15	505.15	6/2/2025	6/9/2025	6.15	544.00	BQL-420
FP-MW20	534.46	10.0 - 25.0	524.46	489.46	6/3/2025	6/9/2025	8.32	526.14	BQL-424
Previously Installed Monitoring Wells									
FP-MW1	564.95	15.0 - 24.8	550.3	540.6	5/24/2022	6/9/2025	17.49	547.46	BPK-751
FP-MW2	559.19	30.0 - 39.8	550.3	520.0	5/25/2022	6/9/2025	32.64	526.55	BPK-752
FP-MW3	559.55	33.0 - 42.8	526.6	516.8	5/25/2022	6/9/2025	33.17	526.38	BPK-753
FP-MW4	565.97	22.0 - 31.8	544.4	534.6	5/27/2022	6/9/2025	17.91	548.06	BNL-692
FP-MW5	523.24	8.7 - 18.5	514.7	504.9	10/24/2022	6/9/2025	10.93	512.31	BPL-660
FP-MW6	521.91	4.0 - 13.8	518.2	508.4	10/24/2022	6/9/2025	11.92	509.99	BPL-661
FP-MW7	523.68	10.0 - 20.0	513.7	503.7	2/7/2024	6/9/2025	15.70	507.98	BPX-733
FP-MW8	564.00	17.0 - 27.0	547.0	537.0	2/6/2024	6/9/2025	15.08	548.92	BPX-732
FP-MW9	569.08	10.0 - 25.0	559.1	544.1	2/6/2024	6/9/2025	11.58	557.50	BPX-731
FP-MW10	522.17	10.0 - 20.0	512.2	502.2	2/7/2024	6/9/2025	12.76	509.41	BPX-734
FP-MW11	562.66	20.0 - 30.0	542.7	532.7	2/5/2024	6/9/2025	20.69	541.97	BPX-729
FP-MW12	572.24	10.0 - 25.0	562.2	547.2	2/5/2024	6/9/2025	14.90	557.34	BPX-730
FP-MW13	528.54	5.0 - 20.0	523.8	508.8	3/26/2024	6/9/2025	6.38	522.16	BQB-615

Notes:

[1] Approximate locations shown on Figure 2. MW1-MW12 installed during previous investigations. MW14-MW20 installed and surveyed by GeoEngineers, 2025.

[2] MW14 through MW20 well screen elevations are approximated based on surveyed top of casing elevations.

bgs = below ground surface; ft = feet

BTOC = below top of casing

NAVD 88 = North American Vertical Datum of 1988

Table 2

Soil Chemical Analytical Results[1]

Per- and Polyfluoroalkyl Substances (PFAS)

Former Fire Training Pit Study Area at Snohomish County Airport
Everett, Washington

Sample Location[2]	Sample Identification	Sample Date	Sample Depth (feet bgs)	Vadose or Saturated Samples[3]	Analyte Group	Per- and Polyfluoroalkyl Substances (µg/kg)											
						Compounds with Washington PCUL[4]										Carboxylic Acids	
																Perfluoroalkyl Carboxylic Acids	
					Analyte Name	Perfluorooctanoic acid	Perfluorooctanesulfonic acid	Perfluorononanoic acid	Perfluorohexanesulfonic acid	Perfluorobutanesulfonic acid	Perfluorobutanoic acid	Perfluorohexanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorodecanoic acid	6:2 Fluorotelomer sulfonate	Perfluoropentanoic acid	Perfluoroheptanoic acid
					Abbreviation	PFOA	PFOS	PFNA	PFHxS	PFBS	PFBA	PFHxA	HFPO-DA (GenX)	PFDA	6:2FTS	PFPeA	PFHpA
2025 Soil Samples																	
FP-MW14	FP-MW14-15-16.6	6/4/2025	15.0	Vadose		*0.20 U*	**0.48**	*0.20 U*	**0.35**	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.40 U	0.20 U
	FP-MW14-30-31.5		30.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.78 U	0.20 U	*0.78 U*	*0.20 U*	0.78 U	0.39 U	0.20 U
	FP-MW14-40-41.5		40.0	Saturated		*0.20 U*	**0.28**	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
FP-MW15	FP-MW15-5-6.5	6/4/2025	5.0	Vadose		*0.20 U*	**0.39**	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
	FP-MW15-20-21.5		20.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
	FP-MW15-25-26.5		25.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
	FP-MW15-30-31.5		30.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
FP-MW16	FP-MW16-5-6.5	6/3/2025	5.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
	FP-MW16-10-11.5		10.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.40 U	0.20 U
	FP-MW16-25-26.5		25.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
FP-MW17	FP-MW17-5-6.5	6/3/2025	5.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
	FP-MW17-10-11.5		10.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.39 U	0.20 U
	FP-MW17-25-26.5		25.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
FP-MW18	FP-MW18-5-6	6/2/2025	5.0	Vadose		*0.20 U*	**0.21**	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.39 U	0.20 U
	FP-MW18-10-11.5		10.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.39 U	0.20 U
	FP-MW18-20-20.5		20.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.80 U	0.20 U	*0.80 U*	*0.20 U*	0.80 U	0.40 U	0.20 U
FP-MW19	FP-MW19-5-6	6/2/2025	5.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.39 U	0.20 U
	FP-MW19-10-11		10.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.39 U	0.20 U
	FP-MW19-30-30.5		30.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.40 U	0.20 U
FP-MW20	FP-MW20-5-6.5	6/3/2025	5.0	Vadose		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.39 U	0.20 U
	FP-MW20-10-11.5		10.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.40 U	0.20 U
	FP-MW20-20-20.5		20.0	Saturated		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.40 U	0.20 U
2025 Wetland Soil Samples																	
FP-GEI-1	FP-GEI-1-1.0	6/3/2025	1.0	--		**0.31**	**0.80**	*0.23 U*	*0.23 U*	0.23 U	**0.97**	0.23 U	*0.92 U*	*0.23 U*	0.92 U	0.46 U	0.23 U
FP-GEI-2	FP-GEI-2-1.0	6/3/2025	1.0	--		**0.56**	**2.2**	*0.20 U*	**0.96**	0.20 U	**1.3**	**6.7**	*0.79 U*	*0.20 U*	**2.6**	**11.9**	**2.1**
FP-GEI-3	FP-GEI-3-1.0	6/3/2025	1.0	--		*0.20 U*	*0.20 U*	*0.20 U*	*0.20 U*	0.20 U	0.79 U	0.20 U	*0.79 U*	*0.20 U*	0.79 U	0.40 U	0.20 U
Project Specific PCUL for Soil Protective of Potable Groundwater (µg/kg) - Vadose[4]						0.025	0.046	0.089	0.00004	25	44	35	0.12	0.00038	73.9	NE	NE
Project Specific PCUL for Soil Protective of Potable Groundwater (µg/kg) - Saturated[4]						0.0016	0.0026	0.0053	0.0000026	1.7	2.9	2.5	0.0069	0.000022	3.97	NE	NE

Notes:

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. PFAS compounds were analyzed by EPA Method 1633. Chemical analytical laboratory reports are included in Appendix C.

[2] Approximate sample locations are shown on Figure 2.

[3] The interpretation of vadose and saturated soil samples was determined by GeoEngineers using depth to groundwater measured at the time of well construction.

[4] PCULs were established by the Washington State Department of Ecology (updated February 2025). Where laboratory RLs exceeded PCULs, the RLs were adopted as the new PCULs. Per WAC 173-340-830(2), if the practical quantitation limit is greater than the cleanup level, the cleanup level is considered attained when nondetects meet method and EPA quantitation requirements.

[5] The total detected PFAS concentration reflects only those analytes included in EPA Method 1633. Other PFAS compounds not measured by this method may be present but are not accounted for in these results.

bgs = below ground surface

µg/kg = micrograms per kilogram

PCUL = Preliminary Cleanup Level

U = Analyte not detected at a concentration greater than the listed reporting limit.

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Gray shaded value indicates the detected concentration is greater than the Preliminary Cleanup Level.

Italicized value indicates the analyte was not detected but the reporting limit is greater than the Preliminary Cleanup Level.

Sample Location[2]	Sample Identification	Sample Date	Sample Depth (feet bgs)	Vadose or Saturated Samples[3]	Analyte Group	Per- and Polyfluoroalkyl Substances (continued) (µg/kg)										
						Carboxylic Acids (continued)										
						Perfluoroalkyl Carboxylic Acids (continued)				Fluorotelomer Carboxylic Acids			Per- and Polyfluoroether Carboxylic Acids			
					Analyte Name	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	3:3 Fluorotelomer carboxylate	5:3 Fluorotelomer carboxylate	7:3 Fluorotelomer carboxylate	4,8-Dioxa-3H-perfluorononanoic acid	Nonafluoro-3,6-dioxaheptanoic acid	Perfluoro-3-methoxypropanoic acid	Perfluoro-4-methoxybutanoic acid
					Abbreviation	PFUnA	PFDoDA	PFTrDA	PFTeDA	3:3FTCA	5:3FTCA	7:3FTCA	ADONA	NFDHA	PFMPA	PFMBA
2025 Soil Samples																
FP-MW14	FP-MW14-15-16.6	6/4/2025	15.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	5.0 U	5.0 U	0.79 U	0.40 U	0.40 U	0.40 U
	FP-MW14-30-31.5		30.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.98 U	4.9 U	4.9 U	0.78 U	0.39 U	0.39 U	0.39 U
	FP-MW14-40-41.5		40.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
FP-MW15	FP-MW15-5-6.5	6/4/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
	FP-MW15-20-21.5		20.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
	FP-MW15-25-26.5		25.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
	FP-MW15-30-31.5		30.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
FP-MW16	FP-MW16-5-6.5	6/3/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
	FP-MW16-10-11.5		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	4.9 U	4.9 U	0.79 U	0.40 U	0.40 U	0.40 U
	FP-MW16-25-26.5		25.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
FP-MW17	FP-MW17-5-6.5	6/3/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
	FP-MW17-10-11.5		10.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
	FP-MW17-25-26.5		25.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
FP-MW18	FP-MW18-5-6	6/2/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.98 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
	FP-MW18-10-11.5		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
	FP-MW18-20-20.5		20.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	5.0 U	5.0 U	0.80 U	0.40 U	0.40 U	0.40 U
FP-MW19	FP-MW19-5-6	6/2/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.98 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
	FP-MW19-10-11		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.98 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
	FP-MW19-30-30.5		30.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	5.0 U	5.0 U	0.79 U	0.40 U	0.40 U	0.40 U
FP-MW20	FP-MW20-5-6.5	6/3/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.98 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
	FP-MW20-10-11.5		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	4.9 U	4.9 U	0.79 U	0.40 U	0.40 U	0.40 U
	FP-MW20-20-20.5		20.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	4.9 U	4.9 U	0.79 U	0.40 U	0.40 U	0.40 U
2025 Wetland Soil Samples																
FP-GEI-1	FP-GEI-1-1.0	6/3/2025	1.0	–		0.23 U	0.23 U	0.23 U	0.23 U	1.1 U	5.7 U	5.7 U	0.92 U	0.46 U	0.46 U	0.46 U
FP-GEI-2	FP-GEI-2-1.0	6/3/2025	1.0	–		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	**16.0**	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
FP-GEI-3	FP-GEI-3-1.0	6/3/2025	1.0	–		0.20 U	0.20 U	0.20 U	0.20 U	0.99 U	5.0 U	5.0 U	0.79 U	0.40 U	0.40 U	0.40 U
Project Specific PCUL for Soil Protective of Potable Groundwater (µg/kg) - Vadose [4]						NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Project Specific PCUL for Soil Protective of Potable Groundwater (µg/kg) - Saturated [4]						NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes:

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. PFAS compounds were

[2] Approximate sample locations are shown on Figure 2.

[3] The interpretation of vadose and saturated soil samples was determined by GeoEngineers using dep

[4] PCULs were established by the Washington State Department of Ecology (updated February 2025). \
meet method and EPA quantitation requirements.

[5] The total detected PFAS concentration reflects only those analytes included in EPA Method 1633. Ot

bgs = below ground surface

µg/kg = micrograms per kilogram

PCUL = Preliminary Cleanup Level

U = Analyte not detected at a concentration greater than the listed reporting limit.

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Gray shaded value indicates the detected concentration is greater than the Preliminary Cleanup Level

Italicized value indicates the analyte was not detected but the reporting limit is greater than the Preli

Sample Location[2]	Sample Identification	Sample Date	Sample Depth (feet bgs)	Vadose or Saturated Samples[3]	Analyte Group	Per- and Polyfluoroalkyl Substances (continued) (µg/kg)																	Sum of Detected PFAS by EPA 1633[5]
						Sulfonic Acids																	
						Perfluoroalkyl Sulfonic Acids					uorotelomer Sulfonic Aci		Per- and Polyfluoroether Sulfonic Acids		Perfluorooctane Sulfonamides/Amidoacetic Acids/Sulfonamido Ethanols								
					Analyte Name	Perfluoropentanesulfonic acid	Perfluoroheptanesulfonic acid	Perfluorononanesulfonic acid	Perfluorodecanesulfonic acid	Perfluorododecanesulfonic acid	4:2 Fluorotelomer sulfonate	8:2 Fluorotelomer sulfonate	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acd	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	Perfluoro(2-ethoxyethane)sulfonic acid	Perfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	N-Methyl perfluorooctane sulfonamidoacitic acid	N-Methylperfluorooctanesulfonamidothanol	N-Ethylperfluorooctanesulfonamide	N-Ethyl perfluorooctane sulonamido acetic acid	N-Ethylperfluorooctanesulfonamidothanol	
					Abbreviation	PFPeS	PFHpS	PFNS	PFDS	PFDoDS	4:2FTS	8:2FTS	9Cl-PF3ONS (F-53B Major)	11Cl-PF3OUdS (F-53B Minor)	PFEESA	PFOSA	MeFOSA	MeFOSAA	MeFOSE	EtFOSA	EtFOSAA	EtFOSE	
2025 Soil Samples																							
FP-MW14	FP-MW14-15-16.6	6/4/2025	15.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	**0.83**
	FP-MW14-30-31.5		30.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.78 U	0.78 U	0.78 U	0.78 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW14-40-41.5		40.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	**0.28**
FP-MW15	FP-MW15-5-6.5	6/4/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	**0.39**
	FP-MW15-20-21.5		20.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW15-25-26.5		25.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW15-30-31.5		30.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
FP-MW16	FP-MW16-5-6.5	6/3/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW16-10-11.5		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW16-25-26.5		25.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
FP-MW17	FP-MW17-5-6.5	6/3/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW17-10-11.5		10.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW17-25-26.5		25.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
FP-MW18	FP-MW18-5-6	6/2/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	**0.21**
	FP-MW18-10-11.5		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW18-20-20.5		20.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.80 U	0.80 U	0.80 U	0.80 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
FP-MW19	FP-MW19-5-6	6/2/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW19-10-11		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW19-30-30.5		30.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
FP-MW20	FP-MW20-5-6.5	6/3/2025	5.0	Vadose		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW20-10-11.5		10.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
	FP-MW20-20-20.5		20.0	Saturated		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
2025 Wetland Soil Samples																							
FP-GEI-1	FP-GEI-1-1.0	6/3/2025	1.0	–		0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.92 U	0.92 U	0.92 U	0.92 U	0.46 U	0.23 U	0.23 U	0.23 U	2.3 U	0.23 U	0.23 U	2.3 U	**2.08**
FP-GEI-2	FP-GEI-2-1.0	6/3/2025	1.0	–		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	**44.3**
FP-GEI-3	FP-GEI-3-1.0	6/3/2025	1.0	–		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.40 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	0 U
Project Specific PCUL for Soil Protective of Potable Groundwater (µg/kg) - Vadose[4]						NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Project Specific PCUL for Soil Protective of Potable Groundwater (µg/kg) - Saturated[4]						NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes:

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. PFAS compounds were a

[2] Approximate sample locations are shown on Figure 2.

[3] The interpretation of vadose and saturated soil samples was determined by GeoEngineers using dep

[4] PCULs were established by the Washington State Department of Ecology (updated February 2025). V meet method and EPA quantitation requirements.

[5] The total detected PFAS concentration reflects only those analytes included in EPA Method 1633. Ot

bgs = below ground surface

µg/kg = micrograms per kilogram

PCUL = Preliminary Cleanup Level

U = Analyte not detected at a concentration greater than the listed reporting limit.

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Bolded value indicates analyte detected at the concentration shown.

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Table 3

Water Chemical Analytical Results[1]

Per- and Polyfluoroalkyl Substances (PFAS)

Former Fire Training Pit Study Area at Snohomish County Airport
Everett, Washington

Sample Location[2]	Sample Identification	Sample Date	Analyte Group	Per- and Polyfluoroalkyl Substances (PFAS) (ng/L)										
				Compounds with Washington PCUL										
			Analyte Name	Perfluorooctanoic acid	Perfluorooctanesulfonic acid	Perfluorononanoic acid	Perfluorohexanesulfonic acid	Perfluorobutanesulfonic acid	Perfluorobutanoic acid	Perfluorohexanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorodecanoic acid	6:2 Fluorotelomer sulfonate	Hazard Index (HI; unitless)[3]
			Abbreviation	PFOA	PFOS	PFNA	PFHxS	PFBS	PFBA	PFHxA	HFPO-DA (GenX)	PFDA	6:2FTS	
2025 Surface Water Samples														
FP-SW2	FP-SW2-250604	6/4/2025		*800 U*	*800 U*	*800 U*	*800 U*	800 U	3,200 U	**3,180**	*3,200 U*	*800 U*	3,200 U	**80**
FP-SW6	FP-SW6-250603	6/3/2025		*800 U*	*800 U*	*800 U*	*800 U*	800 U	3,200 U	800 U	*3,200 U*	*800 U*	3,200 U	0
FP-SW7	FP-SW7-250603	6/3/2025		*6.4 U*	**7.2**	6.4 U	*6.4 U*	6.4 U	25.5 U	**6.5**	*25.5 U*	*6.4 U*	25.5 U	**1**
FP-SW8	FP-SW8-250603	6/3/2025		*15.7 U*	15.7 U	*15.7 U*	**283**	**33.4**	**349**	**783**	*62.7 U*	*15.7 U*	62.7 U	**29**
PCUL for Surface Water, MTCA Method B (ng/L)[4]				4	4	10	0.0064	4,800	8,000	8,000	10	0.032	3,200	1
2025 Groundwater Samples														
FP-MW5	FP-MW5-250610	6/10/2025		**1.6**	1.6 U	1.6 U	*1.6 U*	1.6 U	6.2 U	1.6 U	6.2 U	*1.6 U*	6.2 U	0
FP-MW7	FP-MW7-250610	6/10/2025		1.6 U	1.6 U	1.6 U	**1.9**	1.6 U	6.2 U	1.6 U	6.2 U	*1.6 U*	6.2 U	0
FP-MW8	FP-MW8-250610	6/10/2025		**187**	**301**	**11.5**	**879**	**124**	**179**	**506**	*12.6 U*	*3.1 U*	**630**	**89**
FP-MW10	FP-MW10-250610	6/10/2025		**131**	**357**	**6.7**	**469**	**46.5**	**69.5**	**158**	*12.8 U*	*3.2 U*	**849**	**48**
FP-MW11	FP-MW11-250610	6/10/2025		**18.7**	**303**	**3.7**	**265**	**26.6**	**9.3**	**26.1**	6.2 U	*1.6 U*	6.2 U	**27**
FP-MW12	FP-MW12-250610	6/10/2025		**20.8**	**11.2**	3.2 U	**850**	**64.8**	12.8 U	**26.3**	*12.8 U*	*3.2 U*	12.8 U	**85**
FP-MW14	FP-MW14-250610	6/10/2025		**122**	**316**	**4.0**	**277**	**29.0**	**75.6**	**193**	*12.7 U*	*3.2 U*	**1,580**	**28**
FP-MW15	FP-MW15-250609	6/9/2025		3.2 U	3.2 U	3.2 U	**47.4**	**4.3**	**23.1**	**32.0**	*12.6 U*	*3.2 U*	12.6 U	**5**
FP-MW16	FP-MW16-250609	6/9/2025		**20.6**	**2.2**	1.6 U	**4.8**	1.6 U	**6.4**	**16.2**	6.2 U	*1.6 U*	6.2 U	**1**
FP-MW16	DUP-1-250609	6/9/2025		**22.0**	**1.9**	1.6 U	**5.1**	1.6 U	**6.8**	**16.9**	6.2 U	*1.6 U*	6.2 U	**1**
FP-MW17	FP-MW17-250609	6/9/2025		1.6 U	1.6 U	1.6 U	**1.9**	1.6 U	6.2 U	1.6 U	6.2 U	*1.6 U*	6.2 U	0
FP-MW18	FP-MW18-250609	6/9/2025		1.6 U	1.6 U	1.6 U	*1.6 U*	1.6 U	6.2 U	1.6 U	6.2 U	*1.6 U*	6.2 U	0
FP-MW19	FP-MW19-250609	6/9/2025		**1.7**	1.5 U	1.5 U	**28.7**	**3.0**	**8.1**	**5.8**	6.2 U	*1.5 U*	6.2 U	**3**
FP-MW20	FP-MW20-250609	6/9/2025		1.5 U	1.5 U	1.5 U	*1.5 U*	1.5 U	6.1 U	1.5 U	6.1 U	*1.5 U*	6.1 U	0
RB-1	RB-1-250609	6/9/2025		1.5 U	1.5 U	1.5 U	*1.5 U*	1.5 U	6.1 U	1.5 U	6.1 U	*1.5 U*	6.1 U	0
PCUL for Groundwater (ng/L)[5,6]				4	4	10	0.0064	4,800	8,000	8,000	10	0.032	3,200	1

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. PFAS compounds were analyzed by EPA Method 1633. Chemical analytical laboratory reports are included in Appendix C.

[2] Approximate sample locations are shown in Figure 2.

[3] Hazard Index as defined by PFAS National Primary Drinking Water Regulation (EPA, 2024) based on HFPO-DA, PFBS, PFHxS, and PFNA.

[4] Washington State Department of Ecology MTCA Method B PCULs (updated February 2025). Based on United States EPA and Ecology's Water Quality Program published aquatic life water quality criteria for PFOS and PFOA. Other PFAS compounds are compared to the groundwater PCULs until the EPA finalizes the bioaccumulation calculations for other PFAS.

[5] Washington State Department of Ecology MTCA Method B PCULs (February 2025), provided in a project-specific workbook. Values are from CLARC (Column AN), which incorporates ARARs and Method B equations; for PFOA, PFOS, and PFNA, EPA MCLs adopted July 2024 were used.

[6] Where laboratory RLs exceeded PCULs, the RLs are italicized and adopted as the new PCULs. Per WAC 173-340-830(2), if the practical quantitation limit is greater than the cleanup level, the cleanup level is considered attained when nondetects meet method and EPA quantitation requirements.

[7] The total detected PFAS concentration reflects only those analytes included in EPA Method 1633. Other PFAS compounds not measured by this method may be present but are not accounted for in these results.

bgs = below ground surface; ng/L = nanograms per liter

U = Analyte not detected at a concentration greater than the listed reporting limit.

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Gray shaded value indicates the detected concentration is greater than the Washington Ecology Method B Cleanup Level.

Italicized value indicates the analyte was not detected but the reporting limit is greater than the Preliminary Cleanup Level.

Blue-shaded value indicates the analyte was not detected, but the reporting limit exceeded 10x the method detection limit (per WAC 173-340-830[2]); therefore, the cleanup level is considered not attained.

Sample Location[2]	Sample Identification	Sample Date	Analyte Group	Per- and Polyfluoroalkyl Substances (PFAS) (ng/L)												
				Carboxylic Acids												
				Perfluoroalkyl Carboxylic Acids						Fluorotelomer Carboxylic Acids			Per- and Polyfluoroether Carboxylic Acids			
			Analyte Name	Perfluoropentanoic acid	Perfluoroheptanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	3:3 Fluorotelomer carboxylate	5:3 Fluorotelomer carboxylate	7:3 Fluorotelomer carboxylate	4.8-Dioxa-3H-perfluorononanoic acid	Nonafluoro-3,6-dioxaheptanoic acid	Perfluoro-3-methoxypropanoic acid	Perfluoro-4-methoxybutanoic acid
			Abbreviation	PFPeA	PFHpA	PFUnA	PFDoDA	PFTrDA	PFTeDA	3:3FTCA	5:3FTCA	7:3FTCA	ADONA	NFDHA	PFMPA	PFMBA
2025 Surface Water Samples																
FP-SW2	FP-SW2-250604	6/4/2025		**7,140**	**883**	800 U	800 U	800 U	800 U	4,000 U	20,000 U	20,000 U	3,200 U	1,600 U	1,600 U	1,600 U
FP-SW6	FP-SW6-250603	6/3/2025		1,600 U	800 U	800 U	800 U	800 U	800 U	4,000 U	20,000 U	20,000 U	3,200 U	1,600 U	1,600 U	1,600 U
FP-SW7	FP-SW7-250603	6/3/2025		12.7 U	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	31.8 U	159 U	159 U	25.5 U	12.7 U	12.7 U	12.7 U
FP-SW8	FP-SW8-250603	6/3/2025		**1,830**	**240**	15.7 U	15.7 U	15.7 U	15.7 U	78.4 U	392 U	392 U	62.7 U	31.4 U	31.4 U	31.4 U
PCUL for Surface Water, MTCA Method B (ng/L)[4]				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
2025 Groundwater Samples																
FP-MW5	FP-MW5-250610	6/10/2025		3.1 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	39.0 U	39.0 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW7	FP-MW7-250610	6/10/2025		3.1 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	39.0 U	39.0 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW8	FP-MW8-250610	6/10/2025		**832**	**237**	3.1 U	3.1 U	3.1 U	3.1 U	15.7 U	78.6 U	78.6 U	12.6 U	6.3 U	6.3 U	6.3 U
FP-MW10	FP-MW10-250610	6/10/2025		**267**	**103**	3.2 U	3.2 U	3.2 U	3.2 U	16.0 U	80.2 U	80.2 U	12.8 U	6.4 U	6.4 U	6.4 U
FP-MW11	FP-MW11-250610	6/10/2025		**22.1**	**7.8**	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	38.9 U	38.9 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW12	FP-MW12-250610	6/10/2025		**7.9**	**4.1**	3.2 U	3.2 U	3.2 U	3.2 U	16.0 U	79.9 U	79.9 U	12.8 U	6.4 U	6.4 U	6.4 U
FP-MW14	FP-MW14-250610	6/10/2025		**341**	**115**	3.2 U	3.2 U	3.2 U	3.2 U	15.9 U	79.5 U	79.5 U	12.7 U	6.4 U	6.4 U	6.4 U
FP-MW15	FP-MW15-250609	6/9/2025		**74.4**	**8.9**	3.2 U	3.2 U	3.2 U	3.2 U	15.8 U	79.0 U	79.0 U	12.6 U	6.3 U	6.3 U	6.3 U
FP-MW16	FP-MW16-250609	6/9/2025		**19.3**	**13.6**	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	38.9 U	38.9 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW16	DUP-1-250609	6/9/2025		**19.8**	**14.3**	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	39.0 U	39.0 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW17	FP-MW17-250609	6/9/2025		3.1 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	38.9 U	38.9 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW18	FP-MW18-250609	6/9/2025		3.1 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	7.8 U	38.8 U	38.8 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW19	FP-MW19-250609	6/9/2025		**5.6**	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	7.7 U	38.7 U	38.7 U	6.2 U	3.1 U	3.1 U	3.1 U
FP-MW20	FP-MW20-250609	6/9/2025		3.1 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	7.7 U	38.4 U	38.4 U	6.1 U	3.1 U	3.1 U	3.1 U
RB-1	RB-1-250609	6/9/2025		3.0 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	7.6 U	37.8 U	37.8 U	6.1 U	3.0 U	3.0 U	3.0 U
PCUL for Groundwater (ng/L)[5,6]				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesot

[2] Approximate sample locations are shown in Figure 2.

[3] Hazard Index as defined by PFAS National Primary Drinking Water Regulat

[4] Washington State Department of Ecology MTCA Method B PCULs (updatec PFAS.

[5] Washington State Department of Ecology MTCA Method B PCULs (Februar

[6] Where laboratory RLs exceeded PCULs, the RLs are italicized and adopted

[7] The total detected PFAS concentration reflects only those analytes include

bgs = below ground surface; ng/L = nanograms per liter

U = Analyte not detected at a concentration greater than the listed reportin

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Gray shaded value indicates the detected concentration is greater than the Wa

Italicized value indicates the analyte was not detected but the reporting limit is

Blue-shaded value indicates the analyte was not detected, but the reporting lim

Sample Location[2]	Sample Identification	Sample Date	Analyte Group	Per- and Polyfluoroalkyl Substances (PFAS) (ng/L)																		Sum of Detected PFAS by EPA 1633[7]
				Sulfonic Acids																		
				Perfluoroalkyl Sulfonic Acids					uorotelomer Sulfonic Acl		Per- and Polyfluoroether Sulfonic			Perfluorooctane Sulfonamides/Amidoacetic Acids/Sulfonamido Ethanols								
			Analyte Name	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid	Perfluorononanesulfonic acid	Perfluorodecanesulfonic acid	Perfluorododecanesulfonic acid	4:2 Fluorotelomer sulfonate	8:2 Fluorotelomer sulfonate	Chlorohexadecafluoro-3-oxanonane-1-sulfonic	Chloroeicosafluoro-3-oxaundecane-1-sulfonic	Perfluoro(2-ethoxyethane)sulfonic acid	Perfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	N-Methyl perfluorooctane sulfonamidoacitic acid	N-Methylperfluorooctanesulfonamidothanol	N-Ethylperfluorooctanesulfonamide	N-Ethyl perfluorooctane sulonamidoacetic acid	N-Ethylperfluorooctanesulfonamidothanol	
			Abbreviation	PFPeS	PFHpS	PFNS	PFDS	PFDoDS	4:2FTS	8:2FTS	PF3ONS (F-53B Major)	PF3OUdS (F-53B	PFEESA	PFOSA	MeFOSA	MeFOSAA	MeFOSE	EtFOSA	EtFOSAA	EtFOSE	
2025 Surface Water Samples																						
FP-SW2	FP-SW2-250604	6/4/2025		800 U	800 U	800 U	800 U	800 U	3,200 U	3,200 U	3,200 U	3,200 U	1,600 U	800 U	800 U	800 U	8000 U	800 U	800 U	8,000 U	11,203
FP-SW6	FP-SW6-250603	6/3/2025		800 U	800 U	800 U	800 U	800 U	3,200 U	3,200 U	3,200 U	3,200 U	1,600 U	800 U	800 U	800 U	8000 U	800 U	800 U	8,000 U	0 U
FP-SW7	FP-SW7-250603	6/3/2025		6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	25.5 U	25.5 U	25.5 U	25.5 U	12.7 U	6.4 U	6.4 U	6.4 U	63.7 U	6.4 U	6.4 U	63.7 U	13.7
FP-SW8	FP-SW8-250603	6/3/2025		**30.0**	15.7 U	15.7 U	15.7 U	15.7 U	62.7 U	62.7 U	62.7 U	62.7 U	31.4 U	15.7 U	15.7 U	15.7 U	157 U	15.7 U	15.7 U	157 U	3,548.4
PCUL for Surface Water, MTCA Method B (ng/L)[4]				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	--
2025 Groundwater Samples																						
FP-MW5	FP-MW5-250610	6/10/2025		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.6 U	1.6 U	1.6 U	15.6 U	1.6
FP-MW7	FP-MW7-250610	6/10/2025		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.6 U	1.6 U	1.6 U	15.6 U	1.9
FP-MW8	FP-MW8-250610	6/10/2025		**192**	**30.8**	3.1 U	3.1 U	3.1 U	12.6 U	12.6 U	12.6 U	12.6 U	6.3 U	3.1 U	3.1 U	3.1 U	31.5 U	3.1 U	3.1 U	31.5 U	4,109.3
FP-MW10	FP-MW10-250610	6/10/2025		**56.3**	**8.3**	3.2 U	3.2 U	3.2 U	12.8 U	12.8 U	12.8 U	12.8 U	6.4 U	3.2 U	3.2 U	3.2 U	32.1 U	3.2 U	3.2 U	32.1 U	2,521.3
FP-MW11	FP-MW11-250610	6/10/2025		**39.7**	**3.0**	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.6 U	1.6 U	1.6 U	15.6 U	725.0
FP-MW12	FP-MW12-250610	6/10/2025		**79.4**	**9.2**	3.2 U	3.2 U	3.2 U	12.8 U	12.8 U	12.8 U	12.8 U	6.4 U	3.2 U	3.2 U	3.2 U	32.0 U	3.2 U	3.2 U	32.0 U	1,073.7
FP-MW14	FP-MW14-250610	6/10/2025		**28.2**	**3.5**	3.2 U	3.2 U	3.2 U	12.7 U	12.7 U	12.7 U	12.7 U	6.4 U	3.2 U	3.2 U	3.2 U	31.8 U	3.2 U	3.2 U	31.8 U	3,084.3
FP-MW15	FP-MW15-250609	6/9/2025		**4.0**	3.2 U	3.2 U	3.2 U	3.2 U	12.6 U	12.6 U	12.6 U	12.6 U	6.3 U	3.2 U	3.2 U	3.2 U	31.6 U	3.2 U	3.2 U	31.6 U	194.1
FP-MW16	FP-MW16-250609	6/9/2025		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.5 U	1.6 U	1.6 U	15.5 U	83.1
FP-MW16	DUP-1-250609	6/9/2025		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.6 U	1.6 U	1.6 U	15.6 U	86.8
FP-MW17	FP-MW17-250609	6/9/2025		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.6 U	1.6 U	1.6 U	15.6 U	1.9
FP-MW18	FP-MW18-250609	6/9/2025		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.6 U	1.6 U	1.6 U	15.5 U	1.6 U	1.6 U	15.5 U	0
FP-MW19	FP-MW19-250609	6/9/2025		**3.1**	1.5 U	1.5 U	1.5 U	1.5 U	6.2 U	6.2 U	6.2 U	6.2 U	3.1 U	1.5 U	1.5 U	1.5 U	15.5 U	1.5 U	1.5 U	15.5 U	56.0
FP-MW20	FP-MW20-250609	6/9/2025		1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	6.1 U	6.1 U	6.1 U	6.1 U	3.1 U	1.5 U	1.5 U	1.5 U	15.3 U	1.5 U	1.5 U	15.3 U	0
RB-1	RB-1-250609	6/9/2025		1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	6.1 U	6.1 U	6.1 U	6.1 U	3.0 U	1.5 U	1.5 U	1.5 U	15.1 U	1.5 U	1.5 U	15.1 U	0
PCUL for Groundwater (ng/L)[5,6]				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	--

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesot

[2] Approximate sample locations are shown in Figure 2.

[3] Hazard Index as defined by PFAS National Primary Drinking Water Regulat

[4] Washington State Department of Ecology MTCA Method B PCULs (updatec PFAS.

[5] Washington State Department of Ecology MTCA Method B PCULs (Februar

[6] Where laboratory RLs exceeded PCULs, the RLs are italicized and adopted

[7] The total detected PFAS concentration reflects only those analytes include

bgs = below ground surface; ng/L = nanograms per liter

U = Analyte not detected at a concentration greater than the listed reportin

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Gray shaded value indicates the detected concentration is greater than the Wa

Italicized value indicates the analyte was not detected but the reporting limit is

Blue-shaded value indicates the analyte was not detected, but the reporting lim

Table 4

Stormwater Utility Chemical Analytical Results[1]

Per- and Polyfluoroalkyl Substances (PFAS)

Former Fire Training Pit Study Area at Snohomish County Airport
Everett, Washington

Sample Location[2]	Sample Identification	Sample Date	Analyte Group	Per- and Polyfluoroalkyl Substances (PFAS)										
				Compounds with Washington PCUL										
			Analyte Name	Perfluorooctanoic acid	Perfluorooctanesulfonic acid	Perfluorononanoic acid	Perfluorohexanesulfonic acid	Perfluorobutanesulfonic acid	Perfluorobutanoic acid	Perfluorohexanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorodecanoic acid	6:2 Fluorotelomer sulfonate	Hazard Index (HI; unitless)[3]
			Abbreviation	PFOA	PFOS	PFNA	PFHxS	PFBS	PFBA	PFHxA	HFPO-DA (GenX)	PFDA	6:2FTS	
Catch Basin Solids Samples (µg/kg)														
FP-CB4	FP-CB4-2.0	6/3/2025		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	7.9 U	**2.1**	7.9 U	2.0 U	7.9 U	--
FP-CB5	FP-CB5-6.5-6.75	6/3/2025		0.20 U	**0.22**	0.20 U	0.20 U	0.20 U	0.79 U	0.20 U	0.79 U	0.20 U	0.79 U	--
PCUL for Sediment, Freshwater Sites (µg/kg)[4]				NE	11	NE	NE	NE	NE	NE	NE	NE	NE	NE
Catch Basin Water Samples (ng/L)[5]														
FP-CB1	FP-CB1-250603	6/4/2025		**189**	**2,950**	**256**	**947**	**89.4**	**125**	**404**	24.6 U	6.1 U	**654**	**120**
FP-CB2	FP-CB2-250603	6/4/2025		**4.5**	**26.5**	3.2 U	**39.8**	3.2 U	12.8 U	**9.1**	12.8 U	3.2 U	12.8 U	**4**
FP-CB3	FP-CB3-250603	6/4/2025		**22.7**	**54.4**	**6.5**	**46.0**	6.3 U	25.0 U	**52.5**	25.0 U	6.3 U	**73.3**	**5**
FP-CB4	FP-CB4-250603	6/3/2025		31.6 U	31.6 U	31.6 U	31.6 U	31.6 U	126 U	**185**	126 U	31.6 U	126 U	**3**
FP-CB6	FP-CB6-250603	6/3/2025		6.2 U	6.2 U	6.2 U	**74.0**	**11.4**	**83.0**	**202**	24.9 U	6.2 U	24.9 U	**8**

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. PFAS compounds were analyzed by EPA Method 1633. Chemical analytical laboratory reports are included in Appendix C.

[2] Approximate sample locations are shown in Figure 2.

[3] Hazard Index as defined by PFAS National Primary Drinking Water Regulation (EPA, 2024) based on HFPO-DA, PFBS, PFHxS, and PFNA.

[4] Washington State Department of Ecology SMS Lower Tier Beach Play Direct Contact SCO SWAC Preliminary Cleanup Levels, updated February 2025.

[5] Screening levels for water samples collected from stormwater utilities has not been provided by the Washington State Department of Ecology.

[6] The total detected PFAS concentration reflects only those analytes included in EPA Method 1633. Other PFAS compounds not measured by this method may be present but are not accounted for in these results.

bgs = below ground surface; ng/L = nanograms per liter

U = Analyte not detected at a concentration greater than the listed reporting limit.

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Sample Location[2]	Sample Identification	Sample Date	Analyte Group	Per- and Polyfluoroalkyl Substances (PFAS) (continued)												
				Carboxylic Acids												
				Perfluoroalkyl Carboxylic Acids						Fluorotelomer Carboxylic Acids			Per- and Polyfluoroether Carboxylic Acids			
			Analyte Name	Perfluoropentanoic acid	Perfluoroheptanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	3:3 Fluorotelomer carboxylate	5:3 Fluorotelomer carboxylate	7:3 Fluorotelomer carboxylate	4.8-Dioxa-3H-perfluorononanoic acid	Nonafluoro-3,6-dioxaheptanoic acid	Perfluoro-3-methoxypropanoic acid	Perfluoro-4-methoxybutanoic acid
			Abbreviation	PFPeA	PFHpA	PFUnA	PFDoDA	PFTrDA	PFTeDA	3:3FTCA	5:3FTCA	7:3FTCA	ADONA	NFDHA	PFMPA	PFMBA
Catch Basin Solids Samples (µg/kg)																
FP-CB4	FP-CB4-2.0	6/3/2025		**4.3**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	9.9 U	49.4 U	49.4 U	7.9 U	4.0 U	4.0 U	4.0 U
FP-CB5	FP-CB5-6.5-6.75	6/3/2025		0.39 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.98 U	4.9 U	4.9 U	0.79 U	0.39 U	0.39 U	0.39 U
PCUL for Sediment, Freshwater Sites (µg/kg)[4]				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Catch Basin Water Samples (ng/L)[5]																
FP-CB1	FP-CB1-250603	6/4/2025		**713**	**161**	6.1 U	6.1 U	6.1 U	6.1 U	30.7 U	154 U	154 U	24.6 U	12.3 U	12.3 U	12.3 U
FP-CB2	FP-CB2-250603	6/4/2025		6.4 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	16.0 U	79.9 U	79.9 U	12.8 U	6.4 U	6.4 U	6.4 U
FP-CB3	FP-CB3-250603	6/4/2025		**65.8**	**16.9**	6.3 U	6.3 U	6.3 U	6.3 U	31.3 U	156 U	156 U	25.0 U	12.5 U	12.5 U	12.5 U
FP-CB4	FP-CB4-250603	6/3/2025		**313**	**77.7**	31.6 U	31.6 U	31.6 U	31.6 U	158 U	791 U	791 U	126 U	63.2 U	63.2 U	63.2 U
FP-CB6	FP-CB6-250603	6/3/2025		**458**	**54.7**	6.2 U	6.2 U	6.2 U	6.2 U	31.1 U	156 U	156 U	24.9 U	12.5 U	12.5 U	12.5 U

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. P

[2] Approximate sample locations are shown in Figure 2.

[3] Hazard Index as defined by PFAS National Primary Drinking Water Regulation

[4] Washington State Department of Ecology SMS Lower Tier Beach Play Direct C

[5] Screening levels for water samples collected from stormwater utilities has not

[6] The total detected PFAS concentration reflects only those analytes included in

bgs = below ground surface; ng/L = nanograms per liter

U = Analyte not detected at a concentration greater than the listed reporting lim

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Sample Location[2]	Sample Identification	Sample Date	Analyte Group	Per- and Polyfluoroalkyl Substances (PFAS) (continued)																	
				Sulfonic Acids																	Sum of Detected PFAS by EPA 1633[6]
				Perfluoroalkyl Sulfonic Acids					uorotelomer Sulfonic Aci		Per- and Polyfluoroether Sulfonic			Perfluorooctane Sulfonamides/Amidoacetic Acids/Sulfonamido Ethanols							
			Analyte Name	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid	Perfluorononanesulfonic acid	Perfluorodecanesulfonic acid	Perfluorododecanesulfonic acid	4:2 Fluorotelomer sulfonate	8:2 Fluorotelomer sulfonate	Chlorohexadecafluoro-3-oxanonane-1-sulfonic	Chloroeicosafluoro-3-oxaundecane-1-sulfonic	Perfluoro(2-ethoxyethane)sulfonic acid	Perfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamidoacitic acid	N-Methylperfluorooctanesulfonamidoethanol	N-Ethylperfluorooctanesulfonamide	N-Ethylperfluorooctanesulonamidoacetic acid	N-Ethylperfluorooctanesulfonamidoethanol	
			Abbreviation	PFPeS	PFHpS	PFNS	PFDS	PFDoDS	4:2FTS	8:2FTS	PF3ONS (F-53B Major)	PF3OUdS (F-53B	PFEESA	PFOSA	MeFOSA	MeFOSAA	MeFOSE	EtFOSA	EtFOSAA	EtFOSE	
Catch Basin Solids Samples (µg/kg)																					
FP-CB4	FP-CB4-2.0	6/3/2025		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	7.9 U	7.9 U	7.9 U	7.9 U	4.0 U	2.0 U	2.0 U	2.0 U	19.8 U	2.0 U	2.0 U	19.8 U	**6.4**
FP-CB5	FP-CB5-6.5-6.75	6/3/2025		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.79 U	0.79 U	0.79 U	0.79 U	0.39 U	0.20 U	0.20 U	0.20 U	2.0 U	0.20 U	0.20 U	2.0 U	**0.22**
PCUL for Sediment, Freshwater Sites (µg/kg)[4]				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	--
Catch Basin Water Samples (ng/L)[5]																					
FP-CB1	FP-CB1-250603	6/4/2025		**121**	**40.8**	6.1 U	6.1 U	6.1 U	24.6 U	24.6 U	24.6 U	24.6 U	12.3 U	6.1 U	6.1 U	6.1 U	61.4 U	6.1 U	6.1 U	61.4 U	**6,650.2**
FP-CB2	FP-CB2-250603	6/4/2025		3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	12.8 U	12.8 U	12.8 U	12.8 U	6.4 U	3.2 U	3.2 U	3.2 U	32.0 U	3.2 U	3.2 U	32.0 U	**79.9**
FP-CB3	FP-CB3-250603	6/4/2025		6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	25.0 U	25.0 U	25.0 U	25.0 U	12.5 U	6.3 U	6.3 U	6.3 U	62.6 U	6.3 U	6.3 U	62.6 U	**338.1**
FP-CB4	FP-CB4-250603	6/3/2025		31.6 U	31.6 U	31.6 U	31.6 U	31.6 U	126 U	126 U	126 U	126 U	63.2 U	31.6 U	31.6 U	31.6 U	316 U	31.6 U	31.6 U	316 U	**575.7**
FP-CB6	FP-CB6-250603	6/3/2025		**9.2**	6.2 U	6.2 U	6.2 U	6.2 U	24.9 U	24.9 U	24.9 U	24.9 U	12.5 U	6.2 U	6.2 U	6.2 U	62.3 U	6.2 U	6.2 U	62.3 U	**892.3**

[1] Chemical analyses performed by Pace Analytical of Minneapolis, Minnesota. P

[2] Approximate sample locations are shown in Figure 2.

[3] Hazard Index as defined by PFAS National Primary Drinking Water Regulation (

[4] Washington State Department of Ecology SMS Lower Tier Beach Play Direct C

[5] Screening levels for water samples collected from stormwater utilities has not

[6] The total detected PFAS concentration reflects only those analytes included in

bgs = below ground surface; ng/L = nanograms per liter

U = Analyte not detected at a concentration greater than the listed reporting lim

NE = Not established

Bolded value indicates analyte detected at the concentration shown.

Figures

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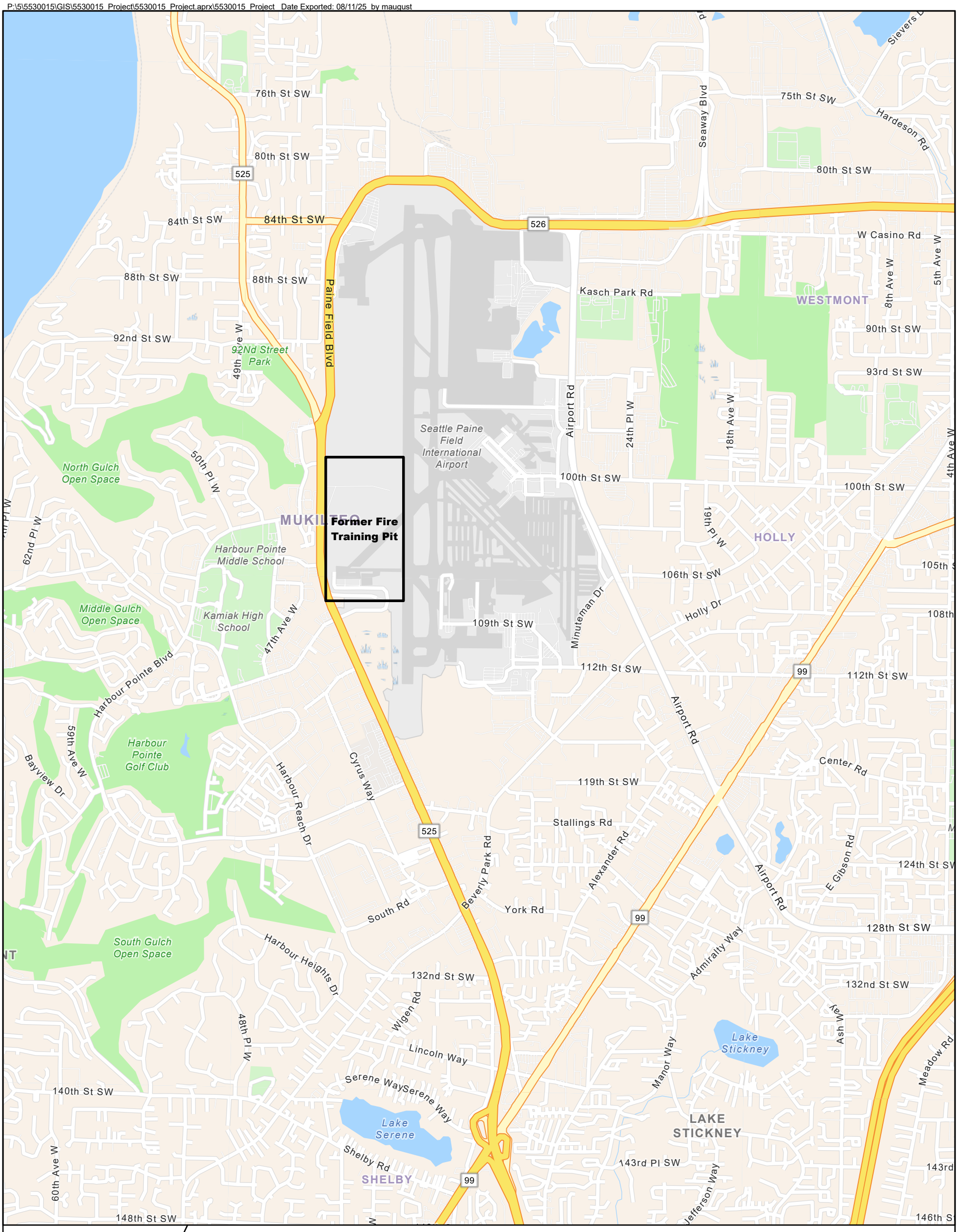

Source(s): ESRI

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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N

0 2,000

Feet

Vicinity Map

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

GeoEngineers

Figure 1

Legend

- Soil Boring (GEI 2024, 2025)
- Surface Water Sample Location (GEI 2024, 2025)
- Monitoring Well (GEI 2024, 2025)
- Catch Basin Sample (GEI 2024, 2025)
- Existing Monitoring Well (SWI 2023)
- Seep Water Sample (GEI 2024)
- Direct Push Boring (CDM 2018)
- Direct Push Boring and Shovel or Hand Auger Explorations (SWI 2023)
- Lysimeter (Regenesis, 2023)
- Monitoring Well (Regenesis, 2023)
- Soil Boring/Piezometer (Regenesis, 2023)
- Stormwater Pipe and Flow Direction
- Pipe Out
- Approximate Former Fire Training Pit (FTP) Boundary
- 2023 Regenesis Treatment Area
- Detention Pond; Infiltration Pond; Wet Pond
- Wetland

0 250
Feet

N

Source(s): Mapbox Aerial Imagery, ESRI, Snohomish County.

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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Site Plan and Exploration Locations

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

GeoEngineers

Figure 2

P:\5\5530015\GIS\5530015_Project\5530015_Project.aprx\5530015_Project Date Exported: 10/02/25 by maugust

Legend

- Soil Boring (GEI 2024, 2025)
- Surface Water Sample Location (GEI 2024, 2025)
- Monitoring Well (GEI 2024, 2025)
- Catch Basin Sample (GEI 2024, 2025)
- Existing Monitoring Well (SWI 2023)
- Seep Water Sample (GEI 2024)
- Direct Push Boring (CDM 2018)
- Direct Push Boring and Shovel or Hand Auger Explorations (SWI 2023)
- Lysimeter (Regenesis, 2023)
- Monitoring Well (Regenesis, 2023)
- Soil Boring/Piezometer (Regenesis, 2023)
- Stormwater Pipe and Flow Direction
- Pipe Out
- Approximate Former Fire Training Pit (FTP) Boundary
- 2023 Regenesis Treatment Area
- Detention Pond; Infiltration Pond; Wet Pond
- Wetland

Key

FP-MW20		
Depth	PFOS	Total PFAS
5	ND	ND
10	ND	ND
20	ND	ND

Depth = feet bgs
PFOS = PFOS by EPA 1633 in µg/kg
Total PFAS = Total Detected PFAS Compounds by EPA 1633 in µg/kg
ND = non-detect

0 250
Feet

N

Source(s): Mapbox Aerial Imagery, ESRI, Snohomish County.

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Soil, PFOS and Total Detected PFAS Results (2025)

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

GeoEngineers

Figure 3

P:\S\5530015\GIS\5530015_Project\5530015_Project.aprx\5530015_Project Date Exported: 10/02/25 by maugust

Legend

- Soil Boring (GEI 2024, 2025)
- Surface Water Sample Location (GEI 2024, 2025)
- Monitoring Well (GEI 2024, 2025)
- Catch Basin Sample (GEI 2024, 2025)
- Existing Monitoring Well (SWI 2023)
- Seep Water Sample (GEI 2024)
- Direct Push Boring (CDM 2018)
- Direct Push Boring and Shovel or Hand Auger Explorations (SWI 2023)
- Lysimeter (Regenesis, 2023)
- Monitoring Well (Regenesis, 2023)
- Soil Boring/Piezometer (Regenesis, 2023)
- Stormwater Pipe and Flow Direction
- Pipe Out
- Approximate Former Fire Training Pit (FTP) Boundary
- 2023 Regenesis Treatment Area
- Detention Pond; Infiltration Pond; Wet Pond
- Wetland

Key

FP-CB4	
PFOS	Total PFAS
ND	575.7

PFOS and Total PFAS = Total Detected PFAS Compounds by EPA 1633 in ng/L
ND = non-detect

0 250
Feet

N

Source(s): Mapbox Aerial Imagery, ESRI, Snohomish County.

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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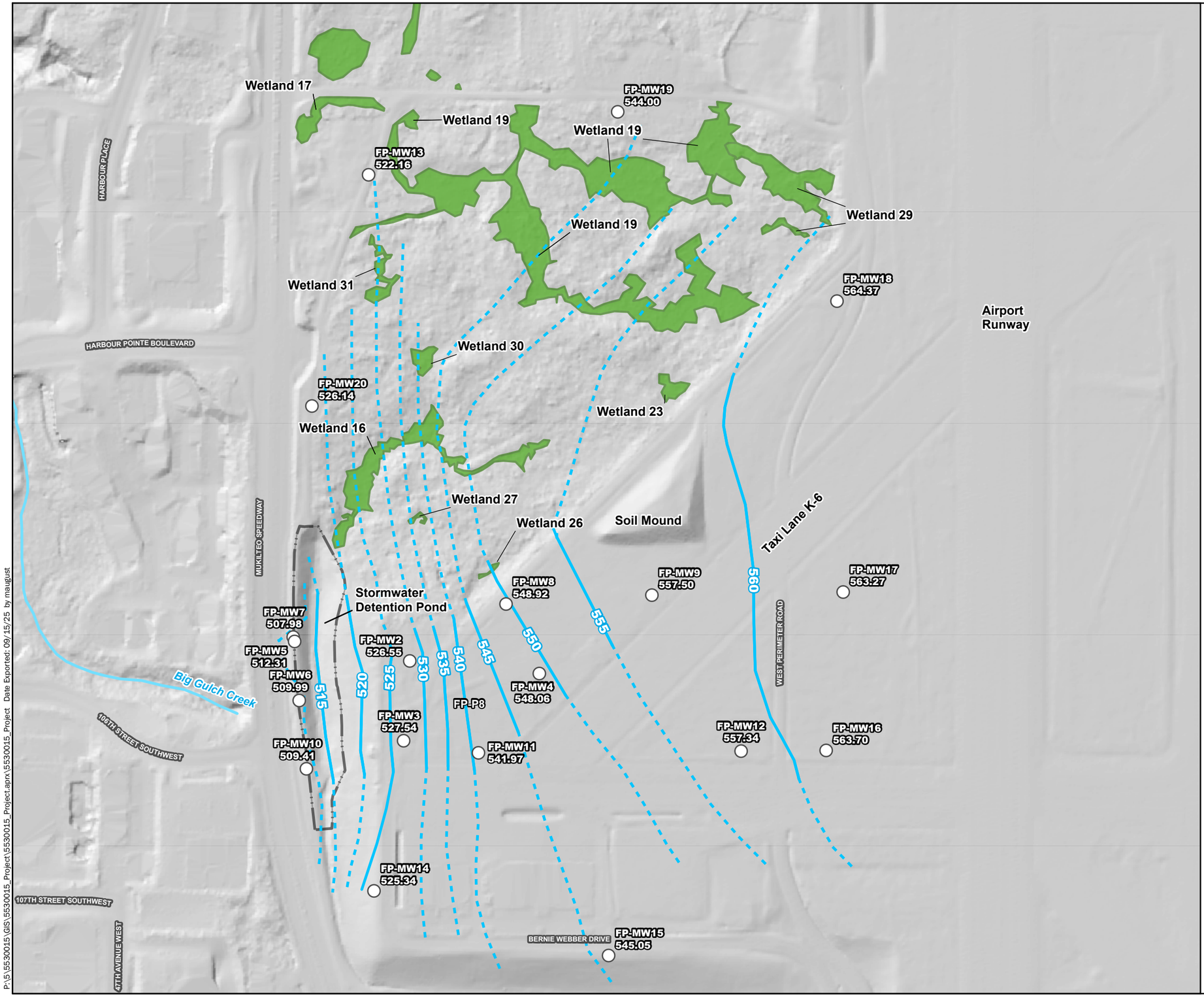
Surface Water, PFOS and Total Detected PFAS Results (2025)

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

GeoEngineers

Figure 4

P:\5\5530015\GIS\5530015_Project\5530015_Project.aprx\5530015_Project Date Exported: 10/02/25 by maugust



Legend

- Groundwater Monitoring Well
- FP-MW9 557.88
- 550 Groundwater Elevation Contour (June 9, 2025 Measurement)
- Creek Trace
- Wetland
- Stormwater Detention Pond

Source(s): Bing Aerial Imagery 2022, ESRI, Snohomish County.

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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N

0 250

Feet

Groundwater Elevations June 2025

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

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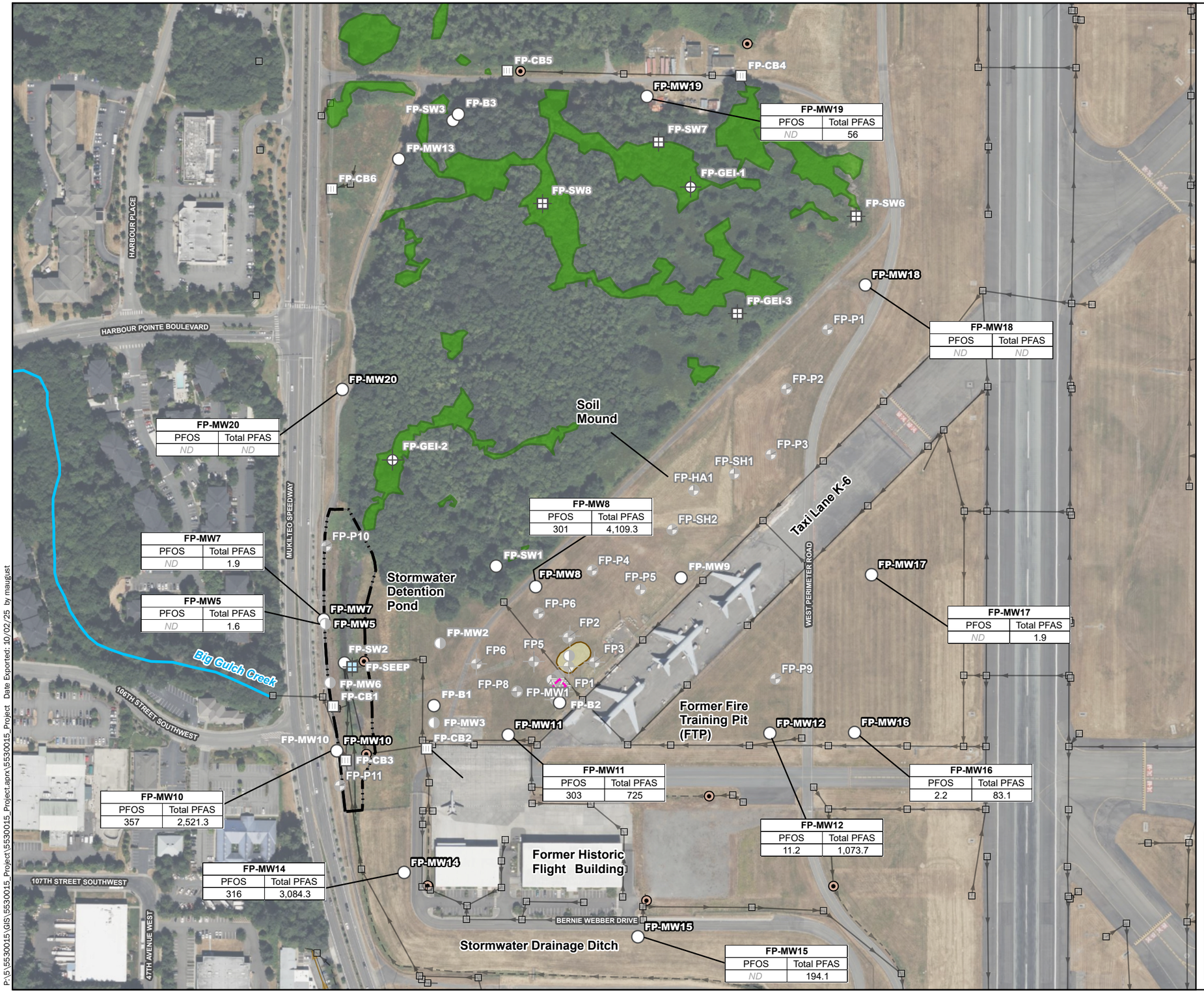
Figure 5

P:\5\5530015\GIS\5530015_Project\5530015_Project.aprx\5530015_Project Date Exported: 09/15/25 by maugust



Legend

- Soil Boring (GEI 2024, 2025)
- Surface Water Sample Location (GEI 2024, 2025)
- Monitoring Well (GEI 2024, 2025)
- Catch Basin Sample (GEI 2024, 2025)
- Existing Monitoring Well (SWI 2023)
- Seep Water Sample (GEI 2024)
- Direct Push Boring (CDM 2018)
- Direct Push Boring and Shovel or Hand Auger Explorations (SWI 2023)
- Lysimeter (Regenesis, 2023)
- Monitoring Well (Regenesis, 2023)
- Soil Boring/Piezometer (Regenesis, 2023)
- Stormwater Pipe and Flow Direction
- Pipe Out
- Approximate Former Fire Training Pit (FTP) Boundary
- 2023 Regenesis Treatment Area
- Detention Pond; Infiltration Pond; Wet Pond
- Wetland

Key

FP-MW17	
PFOS	Total PFAS
ND	1.9

PFOS and Total PFAS = Total Detected PFAS Compounds by EPA 1633 in ng/L
ND = non-detect

0 250
Feet

N

Source(s): Mapbox Aerial Imagery, ESRI, Snohomish County.

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Groundwater, PFOS and Total Detected PFAS Results (2025)

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

GeoEngineers

Figure 6

P:\5\5530015\GIS\5530015_Project\5530015_Project.aprx\5530015_Project Date Exported: 10/02/25 by maugust

Legend

- Soil Boring (GEI 2024, 2025)
- Surface Water Sample Location (GEI 2024, 2025)
- Monitoring Well (GEI 2024, 2025)
- Catch Basin Sample (GEI 2024, 2025)
- Existing Monitoring Well (SWI 2023)
- Seep Water Sample (GEI 2024)
- Direct Push Boring (CDM 2018)
- Direct Push Boring and Shovel or Hand Auger Explorations (SWI 2023)
- Lysimeter (Regenesis, 2023)
- Monitoring Well (Regenesis, 2023)
- Soil Boring/Piezometer (Regenesis, 2023)
- Stormwater Pipe and Flow Direction
- Pipe Out
- Approximate Former Fire Training Pit (FTP) Boundary
- 2023 Regenesis Treatment Area
- Detention Pond; Infiltration Pond; Wet Pond
- Wetland

Key

Solids Sample

FP-MW20		
Depth	PFOS	Total PFAS
5	ND	ND
10	ND	ND
20	ND	ND

Depth = feet bgs
PFOS = PFOS by EPA 1633 in µg/kg
Total PFAS = Total Detected PFAS Compounds by EPA 1633 in µg/kg
ND = non-detect

Water Sample

FP-CB4	
PFOS	Total PFAS
ND	575.7

PFOS and Total PFAS = Total Detected PFAS Compounds by EPA 1633 in ng/L
ND = non-detect

0 250
Feet

N

Source(s): Mapbox Aerial Imagery, ESRI, Snohomish County.

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Stormwater Utility PFOS and Total Detected PFAS Results (2025)

Supplemental Data Gaps Investigation Report
Paine Field/Snohomish County Airport
Everett, Washington

GeoEngineers

Figure 7

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Appendices

Appendix A
Soil Exploration Logs

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE			GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE			SP	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

Sampler Symbol Descriptions

- Modified California Sampler (6-inch sleeve) or Dames & Moore
- Standard Penetration Test (SPT)
- Shelby tube
- Piston
- Direct-Push
- Bulk or grab
- Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
EI	Expansion index
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PL	Point load test
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
UU	Unconsolidated undrained triaxial compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

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Figure A-1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/4/2025	6/4/2025	45.5	MAB	JML	Holocene	Hollow-stem Auger

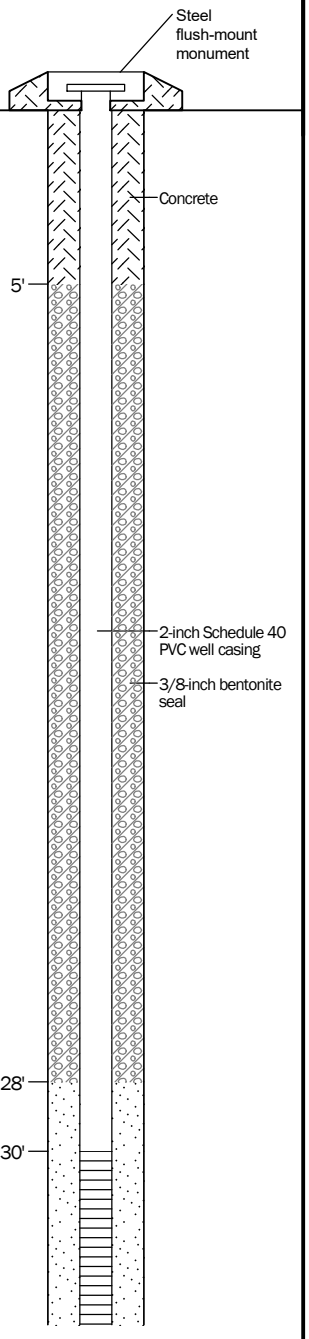
Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	332166.5	Top of Casing Elevation (ft)	558.83
Easting (X) Northing (Y)	-1282683.716	Horizontal Datum	NAD83 (feet)

DOE Well I.D.: BQL-425
A 2-in well was installed on 6/4/2025 to a depth of 45.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	33.49	525.34

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
332165	0						SM	Brown silty fine to medium sand with trace fine gravel and roots in top 6 inches (moist)		
332160	5	8	12						NS	1.3
332155	10	10	4				SP-SM	Gray-brown fine to medium sand with silt and trace fine gravel (moist)	NS	1.0
332150	15	10	5	FP-MW14-15-16.5 CA					NS	1.4
332145	20	12	3				SP	Blue-gray fine to medium sand with trace silt and fine gravel (moist)	NS	<1
332140	25	12	9					Becomes gray	NS	<1
332135	30	12	8	FP-MW14-30-31.5 CA	▼			Becomes with trace organic fragments and some orange-brown mottling	NS	<1
	35									



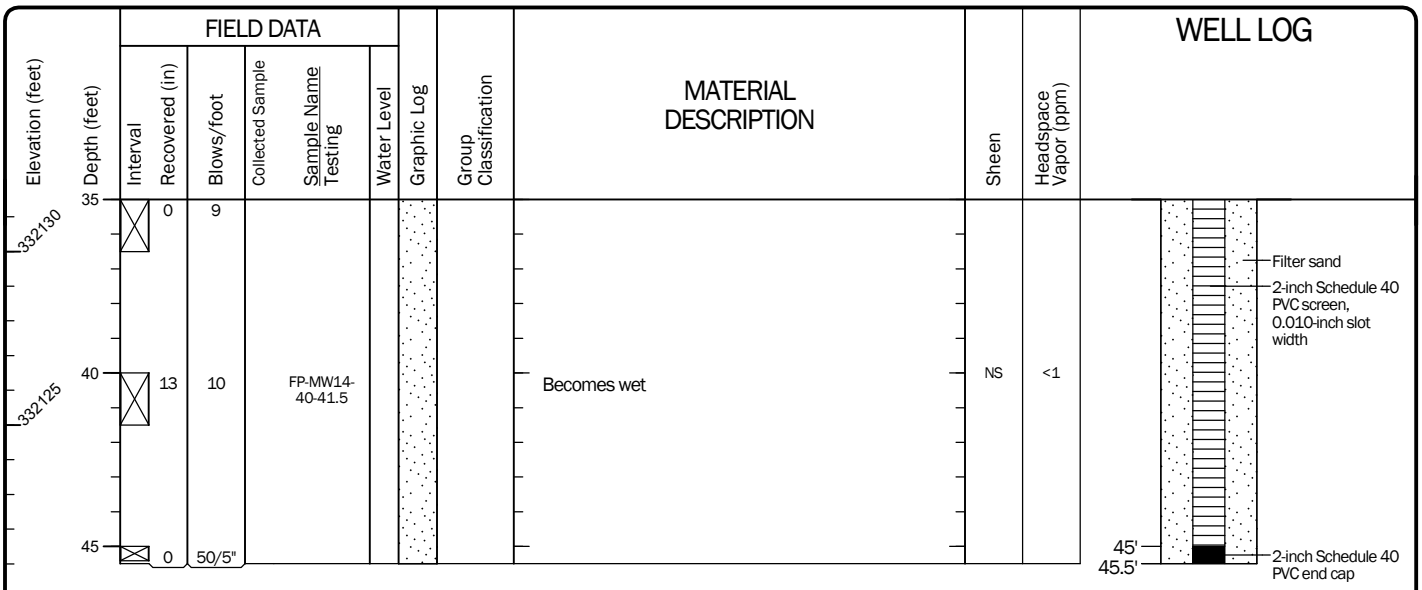
Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW14

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-2
Sheet 1 of 2



Log of Monitoring Well FP-MW14 (continued)

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-2
Sheet 2 of 2

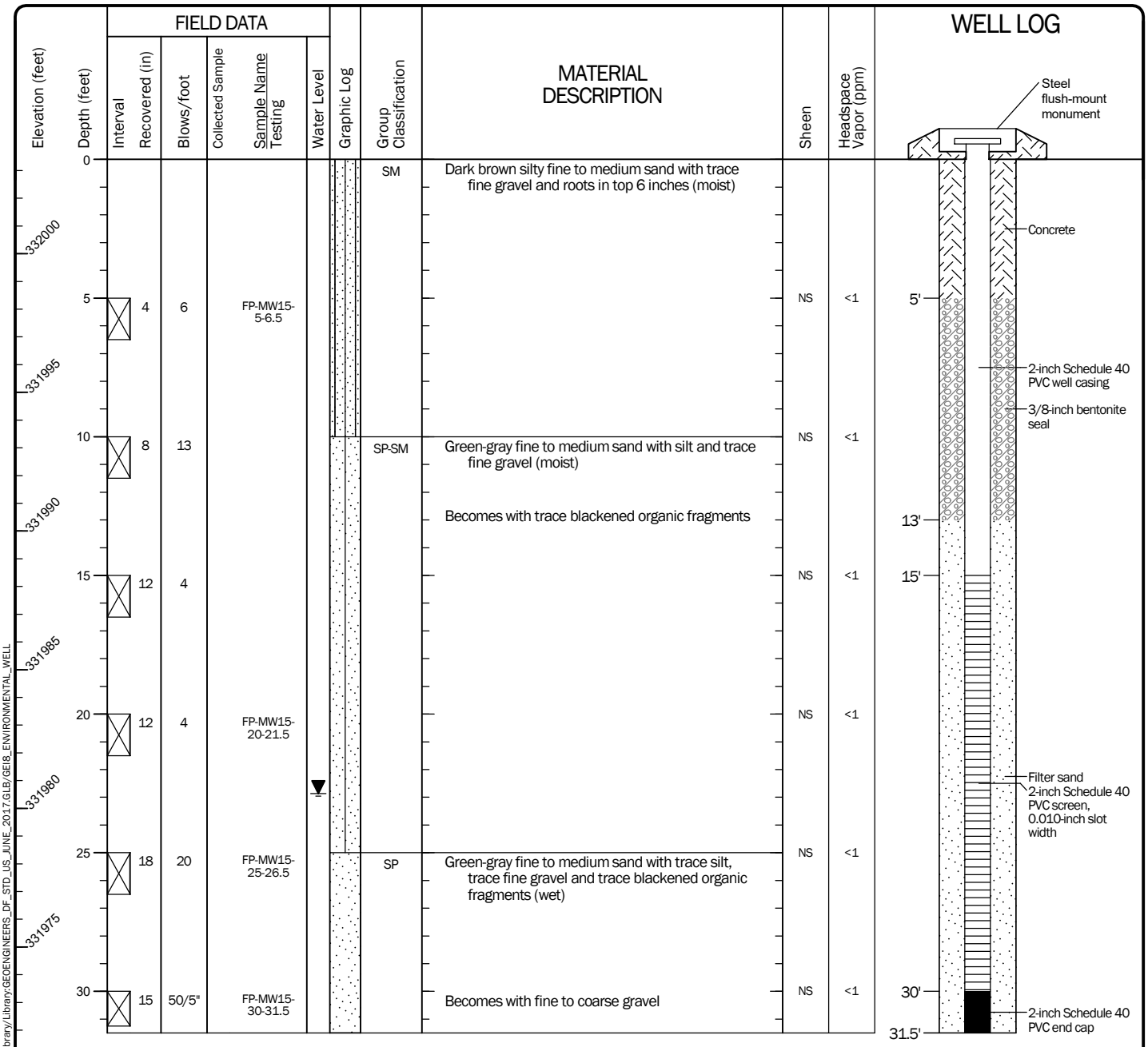
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/4/2025	6/4/2025	31.5	MAB	JML	Holocene	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	332003.4	Top of Casing Elevation (ft)	567.92
Easting (X) Northing (Y)	-1283276.235	Horizontal Datum	NAD83 (feet)

DOE Well I.D.: BQL-426
A 2-in well was installed on 6/4/2025 to a depth of 31.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	22.87	545.05

Notes:



Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW15

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-3
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/3/2025	6/3/2025	26.5	MAB	JML	Holocene	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	332521	Top of Casing Elevation (ft)	574.46
Easting (X) Northing (Y)	-1283825.617	Horizontal Datum	NAD83 (feet)

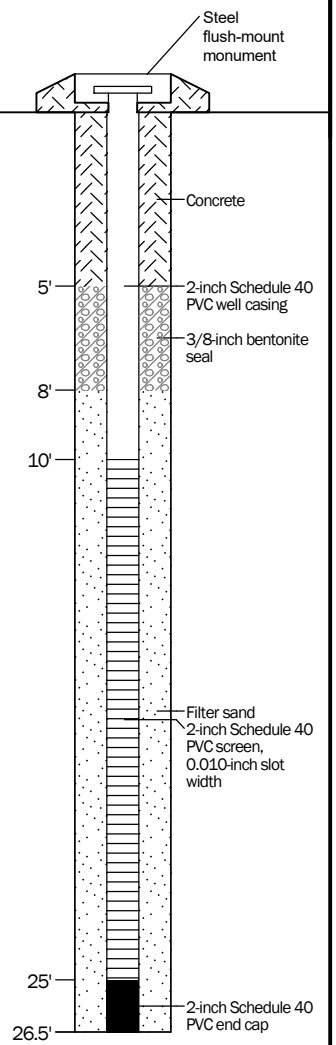
DOE Well I.D.: BQL-422
A 2-in well was installed on 6/3/2025 to a depth of 26.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	10.76	563.70

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
332520	0							SM	Brown silty fine to medium sand with occasional fine gravel and roots in the top 6 inches		
332515	5	12	5		FP-MW16-5-6.5 CA			SP-SM	Becomes gray-brown Gray fine to medium sand with silt and occasional fine gravel (moist)	NS	<1
332510	10	12	11		FP-MW16-10-11.5 CA	▼		SP	Dark brown fine to medium sand with trace silt (moist) (lens)	NS	<1
								SP-SM	Gray fine to medium sand with silt and occasional fine gravel (mixed till)		
332505	15	0	24					SP	Dark gray fine to medium sand with trace silt and occasional fine gravel (wet)	NS	1.3
332500	20	18	29					SP	Gray fine to coarse sand with trace silt and occasional fine gravel (wet)	NS	1.1
332495	25	18	62		FP-MW16-25-26.5 CA					NS	1.1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW16

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-4
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/3/2025	6/3/2025	26.5	MAB	JML	Holocene	Hollow-stem Auger

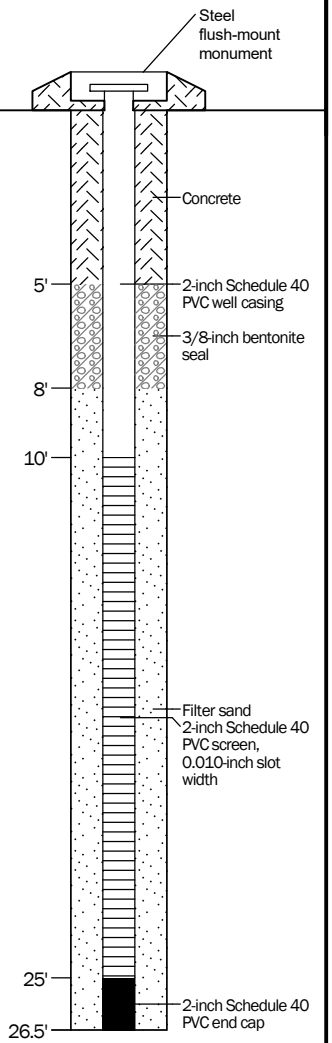
Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	332920.8	Top of Casing Elevation (ft)	575.62
Easting (X) Northing (Y)	-1283868.575	Horizontal Datum	NAD83 (feet)

DOE Well I.D.: BQL-423
A 2-in well was installed on 6/3/2025 to a depth of 26.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	12.35	563.27

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
332920	0								SM	Brown silty fine to medium sand with occasional fine to medium gravel and roots in the top 2 inches (moist)		
332915	5		8	22		FP-MW17-5-6.5 CA				Becomes light gray-brown	NS	2.1
332910	10		12	8		FP-MW17-10-11.5 CA	▼		SP-SM	Light gray-brown fine to medium sand with silt and fine gravel (loose, moist)	NS	2.3
332905	15		4	8					SP	Gray fine to coarse sand with trace silt and occasional fine gravel (wet)	NS	1.9
332900	20		18	23					SP	Gray-brown fine to medium sand with trace silt and fine gravel (wet)	NS	2.1
332895	25		18	54/4"		FP-MW17-525-26.5 CA				Becomes gray (till)	NS	1.8



Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW17

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-5
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/2/2025	6/2/2025	20.75	MAB	JML	Holocene	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	333655	Top of Casing Elevation (ft)	572.22
Easting (X) Northing (Y)	-1283852.983	Horizontal Datum	NAD83 (feet)

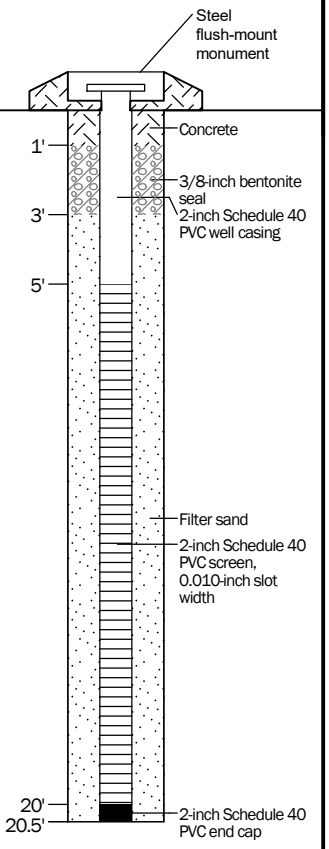
DOE Well I.D.: BQL-421
A 2-in well was installed on 6/2/2025 to a depth of 20.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	7.85	564.37

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0								SM	Dark brown silty fine to medium sand with trace fine gravel (moist)		
333650	5		8	11		FP-MW18-5-6.5 CA	▼				NS	1.1
333645	10		18	11		FP-MW18-10-11.5 CA			SP-SM	Dark gray fine sand with silt and occasional fine gravel (moist)	NS	1.2
333640	15		18	50/5"					SP	Gray fine sand with trace silt and trace fine gravel (wet)	NS	2.0
333635	20		9	50/3"		FP-MW18-20-21.5 CA					NS	1.4

WELL LOG



Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW18

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-6
Sheet 1 of 1

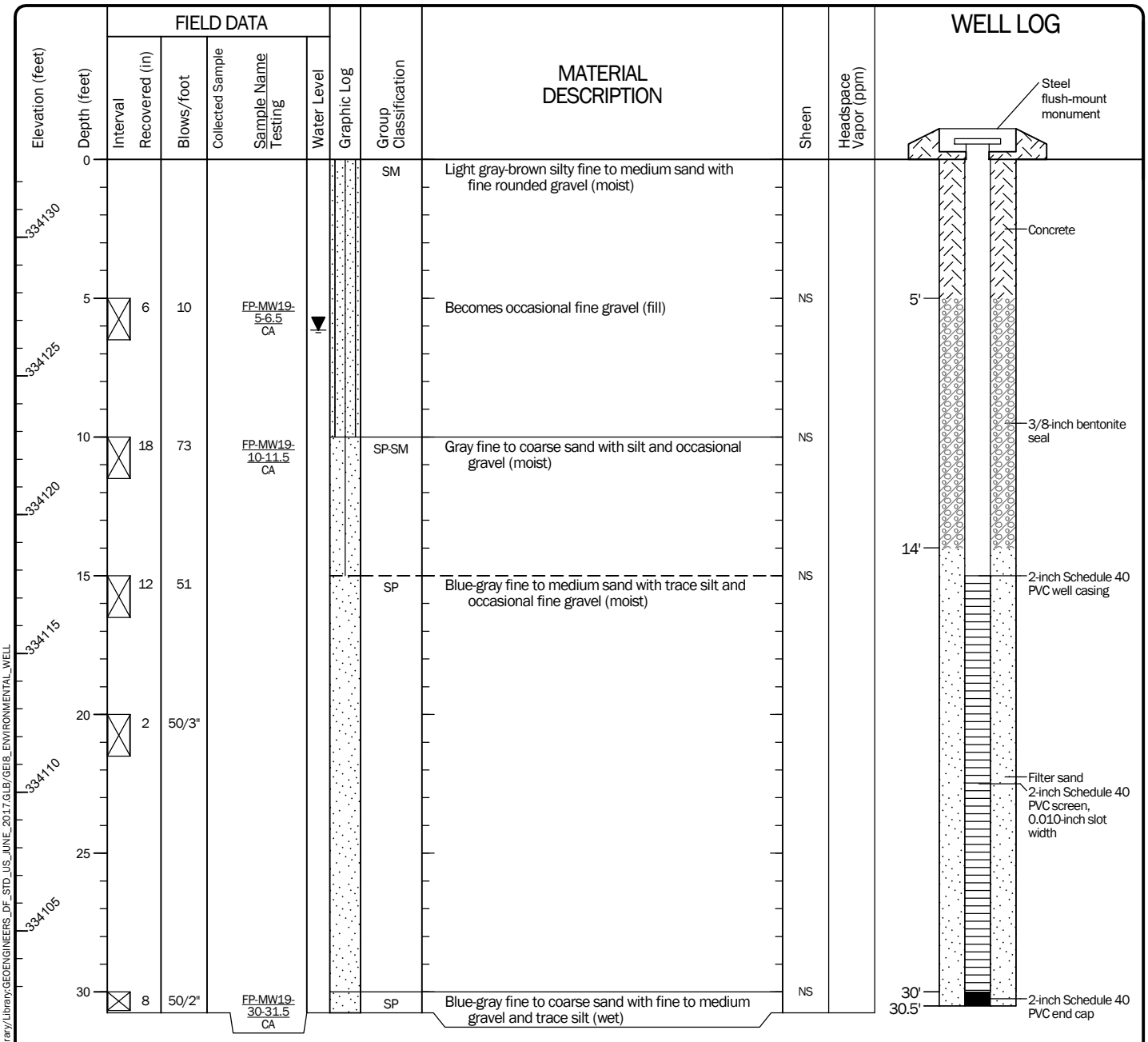
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/2/2025	6/2/2025	30.75	MAB	JML	Holocene	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	334132.8	Top of Casing Elevation (ft)	550.15
Easting (X) Northing (Y)	-1283299.23	Horizontal Datum	NAD83 (feet)

DOE Well I.D.: BQL-420
A 2-in well was installed on 6/2/2025 to a depth of 30.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	6.15	544.00

Notes:



Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW19

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-7
Sheet 1 of 1

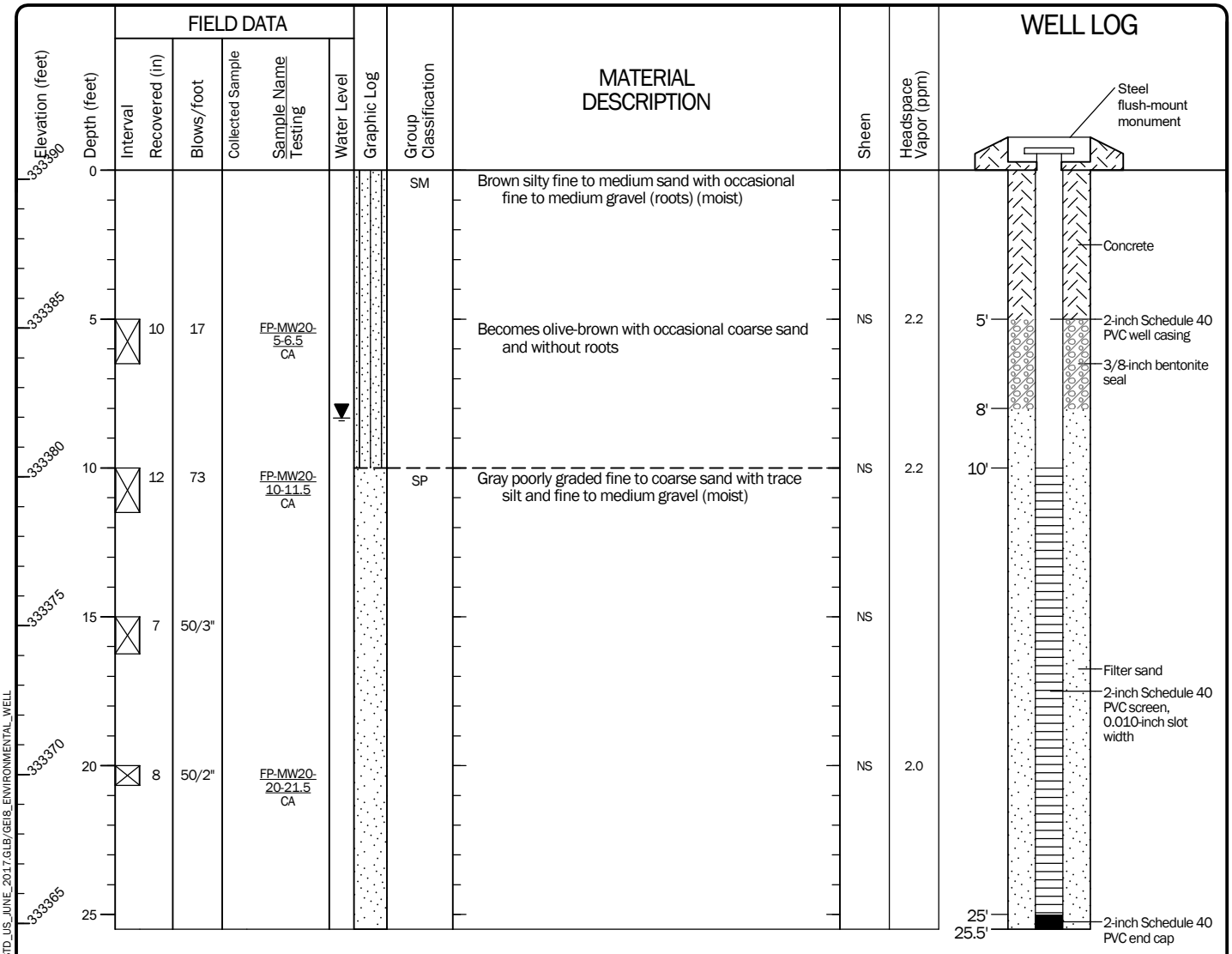
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	6/3/2025	6/3/2025	25.5	MAB	JML	Holocene	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D-50
Surface Elevation (ft) Vertical Datum	333390.3	Top of Casing Elevation (ft)	534.46
Easting (X) Northing (Y)	-1282526.98	Horizontal Datum	NAD83 (feet)

DOE Well I.D.: BQL-424
A 2-in well was installed on 6/3/2025 to a depth of 25.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/9/2025	8.32	526.14

Notes:



Notes: See Figure A-1 for explanation of symbols.
The depths on the hand-augered boring logs are based on an average of measurements across the hand-auger and should be considered accurate to ½ foot.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Monitoring Well FP-MW20

GeoEngineers

Project: Snohomish County Airport - Paine Field FTP Supplemental Data Gaps Investigatic
Project Location: Everett, Washington
Project Number: 5530-015-01

Figure B-8
Sheet 1 of 1

Appendix B
Groundwater Sampling Field Data

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field-~~FTP~~ - Suppl. Job No. 05530-015-01 Collector MN SAMPLE ID: FP-MW 5 -250610

PURGE DATA

Well Condition: Secure [X] Yes [ ] No Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) 11.26

Depth to Base of Well 17.45 Height of Water Column 6.19

Well Casing Type/Diameter 2"PVC

One Casing Volume (gal.) 1.05

Purge Method Pump (type) Peristaltic Bailer (type)

Gallons Purged

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal labelled drums on site

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 06/10/25

Sample Location and Depth Time Collected 1445

Tidal Cycle NA [X] High Tide at Low Tide at Weather Sunny

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [x] Pump [ ] Other

Made of [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox and PFAS-free water

Sample Description (color, free product thickness, odor, turbidity, etc.)

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (L/min)	Purge Volume (Gallons)	Temperature (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (ppm)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1410	13.26	200	1.0	14.3	150	65.9	6.67	7.60	0.146	0.0	0.07
1413	13.26		1.15		145	65.9	6.64	6.94	0.149		
1416	11.19		1.25	16.9	146	65.4	6.64	6.94	0.150		
1419	11.19		1.36	16.2	150	67.8	6.64	7.73	0.147		
1422			1.50	15.9	124	69.7	6.64	8.00	0.144		
1425			1.62	16.0	112	70.1	6.64	8.17	0.144		
1428			1.75	15.7	37.6	72.9	6.63	8.16	0.147		
1431			2.0	15.6	10.96	74.1	6.63	8.16	0.146		
1434			2.10	15.9	4.68	74.6	6.63	8.19	0.145		
1437			2.25	15.8	4.87	75.8	6.63	8.20	0.145		
1440			2.50	15.7	4.01	76.6	6.63	8.15	0.146		

Meters Used for Measurement YSI Pro DSS, Aperia

pH/Con./DO Instrument Calibration [X] Yes [ ] No FEI Spectrophotometer no E-Tape Heron

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance NO

Analyses, Number and Volume of Sample Containers 2- 500ml Poly

Duplicate Sample Number(s) NO

Comments: (Filtered, Not Filtered, Calculations, etc.) NF

Signature Date 6/10/25 Page 1 of 1

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field | Job No.: 5530-015-01 | Collector: MY | SAMPLE ID: FP-MW7 - 250610

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage:
(Padlock brand and number):

Depth to Water (from top of well casing): 15.70
Depth to Base of Well: 19.55 | Height of Water Column: 3.85
Well Casing Type/Diameter: 2in
One Casing Volume (gal.): 0.65
Purge Method | Pump (type): Peristaltic | Bailer (type):
Gallons Purged:
(Remove minimum of 3 well volumes or until field parameters stabilize)
Purge Water Storage/Disposal:
(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr): 6/10/25
Sample Location and Depth: FP-MW07 @ 17.5'
Time Collected: 1225
Tidal Cycle: NA [X] | High Tide at: | Low Tide at:
Weather: Sunny
Sample type (Groundwater, Product, Other): Groundwater
Sample Collected with: [ ] Bailer [X] Pump [ ] Other
Made of: [ ] Stainless Steel [X] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other
Sampler Decon Procedure: Alconox + PFAS Free H_2O
Sample Description (color, free product thickness, odor, turbidity, etc.): Colorless, no odor

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	3% Temperature C (F)	10% or <5 Turbidity (NTU)	10% ORP (mV)	+/- 0.1 pH	10% Dissolved O2 mg/L (ppm)	3% Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1156	15.98	200	0.15	13.4	85.6	114.6	6.08	6.21	0.152	0	0.07
1159	16.10		0.30	14.2	77.3	115.0	6.06	6.29	0.153	0	0.07
1202	16.28		0.45	14.2	53.6	115.5	6.10	6.10	0.153	0	0.07
1205	16.43		0.60	14.4	21.6	116.6	6.07	6.01	0.156	0	0.07
1208	16.45		0.75	14.4	21.2	117.4	6.08	5.89	0.157	0	0.07
1211	16.48 52		0.90	14.5	20.9	119.1	6.06	5.69	0.156	0	0.07
1214	16.48 64		1.05	14.1	2.23	122.4	6.04	5.64	0.153	0	0.07
1217	16.72		1.20	13.9	2.29	123.9	6.03	5.66	0.153	0	0.07
1220	16.72		1.35	13.9	4.49	124.5	6.02	5.78	0.151	0	0.07

Meters Used for Measurement: Teflon-Free WLM, YSI, & Turbidity Meter
pH/Con./DO Instrument Calibration: [X] Yes [ ] No | Spectrophotometer: | E-Tape:

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance:
Analyses, Number and Volume of Sample Containers: 2-500mL Poly (unpres.)
Duplicate Sample Number(s):
Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature: | Date: 6/10/25 | Page: of

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GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field | Job No.: 5530-015-01 | Collector: MY | SAMPLE ID: FP-MW8-250610

PURGE DATA

Well Condition: Secure [x] Yes [ ] No | Describe Damage:
(Padlock brand and number):
Depth to Water (from top of well casing): 15.08
Depth to Base of Well: 26.49 | Height of Water Column: 11.41
Well Casing Type/Diameter: 2in
One Casing Volume (gal.): 1.94
Purge Method | Pump (type): Peristaltic | Bailer (type):
Gallons Purged:
(Remove minimum of 3 well volumes or until field parameters stabilize)
Purge Water Storage/Disposal:
(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr): 6/10/25
Sample Location and Depth: FP-MW8 @ ~21.0' | Time Collected: 1050
Tidal Cycle: NA [X] | High Tide at: | Low Tide at: | Weather: Sunny
Sample type (Groundwater, Product, Other): Groundwater
Sample Collected with: [ ] Bailer [X] Pump [ ] Other
Made of: [ ] Stainless Steel [X] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other
Sampler Decon Procedure: Alconox + PFAS Free Water
Sample Description (color, free product thickness, odor, turbidity, etc.): Colorless, no odor

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature C (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved mg/L O2 (~~ppm~~)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1023	15.08	250	0.2	12.0	42.3	-3.8	6.19	0.52	0.385	0	0.19
1026	15.65		0.4	12.0	27.8	-7.2	6.19	0.39	0.388	0	0.19
1029	15.65		0.6	12.0	24.4	-10.9	6.20	0.24	0.385	0	0.19
1032	15.65		0.8	12.0	20.1	-13.6	6.19	0.19	0.384	0	0.19
1035	15.65		1.0	12.1	15.50	-14.6	6.19	0.15	0.383	0	0.18
1038	15.65		1.2	12.2	15.33	-16.0	6.19	0.13	0.384	0	0.18
1041	15.65		1.4	12.2	6.39	-17.9	6.19	0.10	0.382	0	0.18
1044	15.65		1.6	12.1	6.77	-18.8	6.19	0.08	0.384	0	0.18
1047	15.65		1.8	12.0	6.29	-19.2	6.19	0.06	0.382	0	0.18

Meters Used for Measurement: Teflon-Free WLM, YSI, Turbidity Meter
pH/Con./DO Instrument Calibration: [X] Yes [ ] No | Spectrophotometer: | E-Tape:

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance:
Analyses, Number and Volume of Sample Containers: 2-500mL Poly (unpres.)
Duplicate Sample Number(s):
Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature: | Date: 6/10/25 | Page: of

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field -FTP - Suppl. | Job No. 05530-015-01 | Collector: MW | SAMPLE ID: FP-MW10-250610

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage:
(Padlock brand and number):
Depth to Water (from top of well casing): 12.26
Depth to Base of Well: 20 | Height of Water Column: 7.74
Well Casing Type/Diameter: 2"PVC
One Casing Volume (gal.): 1.31 | 3X = 4.0
Purge Method: Pump (type) Peristaltic | Bailer (type):
Gallons Purged:
(Remove minimum of 3 well volumes or until field parameters stabilize)
Purge Water Storage/Disposal: labelled drums on site
(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr): 06/10/25
Sample Location and Depth: 16'
Time Collected: 1245
Tidal Cycle: NA [X] | High Tide at | Low Tide at
Weather: Sunny
Sample type (Groundwater, Product, Other): Groundwater
Sample Collected with: [ ] Bailer [x] Pump [ ] Other
Made of: [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other
Sampler Decon Procedure: Alconox and PFAS-free water
Sample Description (color, free product thickness, odor, turbidity, etc.)

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (~~mg/L~~ (ppm))	Specific Conductance (~~mS/cm~~)	TDS (g/l)	Salinity (ppt)
1210	12.70	500	2.0	12.9	30.64	-64.7	6.37	0.13	0.448	0.0	0.22
1213	12.70		2.12	12.9	41.52 *	-65.8	6.37	0.13	0.447	0.0	0.22
1216	12.70		2.25	12.9	0.91	-68.6	6.36	0.12	0.448	0.0	
1219			2.36	13.4	1.40	-69.1	6.36	0.11	0.448		
1222			2.5	13.5	0.95	-70.2	6.36	0.11	0.448		
1225			2.65	13.5	0.79	-71.0	6.36	0.10	0.448		

Meters Used for Measurement: YSI Pro DSS, APerg Turbidity meter
pH/Con./DO Instrument Calibration: [X] Yes [ ] No FEL | Spectrophotometer no | E-Tape

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance: NO
Analyses, Number and Volume of Sample Containers: 2-~~500~~ 500 mL poly
Duplicate Sample Number(s): NO
Comments: (Filtered, Not Filtered, Calculations, etc.): NF

Signature | Date: 6/10/25 | Page: 1 of 1

Check if additional information on back [ ]

* Turbidity looked clear
Switched to Handheld APerg

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field | Job No. 5530-015-01 | Collector: MY | SAMPLE ID: FP-MW11-250610

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage:
(Padlock brand and number):
Depth to Water (from top of well casing): 20.69
Depth to Base of Well: 27.30 | Height of Water Column: 6.61
Well Casing Type/Diameter: 2in
One Casing Volume (gal.): 1.12
Purge Method | Pump (type): Peristaltic | Bailer (type):
Gallons Purged:
(Remove minimum of 3 well volumes or until field parameters stabilize)
Purge Water Storage/Disposal:
(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr): 6/10/25
Sample Location and Depth: FP-MW11 ~~[illegible]~~ @ 25.0' | Time Collected: 1135
Tidal Cycle: NA [X] | High Tide at: | Low Tide at: | Weather: Sunny
Sample type (Groundwater, Product, Other): Groundwater
Sample Collected with [ ] Bailer [X] Pump [ ] Other
Made of [ ] Stainless Steel [X] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other
Sampler Decon Procedure: Alconox + DI H_2O
Sample Description (color, free product thickness, odor, turbidity, etc.): Colorless, no odor

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature (C)	Turbidity (NTU)	ORP (mV)	pH	Dissolved mg O2 L (ppm)	Specific Conductance (ms/cm)	TDS (g/l)	Salinity (ppt)
1112	20.69	250	0.2	11.6	167	84.3	5.87	1.20	0.129	0	0.06
1115	21.04		0.4	11.6	65.9	88.9	5.85	1.11	0.129	0	0.06
1118	21.08		0.6	11.7	32.1	93.9	5.82	0.97	0.128	0	0.06
1121	21.08		0.8	11.5	27.5	97.6	5.80	1.00	0.130	0	0.06
1124	21.08		1.0	11.6	23.4	99.8	5.79	0.99	0.131	0	0.06
1127	21.08		1.2	11.6	23.7	102.7	5.77	0.99	0.131	0	0.06
1130	21.08		1.4	11.6	23.0	104.5	5.77	0.98	0.132	0	0.06

Meters Used for Measurement: Teflon-Free WLM, YSI, Turbidity Meter
pH/Con./DO Instrument Calibration [X] Yes [ ] No | Spectrophotometer: | E-Tape:

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance:
Analyses, Number and Volume of Sample Containers: 2 - 500mL Poly (unpres.)
Duplicate Sample Number(s):
Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature: | Date: 6/10/25 | Page: of

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project Paine Field | Job No. 5530-015-01 | Collector MY | SAMPLE ID: FP-MW12-250610

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) 14.90

Depth to Base of Well 24.57 | Height of Water Column 9.67

Well Casing Type/Diameter 2in

One Casing Volume (gal.) 1.64

Purge Method | Pump (type) Peristaltic | Bailer (type)

Gallons Purged

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 6/10/25

Sample Location and Depth FP-MW12 @ ~ 20.0 | Time Collected 1000

Tidal Cycle NA [X] | High Tide at | Low Tide at | Weather Sunny

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [X] Pump [ ] Other

Made of [ ] Stainless Steel [X] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox + PFAS Free Water

Sample Description (color, free product thickness, odor, turbidity, etc.) w/ slight yellow tinge Colorless, no odor

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature (C)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (mg/L)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
0941	15.81	250	0.2	12.2	175	24.5	5.90	0.25	0.203	0	0.10
0944	15.95		0.4	12.2	120	23.6	5.90	0.20	0.204	0	0.10
0947	15.95		0.6	12.2	106	22.1	5.90	0.18	0.206	0	0.10
0950	15.95		0.8	12.3	80.1	19.0	5.90	0.24	0.206	0	0.10
0953	15.95		1.0	12.2	72.9	17.5	5.91	0.32	0.211	0	0.10
0956	16.02		1.2	12.1	69.9	16.5	5.91	0.33	0.211	0	0.10
0959	16.02		1.4	12.4	79.6	16.1	5.91	0.44	0.213	0	0.10

Meters Used for Measurement: Teflon-Free WLM, YSI, Turbidity Meter

pH/Con./DO Instrument Calibration [X] Yes [ ] No | Spectrophotometer | E-Tape

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance

Analyses, Number and Volume of Sample Containers 2-500mL Poly (unpres.)

Duplicate Sample Number(s)

Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature | Date 6/10/25 | Page of

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field -FTP - Suppl. | Job No. 05530-015-01 | Collector: MN | SAMPLE ID: FP-MW 14 -250610

PURGE DATA

Well Condition: Secure [ ] Yes [ ] No | Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing): 33.62

Depth to Base of Well: 45 | Height of Water Column: 11.38

Well Casing Type/Diameter: 2"PVC

One Casing Volume (gal.): 1.93 | 3x = 6.0

Purge Method: Pump (type) Peristaltic | Bailer (type)

Gallons Purged: N/A | ~~6.0~~

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal: labelled drums on site

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr): 06/10/25

Sample Location and Depth: ≈43 | Time Collected: 1035

Tidal Cycle: NA [X] | High Tide at | Low Tide at | Weather: Sunny

Sample type (Groundwater, Product, Other): Groundwater

Sample Collected with: [ ] Bailer [x] Pump [ ] Other

Made of: [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure: Alconox and PFAS-free water

Sample Description (color, free product thickness, odor, turbidity, etc.): cloudy

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (ppm)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
9 50	33.62	500	2.25	13.9	195.64	-73.9	6.42	0.24	0.504	0.0	0.25
0953			2.50	13.9	186.55	-78.9	6.42	0.24	0.504	0.0	0.25
0956			2.75	13.8	181.12	-81.0	6.42	0.25	0.504	0.0	0.25
0959			3.25	13.8	194.32	-82.8	6.42	0.27	0.503	0.0	0.24
1002			3.50	13.9	213.44	-83.8	6.42	0.28	0.504	0.0	0.24
1005			3.75	13.8	215.61	-84.6	6.42	0.28	0.504	0.0	0.24
1008			4.50	13.8	216.56	-85.2	6.41	0.28	0.504	0.0	0.24
1011			4.75	13.9	216.51	-86.7	6.42	0.28	0.506	0.0	0.24
1014			5.0	14.1	226.35	-86.3	6.42	0.31	0.508	0.0	0.25
1017			5.5	14.0	116.08	-86.4	6.42	0.29	0.508	0.0	0.25
1020			5.75	14.0	110.15	-86.7	6.42	0.28	0.508	0.0	0.25
1023			6.0	14.1	109.97	-86.8	6.42	0.28	0.507	0.0	0.25
1026			6.25	14.1	112.09	-86.8	6.41	0.28	0.508	0.0	0.25

Meters Used for Measurement: YSI Pro Dss

pH/Con./DO Instrument Calibration: [X] Yes [ ] No | FEI | Spectrophotometer no | E-Tape: Heron

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance: No

Analyses, Number and Volume of Sample Containers: 2-~~250~~ 500 ml Polys.

Duplicate Sample Number(s): No

Comments: (Filtered, Not Filtered, Calculations, etc.): NF

Signature | Date: 6/10/2025 | Page 1 of 1

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field | Job No.: 5530-015-01 | Collector: MY | SAMPLE ID: FP-MW15-250609

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage:
(Padlock brand and number):

Depth to Water (from top of well casing): 22.87
Depth to Base of Well: 29.64 | Height of Water Column: 6.77
Well Casing Type/Diameter: 2in
One Casing Volume (gal.): 1.15
Purge Method | Pump (type): Peristaltic | Bailer (type):
Gallons Purged:
(Remove minimum of 3 well volumes or until field parameters stabilize)
Purge Water Storage/Disposal:
(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr): 6/9/25
Sample Location and Depth: FP-MW15 @ ~27.0 | Time Collected: 1400
Tidal Cycle: NA [X] | High Tide at: | Low Tide at: | Weather: Sunny
Sample type (Groundwater, Product, Other): Groundwater
Sample Collected with: [ ] Bailer [X] Pump [ ] Other:
Made of: [ ] Stainless Steel [X] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other:
Sampler Decon Procedure: Alconox + PFAS Free H_2O
Sample Description (color, free product thickness, odor, turbidity, etc.): Colorless, no odor

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate m(L/min)	Purge Volume (Gallons)	Temperature C (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved mg O2 L ~~(ppm)~~	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1321	22.07	250	0.2	13.8	118	-11.5	6.19	0.64	0.375	0	0.18
1324	22.43		0.4	13.9	99.2	-15.4	6.17	0.38	0.373	0	0.18
1327	22.43		0.6	13.7	105	-13.5	6.15	0.42	0.367	0	0.18
1330	22.43		0.8	13.7	102	-7.7	6.14	0.60	0.364	0	0.18
1333	22.43		1.0	13.7	99.7	-5.9	6.14	0.70	0.366	0	0.18
1336	22.43		1.2	13.6	94.0	-6.7	6.14	0.68	0.366	0	0.18
1339	22.43		1.4	13.8	98.6	-9.9	6.14	0.53	0.369	0	0.18
1342	22.43		1.6	13.6	81.5	-12.4	6.15	0.41	0.369	0	0.18
1345	22.43		1.8	13.6	72.1	-14.0	6.15	0.31	0.370	0	0.18
1348	22.43		2.0	13.6	64.6	-16.1	6.15	0.25	0.370	0	0.18
1351	22.43		2.2	13.5	59.9	-17.9	6.15	0.19	0.372	0	0.18
1354	22.43		2.4	13.6	58.9	-18.9	6.15	0.15	0.371	0	0.18

Meters Used for Measurement: Teflon-Free WLM, YSI, Turbidity Meter
pH/Con./DO Instrument Calibration: [X] Yes [ ] No | Spectrophotometer: | E-Tape:

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance:
Analyses, Number and Volume of Sample Containers: 2-500mL Poly (Unpres.)
Duplicate Sample Number(s):
Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature: | Date: 6/9/25 | Page: 1 of 1
Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project Paine Field | Job No. 5530-015-01 | Collector MY | SAMPLE ID: FP-MW16-250609

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) 10.76

Depth to Base of Well 24.45 | Height of Water Column 13.69

Well Casing Type/Diameter 2in

One Casing Volume (gal.) 2.32

Purge Method | Pump (type) Peristaltic | Bailer (type)

Gallons Purged

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 6/9/25

Sample Location and Depth FP-MW16 @ ~17.0 | Time Collected 1245

Tidal Cycle NA [X] | High Tide at | Low Tide at | Weather Sunny

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [X] Pump [ ] Other

Made of [ ] Stainless Steel [X] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox + PFAS Free H_2O

Sample Description (color, free product thickness, odor, turbidity, etc.) Colorless, no odor

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate mL/min	Purge Volume (Gallons)	Temperature C (F)	10% or ≤5.0 Turbidity (NTU)	ORP (mV)	pH	Dissolved mg O2 L (ppm)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1212	10.79	250	0.20	13.4	22.5	7.0	6.15	0.59	0.239	0	0.11
1215	10.89		0.40	13.2	22.0	5.0	6.11	0.38	0.236	0	0.11
1218	10.89		0.60	13.1	21.4	2.5	6.10	0.32	0.237	0	0.11
1221	10.89		0.80	13.1	15.30	-1.6	6.09	0.19	0.237	0	0.11
1224	10.89		1.00	12.9	14.97	-2.8	6.09	0.17	0.237	0	0.11
1227	10.89		1.20	12.9	12.53	-4.3	6.09	0.14	0.237	0	0.11
1230	10.89		1.40	13.2	9.86	-5.8	6.08	0.12	0.237	0	0.11
1233	10.89		1.60	13.0	8.97	-6.6	6.08	0.11	0.237	0	0.11
1236	10.89		1.80	13.0	6.01	-7.4	6.08	0.10	0.237	0	0.11
1239	10.89		2.00	12.9	3.79	-8.2	6.08	0.09	0.237	0	0.11
1242	10.89		2.20	12.9	2.21	-9.0	6.08	0.08	0.237	0	0.11

Meters Used for Measurement Teflon-Free WLM, YSI, Turbidity Meter

pH/Con./DO Instrument Calibration [ ] Yes [ ] No | Spectrophotometer | E-Tape

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance

Analyses, Number and Volume of Sample Containers 2-500mL Poly (unpres.)

Duplicate Sample Number(s) DUP-1-250609 (2-500mL Poly - unpres.)

Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature | Date 6/9/25 | Page 1 of 1

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project ~~Paine Field-FTP~~ - Suppl. Job No. 05530-015-01 Collector MW SAMPLE ID: FP-MW 17 -250609

PURGE DATA

Well Condition: Secure [X] Yes [ ] No Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) 12.35

Depth to Base of Well 25 Height of Water Column 12.65

Well Casing Type/Diameter 2"PVC

One Casing Volume (gal.) 2.1 (3x = 6.5)

Purge Method Pump (type) Peristaltic Bailer (type)

Gallons Purged 2.25

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal labelled drums on site

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 06/09/25

Sample Location and Depth 18.5 Time Collected 1300

Tidal Cycle NA [X] High Tide at Low Tide at Weather Sunny

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [x] Pump [ ] Other

Made of [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox and PFAS-free water

Sample Description (color, free product thickness, odor, turbidity, etc.) clear

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (L/min)	Purge Volume (Gallons)	Temperature (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (mg/L (ppm))	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1235	12.45	300	1.0	12.3	41.29	-5.9	6.0	0.14	0.180	0.0	0.09
1238	12.50	↓	1.25	12.5	41.59	-6.6	6.0	0.18	0.179	0.0	0.09
1241	12.50		1.50	12.3	35.15	-3.9	5.99	0.18	0.180	0.0	0.09
1244	12.50		1.75	12.4	34.57	-3.6	5.99	0.16	0.179	0.0	0.09
1247	12.50		2.00	12.3	34.60	-3.8	5.99	0.16	0.180	0.0	0.09
1250	12.50	↓	2.25	12.5	33.46	-3.5	5.99	0.14	0.181	0.0	0.09

~~Meters~~ Used for Measurement YSI

pH/Con./DO Instrument Calibration [ ] Yes [ ] No Spectrophotometer no E-Tape

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance NA

Analyses, Number and Volume of Sample Containers 2-~~500~~ 250ml Polys

Duplicate Sample Number(s) NO

Comments: (Filtered, Not Filtered, Calculations, etc.) NO

Signature Date 6/9/25 Page 1 of 1

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field -FTP - Suppl. | Job No. 05530-015-01 | Collector MN | SAMPLE ID: FP-MW 18 -250609

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) 7.95

Depth to Base of Well 20.0 | Height of Water Column 12.15

Well Casing Type/Diameter 2"PVC

One Casing Volume (gal.) 2.06 | 3X = 6.25

Purge Method | Pump (type) Peristaltic | Bailer (type)

Gallons Purged 7.0

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal labelled drums on site

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 06/09/25

Sample Location and Depth 13.925 | Time Collected 1400

Tidal Cycle NA [X] | High Tide at | Low Tide at | Weather Sunny

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [x] Pump [ ] Other

Made of [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox and PFAS-free water

Sample Description (color, free product thickness, odor, turbidity, etc.) clear

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (mg/L) (ppm)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
~~1325~~ 1325	8.10	400	0.75	13.1	19.53	121.5	5.89	1.21	0.183	0.0	0.09
1328	8.11		1.12	13.2	18.40	114.7	5.88	0.90	0.180		
1331	8.15		1.50	13.4	21.23	123.6	5.88	0.75	0.180		
1334	8.20		1.62	13.8	21.42	124.8	5.88	0.70	0.182		
1337	8.28		1.75	13.9	20.27	124.2	5.88	0.67	0.182		
1340	8.32		2.00	14.1	21.74	124.0	5.89	0.67	0.184		

Meters Used for Measurement YSI Pro DSS

pH/Con./DO Instrument Calibration [X] Yes [ ] No FFI | Spectrophotometer no | E-Tape Heron

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance No

Analyses, Number and Volume of Sample Containers 2- 500ml Poly's

Duplicate Sample Number(s) NA

Comments: (Filtered, Not Filtered, Calculations, etc.) NF

Signature | Date 6/9/25 | Page 1 of 1

Check if additional information on back [ ]

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project: Paine Field -FTP - Suppl. | Job No. 05530-015-01 | Collector MN | SAMPLE ID: FP-MW19-250609

PURGE DATA

Well Condition: Secure [ ] Yes [ ] No | Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) ~~6.75~~ 5.93

Depth to Base of Well 30 | Height of Water Column 24.07

Well Casing Type/Diameter 2"PVC

One Casing Volume (gal.) 4.09

Purge Method | Pump (type) Peristaltic | Bailer (type)

Gallons Purged

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal labelled drums on site

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 06/09/25

Sample Location and Depth ≈ 18'

Time Collected ~~1446~~ 1500

Tidal Cycle NA [X] | High Tide at | Low Tide at | Weather

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [x] Pump [ ] Other

Made of [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox and PFAS-free water

Sample Description (color, free product thickness, odor, turbidity, etc.) Clear

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (L/min)	Purge Volume (Gallons)	Temperature (F)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (ppm)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
~~1415~~											
~~1418~~											
1421	5.93	400	0.5	10.4	34.54	~~30~~.06	7.37	8.17	0.417	0.0	0.20
1424			0.75	10.3	51.33	-85.8	7.34	2.12	0.418		
1427			1.00	10.3	58.20	-99.4	7.31	1.35	0.417		
1430			1.25	10.2	56.23	-106.6	7.30	0.98	0.415		
1433			1.50	10.3	51.05	-109.1	7.28	0.84	0.413		
1436			1.75	10.3	52.03	-109.8	7.26	0.65	0.412		
1439			2.0	10.7	58.16	-114.1	7.25	0.34	0.411		
1442			2.25	10.6	64.97	-111	7.23	0.22	0.404		
1445			2.5	10.5	60.45	-117.2	7.24	0.18	0.408		
1448			2.75	10.5	60.66	-109.0	7.24	0.17	0.408		
1451			3.25	10.3	60.09	-109.0	7.24	0.16	0.408		

Meters Used for Measurement YSI ProDSS

pH/Con./DO Instrument Calibration [✓] Yes [ ] No FEI | Spectrophotometer no | E-Tape Heron

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance NO

Analyses, Number and Volume of Sample Containers 2 - 500mL Polys

Duplicate Sample Number(s) NO

Comments: (Filtered, Not Filtered, Calculations, etc.) NF

Signature | Date 6/9/25 | Page 1 of 1

Check if additional information on back [ ]

* inaccurate

GeoEngineers

GROUNDWATER SAMPLE COLLECTION FORM

Project Paine Field | Job No. 5530-015-01 | Collector MY | SAMPLE ID: FP-MW20-250609

PURGE DATA

Well Condition: Secure [X] Yes [ ] No | Describe Damage

(Padlock brand and number)

Depth to Water (from top of well casing) 8.32

Depth to Base of Well 24.38 | Height of Water Column 16.06

Well Casing Type/Diameter 2in

One Casing Volume (gal.) 2.73

Purge Method | Pump (type) Peristaltic | Bailer (type)

Gallons Purged 22.73

(Remove minimum of 3 well volumes or until field parameters stabilize)

Purge Water Storage/Disposal

(Drum identification, sample analysis, sample results, storage location, etc.)

Diameter (in.)	OD	ID	Volume Gal./ Linear Ft
2	2.375"	2.067"	0.17
3	3.500"	3.068"	0.38
4	4.500"	4.026"	0.66
6	6.625"	6.065"	1.50
0.75	1.050"	0.810"	0.023

V = pi*r in ft ^2*7.48 gal/ft^3 = gal/ft^3

SAMPLING DATA

Date Collected (mo/dy/yr) 6/9/25

Sample Location and Depth FP-MW20 @ 15.0 | Time Collected 1515

Tidal Cycle NA [X] | High Tide at | Low Tide at | Weather Sunny

Sample type (Groundwater, Product, Other) Groundwater

Sample Collected with [ ] Bailer [ ] Pump [ ] Other

Made of [ ] Stainless Steel [ ] PVC [ ] Teflon [ ] Disposable LDPE [ ] Other

Sampler Decon Procedure Alconox + PFAS Free H_2O

Sample Description (color, free product thickness, odor, turbidity, etc.)

FIELD PARAMETERS

Time	Depth to Water (ft bTOC)	Flow Rate (mL/min)	Purge Volume (Gallons)	Temperature (C)	Turbidity (NTU)	ORP (mV)	pH	Dissolved O2 (mg/L)	Specific Conductance (mS/cm)	TDS (g/l)	Salinity (ppt)
1437	8.32	250	0.2	13.8	85.8	67.0	6.59	6.27	0.164	0	0.08
1440	8.35		0.4	13.7	71.7	68.7	6.57	6.33	0.168	0	0.08
1443	8.35		0.6	13.7	42.0	69.5	6.61	6.52	0.183	0	0.09
1446	8.35		0.8	13.6	41.7	67.7	6.72	6.95	0.190	0	0.09
1449	8.35		1.0	13.6	29.6	67.0	6.69	6.92	0.188	0	0.09
1452	8.35		1.2	13.5	32.5	67.2	6.73	6.96	0.203	0	0.10
1455	8.35		1.4	13.6	25.2	64.7	6.82	6.82	0.218	0	0.10
1458	8.35		1.6	13.5	23.5	60.8	6.86	6.77	0.222	0	0.10
1501	8.35		1.8	13.3	20.4	56.2	6.88	6.68	0.223	0	0.10
1504	8.35		2.0	13.3	13.74	51.6	6.89	6.47	0.226	0	0.10
1507	8.35		2.2	13.3	11.06	48.7	6.90	6.36	0.227	0	0.10
1510	8.35		2.4	13.3	12.72	46.9	6.90	6.24	0.227	0	0.10

Meters Used for Measurement: Teflon-Free WLM, YSI, Turbidity Meter

pH/Con./DO Instrument Calibration [X] Yes [ ] No | Spectrophotometer | E-Tape

ADDITIONAL INFORMATION

Samples Composited Overtime, Distance

Analyses, Number and Volume of Sample Containers 2-500mL Poly (unpres.)

Duplicate Sample Number(s)

Comments: (Filtered, Not Filtered, Calculations, etc.)

Signature | Date 6/9/25 | Page of

Check if additional information on back [ ]

GeoEngineers

Appendix C
Laboratory Analytical Reports

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

July 08, 2025

Jacob Letts
Geoengineers
1101 S Fawcett Ave
Suite 200

Tacoma, WA 98402

RE: Project: Paine Airfield WA
Pace Project No.: 10738459

Dear Jacob Letts:

Enclosed are the analytical results for sample(s) received by the laboratory on June 12, 2025. 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,

Isaac Johnson
isaac.johnson@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Paine Airfield WA
Pace Project No.: 10738459

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Paine Airfield WA
Pace Project No.: 10738459

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10738459001	**DUP-1-250609**	Water	06/09/25 06:00	06/12/25 09:40
10738459002	**FP-MW16-250609**	Water	06/09/25 12:45	06/12/25 09:40
10738459003	**FP-MW17-250609**	Water	06/09/25 13:00	06/12/25 09:40
10738459004	**FP-MW18-250609**	Water	06/09/25 14:00	06/12/25 09:40
10738459005	**FP-MW15-250609**	Water	06/09/25 14:00	06/12/25 09:40
10738459006	**FP-MW19-250609**	Water	06/09/25 15:00	06/12/25 09:40
10738459007	**FP-MW20-250609**	Water	06/09/25 15:15	06/12/25 09:40
10738459008	**RB-1-250609**	Water	06/09/25 11:40	06/12/25 09:40
10738459009	**FP-MW12-250610**	Water	06/10/25 10:00	06/12/25 09:40
10738459010	**FP-MW14-250610**	Water	06/10/25 10:35	06/12/25 09:40
10738459011	**FP-MW8-250610**	Water	06/10/25 10:50	06/12/25 09:40
10738459012	**FP-MW11-250610**	Water	06/10/25 11:35	06/12/25 09:40
10738459013	**FP-MW7-250610**	Water	06/10/25 12:25	06/12/25 09:40
10738459014	**FP-MW10-250610**	Water	06/10/25 12:45	06/12/25 09:40
10738459015	**FP-MW5-250610**	Water	06/10/25 14:45	06/12/25 09:40

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Paine Airfield WA
Pace Project No.: 10738459

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10738459001	**DUP-1-250609**	EPA 1633	NBH	65
10738459002	**FP-MW16-250609**	EPA 1633	NBH	65
10738459003	**FP-MW17-250609**	EPA 1633	NBH	65
10738459004	**FP-MW18-250609**	EPA 1633	NBH	65
10738459005	**FP-MW15-250609**	EPA 1633	NBH	65
10738459006	**FP-MW19-250609**	EPA 1633	NBH	65
10738459007	**FP-MW20-250609**	EPA 1633	NBH	65
10738459008	**RB-1-250609**	EPA 1633	NBH	65
10738459009	**FP-MW12-250610**	EPA 1633	NBH	65
10738459010	**FP-MW14-250610**	EPA 1633	NBH	65
10738459011	**FP-MW8-250610**	EPA 1633	CS4, NBH	65
10738459012	**FP-MW11-250610**	EPA 1633	NBH	65
10738459013	**FP-MW7-250610**	EPA 1633	NBH	65
10738459014	**FP-MW10-250610**	EPA 1633	NBH	65
10738459015	**FP-MW5-250610**	EPA 1633	NBH	65

PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: DUP-1-250609 **Lab ID: 10738459001** Collected: 06/09/25 06:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 17:54	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	757124-72-4	
5:3 FTCA	ND	ng/L	39.0	1	06/30/25 09:45	06/30/25 17:54	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	27619-97-2	
7:3 FTCA	ND	ng/L	39.0	1	06/30/25 09:45	06/30/25 17:54	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	4151-50-2	
NEtFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 17:54	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 17:54	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	31506-32-8	
NMeFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 17:54	24448-09-7	
PFBS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	335-76-2	
PFHxA	**16.9**	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	307-24-4	
PFBA	**6.8**	ng/L	6.2	1	06/30/25 09:45	06/30/25 17:54	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 17:54	113507-82-7	
PFHpS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 17:54	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 17:54	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	754-91-6	
PFPeA	**19.8**	ng/L	3.1	1	06/30/25 09:45	06/30/25 17:54	2706-90-3	
PFPeS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	307-55-1	
PFHpA	**14.3**	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	375-85-9	
PFHxS	**5.1**	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	355-46-4	
PFNA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	375-95-1	
PFOS	**1.9**	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	1763-23-1	
PFOA	**22.0**	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 17:54	2058-94-8	
Surrogates								
13C2-PFDoA (S)	70	%.	10-130	1	06/30/25 09:45	06/30/25 17:54		
13C3HFPO-DA (S)	76	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C3-PFBS (S)	68	%.	40-135	1	06/30/25 09:45	06/30/25 17:54		
13C3-PFHxS (S)	73	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C4-PFBA (S)	71	%.	5-130	1	06/30/25 09:45	06/30/25 17:54		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: DUP-1-250609 **Lab ID: 10738459001** Collected: 06/09/25 06:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	77	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C5-PFHxA (S)	74	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C5-PFPeA (S)	71	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C6-PFDA (S)	77	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C8-PFOA (S)	71	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C8-PFOS (S)	72	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C8-PFOSA (S)	61	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
13C9-PFNA (S)	74	%.	40-130	1	06/30/25 09:45	06/30/25 17:54		
d3-MeFOSAA (S)	93	%.	40-170	1	06/30/25 09:45	06/30/25 17:54		
d3-NMeFOSA (S)	52	%.	10-130	1	06/30/25 09:45	06/30/25 17:54		
d5-EtFOSAA (S)	95	%.	25-135	1	06/30/25 09:45	06/30/25 17:54		
d5-NEtFOSA (S)	52	%.	10-130	1	06/30/25 09:45	06/30/25 17:54		
d7-NMeFOSE (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 17:54		
d9-NEtFOSE (S)	44	%.	10-130	1	06/30/25 09:45	06/30/25 17:54		
13C2-PFTA (S)	66	%.	10-130	1	06/30/25 09:45	06/30/25 17:54		
13C7-PFUdA (S)	78	%.	30-130	1	06/30/25 09:45	06/30/25 17:54		
13C24:2FTS (S)	147	%.	40-200	1	06/30/25 09:45	06/30/25 17:54		
13C26:2FTS (S)	135	%.	40-200	1	06/30/25 09:45	06/30/25 17:54		
13C28:2FTS (S)	132	%.	40-300	1	06/30/25 09:45	06/30/25 17:54		
13C3-PFPrA (S)	23	%.	5-130	1	06/30/25 09:45	06/30/25 17:54		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW16-250609 **Lab ID: 10738459002** Collected: 06/09/25 12:45 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 18:05	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	757124-72-4	
5:3 FTCA	ND	ng/L	38.9	1	06/30/25 09:45	06/30/25 18:05	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	27619-97-2	
7:3 FTCA	ND	ng/L	38.9	1	06/30/25 09:45	06/30/25 18:05	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	4151-50-2	
NEtFOSE	ND	ng/L	15.5	1	06/30/25 09:45	06/30/25 18:05	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:05	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	31506-32-8	
NMeFOSE	ND	ng/L	15.5	1	06/30/25 09:45	06/30/25 18:05	24448-09-7	
PFBS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	335-76-2	
PFHxA	**16.2**	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	307-24-4	
PFBA	**6.4**	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:05	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:05	113507-82-7	
PFHpS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:05	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:05	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	754-91-6	
PFPeA	**19.3**	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:05	2706-90-3	
PFPeS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	307-55-1	
PFHpA	**13.6**	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	375-85-9	
PFHxS	**4.8**	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	355-46-4	
PFNA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	375-95-1	
PFOS	**2.2**	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	1763-23-1	
PFOA	**20.6**	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:05	2058-94-8	
Surrogates								
13C2-PFDoA (S)	90	%.	10-130	1	06/30/25 09:45	06/30/25 18:05		
13C3HFPO-DA (S)	100	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C3-PFBS (S)	93	%.	40-135	1	06/30/25 09:45	06/30/25 18:05		
13C3-PFHxS (S)	95	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C4-PFBA (S)	96	%.	5-130	1	06/30/25 09:45	06/30/25 18:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW16-250609 **Lab ID: 10738459002** Collected: 06/09/25 12:45 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	100	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C5-PFHxA (S)	98	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C5-PFPeA (S)	96	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C6-PFDA (S)	96	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C8-PFOA (S)	93	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C8-PFOS (S)	91	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C8-PFOSA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
13C9-PFNA (S)	99	%.	40-130	1	06/30/25 09:45	06/30/25 18:05		
d3-MeFOSAA (S)	122	%.	40-170	1	06/30/25 09:45	06/30/25 18:05		
d3-NMeFOSA (S)	63	%.	10-130	1	06/30/25 09:45	06/30/25 18:05		
d5-EtFOSAA (S)	118	%.	25-135	1	06/30/25 09:45	06/30/25 18:05		
d5-NEtFOSA (S)	62	%.	10-130	1	06/30/25 09:45	06/30/25 18:05		
d7-NMeFOSE (S)	60	%.	10-130	1	06/30/25 09:45	06/30/25 18:05		
d9-NEtFOSE (S)	47	%.	10-130	1	06/30/25 09:45	06/30/25 18:05		
13C2-PFTA (S)	75	%.	10-130	1	06/30/25 09:45	06/30/25 18:05		
13C7-PFUdA (S)	100	%.	30-130	1	06/30/25 09:45	06/30/25 18:05		
13C24:2FTS (S)	189	%.	40-200	1	06/30/25 09:45	06/30/25 18:05		
13C26:2FTS (S)	192	%.	40-200	1	06/30/25 09:45	06/30/25 18:05		
13C28:2FTS (S)	171	%.	40-300	1	06/30/25 09:45	06/30/25 18:05		
13C3-PFPrA (S)	26	%.	5-130	1	06/30/25 09:45	06/30/25 18:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW17-250609 **Lab ID: 10738459003** Collected: 06/09/25 13:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 18:15	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	757124-72-4	
5:3 FTCA	ND	ng/L	38.9	1	06/30/25 09:45	06/30/25 18:15	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	27619-97-2	
7:3 FTCA	ND	ng/L	38.9	1	06/30/25 09:45	06/30/25 18:15	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	4151-50-2	
NEtFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 18:15	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:15	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	31506-32-8	
NMeFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 18:15	24448-09-7	
PFBS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	335-76-2	
PFHxA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	307-24-4	
PFBA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:15	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:15	113507-82-7	
PFHpS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:15	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:15	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	754-91-6	
PFPeA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:15	2706-90-3	
PFPeS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	307-55-1	
PFHpA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	375-85-9	
PFHxS	**1.9**	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	355-46-4	
PFNA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	375-95-1	
PFOS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	1763-23-1	
PFOA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:15	2058-94-8	
Surrogates								
13C2-PFDoA (S)	60	%.	10-130	1	06/30/25 09:45	06/30/25 18:15		
13C3HFPO-DA (S)	87	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C3-PFBS (S)	79	%.	40-135	1	06/30/25 09:45	06/30/25 18:15		
13C3-PFHxS (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C4-PFBA (S)	84	%.	5-130	1	06/30/25 09:45	06/30/25 18:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW17-250609 **Lab ID: 10738459003** Collected: 06/09/25 13:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	87	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C5-PFHxA (S)	84	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C5-PFPeA (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C6-PFDA (S)	77	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C8-PFOA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C8-PFOS (S)	75	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C8-PFOSA (S)	61	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
13C9-PFNA (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 18:15		
d3-MeFOSAA (S)	90	%.	40-170	1	06/30/25 09:45	06/30/25 18:15		
d3-NMeFOSA (S)	42	%.	10-130	1	06/30/25 09:45	06/30/25 18:15		
d5-EtFOSAA (S)	86	%.	25-135	1	06/30/25 09:45	06/30/25 18:15		
d5-NEtFOSA (S)	41	%.	10-130	1	06/30/25 09:45	06/30/25 18:15		
d7-NMeFOSE (S)	48	%.	10-130	1	06/30/25 09:45	06/30/25 18:15		
d9-NEtFOSE (S)	47	%.	10-130	1	06/30/25 09:45	06/30/25 18:15		
13C2-PFTA (S)	57	%.	10-130	1	06/30/25 09:45	06/30/25 18:15		
13C7-PFUdA (S)	69	%.	30-130	1	06/30/25 09:45	06/30/25 18:15		
13C24:2FTS (S)	162	%.	40-200	1	06/30/25 09:45	06/30/25 18:15		
13C26:2FTS (S)	150	%.	40-200	1	06/30/25 09:45	06/30/25 18:15		
13C28:2FTS (S)	146	%.	40-300	1	06/30/25 09:45	06/30/25 18:15		
13C3-PFPrA (S)	36	%.	5-130	1	06/30/25 09:45	06/30/25 18:15		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW18-250609 **Lab ID: 10738459004** Collected: 06/09/25 14:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 18:25	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	757124-72-4	
5:3 FTCA	ND	ng/L	38.8	1	06/30/25 09:45	06/30/25 18:25	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	27619-97-2	
7:3 FTCA	ND	ng/L	38.8	1	06/30/25 09:45	06/30/25 18:25	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	4151-50-2	
NEtFOSE	ND	ng/L	15.5	1	06/30/25 09:45	06/30/25 18:25	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:25	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	31506-32-8	
NMeFOSE	ND	ng/L	15.5	1	06/30/25 09:45	06/30/25 18:25	24448-09-7	
PFBS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	335-76-2	
PFHxA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	307-24-4	
PFBA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:25	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:25	113507-82-7	
PFHpS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:25	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:25	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	754-91-6	
PFPeA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:25	2706-90-3	
PFPeS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	307-55-1	
PFHpA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	375-85-9	
PFHxS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	355-46-4	
PFNA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	375-95-1	
PFOS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	1763-23-1	
PFOA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 18:25	2058-94-8	
Surrogates								
13C2-PFDoA (S)	73	%.	10-130	1	06/30/25 09:45	06/30/25 18:25		
13C3HFPO-DA (S)	90	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C3-PFBS (S)	84	%.	40-135	1	06/30/25 09:45	06/30/25 18:25		
13C3-PFHxS (S)	88	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C4-PFBA (S)	87	%.	5-130	1	06/30/25 09:45	06/30/25 18:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW18-250609 **Lab ID: 10738459004** Collected: 06/09/25 14:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	88	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C5-PFHxA (S)	85	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C5-PFPeA (S)	84	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C6-PFDA (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C8-PFOA (S)	84	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C8-PFOS (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C8-PFOSA (S)	65	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
13C9-PFNA (S)	88	%.	40-130	1	06/30/25 09:45	06/30/25 18:25		
d3-MeFOSAA (S)	99	%.	40-170	1	06/30/25 09:45	06/30/25 18:25		
d3-NMeFOSA (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 18:25		
d5-EtFOSAA (S)	101	%.	25-135	1	06/30/25 09:45	06/30/25 18:25		
d5-NEtFOSA (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 18:25		
d7-NMeFOSE (S)	57	%.	10-130	1	06/30/25 09:45	06/30/25 18:25		
d9-NEtFOSE (S)	56	%.	10-130	1	06/30/25 09:45	06/30/25 18:25		
13C2-PFTA (S)	71	%.	10-130	1	06/30/25 09:45	06/30/25 18:25		
13C7-PFUdA (S)	79	%.	30-130	1	06/30/25 09:45	06/30/25 18:25		
13C24:2FTS (S)	161	%.	40-200	1	06/30/25 09:45	06/30/25 18:25		
13C26:2FTS (S)	175	%.	40-200	1	06/30/25 09:45	06/30/25 18:25		
13C28:2FTS (S)	158	%.	40-300	1	06/30/25 09:45	06/30/25 18:25		
13C3-PFPrA (S)	28	%.	5-130	1	06/30/25 09:45	06/30/25 18:25		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW15-250609 **Lab ID: 10738459005** Collected: 06/09/25 14:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	763051-92-9	
3:3 FTCA	ND	ng/L	15.8	1	06/30/25 09:45	06/30/25 18:35	356-02-5	
4:2 FTS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	757124-72-4	
5:3 FTCA	ND	ng/L	79.0	1	06/30/25 09:45	06/30/25 18:35	914637-49-3	
6:2 FTS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	27619-97-2	
7:3 FTCA	ND	ng/L	79.0	1	06/30/25 09:45	06/30/25 18:35	812-70-4	
8:2 FTS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	39108-34-4	
9Cl-PF3ONS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	756426-58-1	
ADONA	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	919005-14-4	
HFPO-DA	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	13252-13-6	
NEtFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	2991-50-6	
NEtFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	4151-50-2	
NEtFOSE	ND	ng/L	31.6	1	06/30/25 09:45	06/30/25 18:35	1691-99-2	
NFDHA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 18:35	151772-58-6	
NMeFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	2355-31-9	
NMeFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	31506-32-8	
NMeFOSE	ND	ng/L	31.6	1	06/30/25 09:45	06/30/25 18:35	24448-09-7	
PFBS	**4.3**	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	375-73-5	
PFDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	335-76-2	
PFHxA	**32.0**	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	307-24-4	
PFBA	**23.1**	ng/L	12.6	1	06/30/25 09:45	06/30/25 18:35	375-22-4	
PFDS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	335-77-3	
PFDoS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	79780-39-5	
PFEESA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 18:35	113507-82-7	
PFHpS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	375-92-8	
PFMBA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 18:35	863090-89-5	
PFMPA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 18:35	377-73-1	
PFNS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	68259-12-1	
PFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	754-91-6	
PFPeA	**74.4**	ng/L	6.3	1	06/30/25 09:45	06/30/25 18:35	2706-90-3	
PFPeS	**4.0**	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	2706-91-4	
PFDoA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	307-55-1	
PFHpA	**8.9**	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	375-85-9	
PFHxS	**47.4**	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	355-46-4	
PFNA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	375-95-1	
PFOS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	1763-23-1	
PFOA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	335-67-1	
PFTeDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	376-06-7	
PFTrDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	72629-94-8	
PFUnA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 18:35	2058-94-8	
Surrogates								
13C2-PFDoA (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 18:35		
13C3HFPO-DA (S)	60	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C3-PFBS (S)	56	%.	40-135	1	06/30/25 09:45	06/30/25 18:35		
13C3-PFHxS (S)	59	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C4-PFBA (S)	57	%.	5-130	1	06/30/25 09:45	06/30/25 18:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW15-250609 **Lab ID: 10738459005** Collected: 06/09/25 14:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	58	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C5-PFHxA (S)	55	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C5-PFPeA (S)	55	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C6-PFDA (S)	58	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C8-PFOA (S)	57	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C8-PFOS (S)	59	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C8-PFOSA (S)	50	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
13C9-PFNA (S)	59	%.	40-130	1	06/30/25 09:45	06/30/25 18:35		
d3-MeFOSAA (S)	75	%.	40-170	1	06/30/25 09:45	06/30/25 18:35		
d3-NMeFOSA (S)	39	%.	10-130	1	06/30/25 09:45	06/30/25 18:35		
d5-EtFOSAA (S)	76	%.	25-135	1	06/30/25 09:45	06/30/25 18:35		
d5-NEtFOSA (S)	41	%.	10-130	1	06/30/25 09:45	06/30/25 18:35		
d7-NMeFOSE (S)	49	%.	10-130	1	06/30/25 09:45	06/30/25 18:35		
d9-NEtFOSE (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 18:35		
13C2-PFTA (S)	60	%.	10-130	1	06/30/25 09:45	06/30/25 18:35		
13C7-PFUdA (S)	61	%.	30-130	1	06/30/25 09:45	06/30/25 18:35		
13C24:2FTS (S)	113	%.	40-200	1	06/30/25 09:45	06/30/25 18:35		
13C26:2FTS (S)	110	%.	40-200	1	06/30/25 09:45	06/30/25 18:35		
13C28:2FTS (S)	113	%.	40-300	1	06/30/25 09:45	06/30/25 18:35		
13C3-PFPrA (S)	32	%.	5-130	1	06/30/25 09:45	06/30/25 18:35		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW19-250609 **Lab ID: 10738459006** Collected: 06/09/25 15:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	763051-92-9	
3:3 FTCA	ND	ng/L	7.7	1	06/30/25 09:45	06/30/25 18:45	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	757124-72-4	
5:3 FTCA	ND	ng/L	38.7	1	06/30/25 09:45	06/30/25 18:45	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	27619-97-2	
7:3 FTCA	ND	ng/L	38.7	1	06/30/25 09:45	06/30/25 18:45	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	13252-13-6	
NEtFOSAA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	2991-50-6	
NEtFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	4151-50-2	
NEtFOSE	ND	ng/L	15.5	1	06/30/25 09:45	06/30/25 18:45	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:45	151772-58-6	
NMeFOSAA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	2355-31-9	
NMeFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	31506-32-8	
NMeFOSE	ND	ng/L	15.5	1	06/30/25 09:45	06/30/25 18:45	24448-09-7	
PFBS	**3.0**	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	375-73-5	
PFDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	335-76-2	
PFHxA	**5.8**	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	307-24-4	
PFBA	**8.1**	ng/L	6.2	1	06/30/25 09:45	06/30/25 18:45	375-22-4	
PFDS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	335-77-3	
PFDoS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:45	113507-82-7	
PFHpS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:45	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:45	377-73-1	
PFNS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	68259-12-1	
PFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	754-91-6	
PFPeA	**5.6**	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:45	2706-90-3	
PFPeS	**3.1**	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	2706-91-4	
PFDoA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	307-55-1	
PFHpA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	375-85-9	
PFHxS	**28.7**	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	355-46-4	
PFNA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	375-95-1	
PFOS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	1763-23-1	
PFOA	**1.7**	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	335-67-1	
PFTeDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	376-06-7	
PFTrDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	72629-94-8	
PFUnA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:45	2058-94-8	
Surrogates								
13C2-PFDoA (S)	80	%.	10-130	1	06/30/25 09:45	06/30/25 18:45		
13C3HFPO-DA (S)	104	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C3-PFBS (S)	93	%.	40-135	1	06/30/25 09:45	06/30/25 18:45		
13C3-PFHxS (S)	96	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C4-PFBA (S)	101	%.	5-130	1	06/30/25 09:45	06/30/25 18:45		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW19-250609 **Lab ID: 10738459006** Collected: 06/09/25 15:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	103	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C5-PFHxA (S)	99	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C5-PFPeA (S)	98	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C6-PFDA (S)	94	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C8-PFOA (S)	98	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C8-PFOS (S)	89	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C8-PFOSA (S)	81	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
13C9-PFNA (S)	100	%.	40-130	1	06/30/25 09:45	06/30/25 18:45		
d3-MeFOSAA (S)	112	%.	40-170	1	06/30/25 09:45	06/30/25 18:45		
d3-NMeFOSA (S)	53	%.	10-130	1	06/30/25 09:45	06/30/25 18:45		
d5-EtFOSAA (S)	113	%.	25-135	1	06/30/25 09:45	06/30/25 18:45		
d5-NEtFOSA (S)	53	%.	10-130	1	06/30/25 09:45	06/30/25 18:45		
d7-NMeFOSE (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 18:45		
d9-NEtFOSE (S)	57	%.	10-130	1	06/30/25 09:45	06/30/25 18:45		
13C2-PFTA (S)	75	%.	10-130	1	06/30/25 09:45	06/30/25 18:45		
13C7-PFUdA (S)	89	%.	30-130	1	06/30/25 09:45	06/30/25 18:45		
13C24:2FTS (S)	204	%.	40-200	1	06/30/25 09:45	06/30/25 18:45		S0
13C26:2FTS (S)	190	%.	40-200	1	06/30/25 09:45	06/30/25 18:45		
13C28:2FTS (S)	170	%.	40-300	1	06/30/25 09:45	06/30/25 18:45		
13C3-PFPrA (S)	20	%.	5-130	1	06/30/25 09:45	06/30/25 18:45		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW20-250609 **Lab ID: 10738459007** Collected: 06/09/25 15:15 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	763051-92-9	
3:3 FTCA	ND	ng/L	7.7	1	06/30/25 09:45	06/30/25 18:55	356-02-5	
4:2 FTS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	757124-72-4	
5:3 FTCA	ND	ng/L	38.4	1	06/30/25 09:45	06/30/25 18:55	914637-49-3	
6:2 FTS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	27619-97-2	
7:3 FTCA	ND	ng/L	38.4	1	06/30/25 09:45	06/30/25 18:55	812-70-4	
8:2 FTS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	756426-58-1	
ADONA	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	919005-14-4	
HFPO-DA	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	13252-13-6	
NEtFOSAA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	2991-50-6	
NEtFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	4151-50-2	
NEtFOSE	ND	ng/L	15.3	1	06/30/25 09:45	06/30/25 18:55	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:55	151772-58-6	
NMeFOSAA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	2355-31-9	
NMeFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	31506-32-8	
NMeFOSE	ND	ng/L	15.3	1	06/30/25 09:45	06/30/25 18:55	24448-09-7	
PFBS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	375-73-5	
PFDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	335-76-2	
PFHxA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	307-24-4	
PFBA	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 18:55	375-22-4	
PFDS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	335-77-3	
PFDoS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:55	113507-82-7	
PFHpS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:55	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:55	377-73-1	
PFNS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	68259-12-1	
PFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	754-91-6	
PFPeA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 18:55	2706-90-3	
PFPeS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	2706-91-4	
PFDoA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	307-55-1	
PFHpA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	375-85-9	
PFHxS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	355-46-4	
PFNA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	375-95-1	
PFOS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	1763-23-1	
PFOA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	335-67-1	
PFTeDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	376-06-7	
PFTrDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	72629-94-8	
PFUnA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 18:55	2058-94-8	
Surrogates								
13C2-PFDoA (S)	59	%.	10-130	1	06/30/25 09:45	06/30/25 18:55		
13C3HFPO-DA (S)	73	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C3-PFBS (S)	63	%.	40-135	1	06/30/25 09:45	06/30/25 18:55		
13C3-PFHxS (S)	70	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C4-PFBA (S)	65	%.	5-130	1	06/30/25 09:45	06/30/25 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW20-250609 **Lab ID: 10738459007** Collected: 06/09/25 15:15 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	75	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C5-PFHxA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C5-PFPeA (S)	67	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C6-PFDA (S)	70	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C8-PFOA (S)	73	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C8-PFOS (S)	67	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C8-PFOSA (S)	59	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
13C9-PFNA (S)	74	%.	40-130	1	06/30/25 09:45	06/30/25 18:55		
d3-MeFOSAA (S)	86	%.	40-170	1	06/30/25 09:45	06/30/25 18:55		
d3-NMeFOSA (S)	36	%.	10-130	1	06/30/25 09:45	06/30/25 18:55		
d5-EtFOSAA (S)	88	%.	25-135	1	06/30/25 09:45	06/30/25 18:55		
d5-NEtFOSA (S)	35	%.	10-130	1	06/30/25 09:45	06/30/25 18:55		
d7-NMeFOSE (S)	47	%.	10-130	1	06/30/25 09:45	06/30/25 18:55		
d9-NEtFOSE (S)	46	%.	10-130	1	06/30/25 09:45	06/30/25 18:55		
13C2-PFTA (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 18:55		
13C7-PFUdA (S)	66	%.	30-130	1	06/30/25 09:45	06/30/25 18:55		
13C24:2FTS (S)	138	%.	40-200	1	06/30/25 09:45	06/30/25 18:55		
13C26:2FTS (S)	146	%.	40-200	1	06/30/25 09:45	06/30/25 18:55		
13C28:2FTS (S)	137	%.	40-300	1	06/30/25 09:45	06/30/25 18:55		
13C3-PFPrA (S)	34	%.	5-130	1	06/30/25 09:45	06/30/25 18:55		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: RB-1-250609 **Lab ID: 10738459008** Collected: 06/09/25 11:40 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	763051-92-9	
3:3 FTCA	ND	ng/L	7.6	1	06/30/25 09:45	06/30/25 19:06	356-02-5	
4:2 FTS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	757124-72-4	
5:3 FTCA	ND	ng/L	37.8	1	06/30/25 09:45	06/30/25 19:06	914637-49-3	
6:2 FTS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	27619-97-2	
7:3 FTCA	ND	ng/L	37.8	1	06/30/25 09:45	06/30/25 19:06	812-70-4	
8:2 FTS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	756426-58-1	
ADONA	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	919005-14-4	
HFPO-DA	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	13252-13-6	
NEtFOSAA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	2991-50-6	
NEtFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	4151-50-2	
NEtFOSE	ND	ng/L	15.1	1	06/30/25 09:45	06/30/25 19:06	1691-99-2	
NFDHA	ND	ng/L	3.0	1	06/30/25 09:45	06/30/25 19:06	151772-58-6	
NMeFOSAA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	2355-31-9	
NMeFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	31506-32-8	
NMeFOSE	ND	ng/L	15.1	1	06/30/25 09:45	06/30/25 19:06	24448-09-7	
PFBS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	375-73-5	
PFDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	335-76-2	
PFHxA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	307-24-4	
PFBA	ND	ng/L	6.1	1	06/30/25 09:45	06/30/25 19:06	375-22-4	
PFDS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	335-77-3	
PFDoS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	79780-39-5	
PFEESA	ND	ng/L	3.0	1	06/30/25 09:45	06/30/25 19:06	113507-82-7	
PFHpS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	375-92-8	
PFMBA	ND	ng/L	3.0	1	06/30/25 09:45	06/30/25 19:06	863090-89-5	
PFMPA	ND	ng/L	3.0	1	06/30/25 09:45	06/30/25 19:06	377-73-1	
PFNS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	68259-12-1	
PFOSA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	754-91-6	
PFPeA	ND	ng/L	3.0	1	06/30/25 09:45	06/30/25 19:06	2706-90-3	
PFPeS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	2706-91-4	
PFDoA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	307-55-1	
PFHpA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	375-85-9	
PFHxS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	355-46-4	
PFNA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	375-95-1	
PFOS	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	1763-23-1	
PFOA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	335-67-1	
PFTeDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	376-06-7	
PFTrDA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	72629-94-8	
PFUnA	ND	ng/L	1.5	1	06/30/25 09:45	06/30/25 19:06	2058-94-8	
Surrogates								
13C2-PFDoA (S)	67	%.	10-130	1	06/30/25 09:45	06/30/25 19:06		
13C3HFPO-DA (S)	75	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C3-PFBS (S)	67	%.	40-135	1	06/30/25 09:45	06/30/25 19:06		
13C3-PFHxS (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C4-PFBA (S)	73	%.	5-130	1	06/30/25 09:45	06/30/25 19:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: RB-1-250609 **Lab ID: 10738459008** Collected: 06/09/25 11:40 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	75	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C5-PFHxA (S)	72	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C5-PFPeA (S)	71	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C6-PFDA (S)	68	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C8-PFOA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C8-PFOS (S)	68	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C8-PFOSA (S)	60	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
13C9-PFNA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 19:06		
d3-MeFOSAA (S)	97	%.	40-170	1	06/30/25 09:45	06/30/25 19:06		
d3-NMeFOSA (S)	49	%.	10-130	1	06/30/25 09:45	06/30/25 19:06		
d5-EtFOSAA (S)	98	%.	25-135	1	06/30/25 09:45	06/30/25 19:06		
d5-NEtFOSA (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 19:06		
d7-NMeFOSE (S)	57	%.	10-130	1	06/30/25 09:45	06/30/25 19:06		
d9-NEtFOSE (S)	56	%.	10-130	1	06/30/25 09:45	06/30/25 19:06		
13C2-PFTA (S)	65	%.	10-130	1	06/30/25 09:45	06/30/25 19:06		
13C7-PFUdA (S)	72	%.	30-130	1	06/30/25 09:45	06/30/25 19:06		
13C24:2FTS (S)	138	%.	40-200	1	06/30/25 09:45	06/30/25 19:06		
13C26:2FTS (S)	136	%.	40-200	1	06/30/25 09:45	06/30/25 19:06		
13C28:2FTS (S)	133	%.	40-300	1	06/30/25 09:45	06/30/25 19:06		
13C3-PFPrA (S)	92	%.	5-130	1	06/30/25 09:45	06/30/25 19:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW12-250610 **Lab ID: 10738459009** Collected: 06/10/25 10:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	763051-92-9	
3:3 FTCA	ND	ng/L	16.0	1	06/30/25 09:45	06/30/25 19:16	356-02-5	
4:2 FTS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	757124-72-4	
5:3 FTCA	ND	ng/L	79.9	1	06/30/25 09:45	06/30/25 19:16	914637-49-3	
6:2 FTS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	27619-97-2	
7:3 FTCA	ND	ng/L	79.9	1	06/30/25 09:45	06/30/25 19:16	812-70-4	
8:2 FTS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	39108-34-4	
9Cl-PF3ONS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	756426-58-1	
ADONA	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	919005-14-4	
HFPO-DA	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	13252-13-6	
NEtFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	2991-50-6	
NEtFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	4151-50-2	
NEtFOSE	ND	ng/L	32.0	1	06/30/25 09:45	06/30/25 19:16	1691-99-2	
NFDHA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:16	151772-58-6	
NMeFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	2355-31-9	
NMeFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	31506-32-8	
NMeFOSE	ND	ng/L	32.0	1	06/30/25 09:45	06/30/25 19:16	24448-09-7	
PFBS	**64.8**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	375-73-5	
PFDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	335-76-2	
PFHxA	**26.3**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	307-24-4	
PFBA	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 19:16	375-22-4	
PFDS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	335-77-3	
PFDoS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	79780-39-5	
PFEESA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:16	113507-82-7	
PFHpS	**9.2**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	375-92-8	
PFMBA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:16	863090-89-5	
PFMPA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:16	377-73-1	
PFNS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	68259-12-1	
PFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	754-91-6	
PFPeA	**7.9**	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:16	2706-90-3	
PFPeS	**79.4**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	2706-91-4	
PFDoA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	307-55-1	
PFHpA	**4.1**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	375-85-9	
PFHxS	**850**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	355-46-4	
PFNA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	375-95-1	
PFOS	**11.2**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	1763-23-1	
PFOA	**20.8**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	335-67-1	
PFTeDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	376-06-7	
PFTrDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	72629-94-8	
PFUnA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:16	2058-94-8	
Surrogates								
13C2-PFDoA (S)	57	%.	10-130	1	06/30/25 09:45	06/30/25 19:16		
13C3HFPO-DA (S)	74	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C3-PFBS (S)	74	%.	40-135	1	06/30/25 09:45	06/30/25 19:16		
13C3-PFHxS (S)	65	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C4-PFBA (S)	70	%.	5-130	1	06/30/25 09:45	06/30/25 19:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW12-250610 **Lab ID: 10738459009** Collected: 06/10/25 10:00 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	70	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C5-PFHxA (S)	68	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C5-PFPeA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C6-PFDA (S)	65	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C8-PFOA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C8-PFOS (S)	63	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C8-PFOSA (S)	54	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
13C9-PFNA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 19:16		
d3-MeFOSAA (S)	84	%.	40-170	1	06/30/25 09:45	06/30/25 19:16		
d3-NMeFOSA (S)	41	%.	10-130	1	06/30/25 09:45	06/30/25 19:16		
d5-EtFOSAA (S)	86	%.	25-135	1	06/30/25 09:45	06/30/25 19:16		
d5-NEtFOSA (S)	43	%.	10-130	1	06/30/25 09:45	06/30/25 19:16		
d7-NMeFOSE (S)	47	%.	10-130	1	06/30/25 09:45	06/30/25 19:16		
d9-NEtFOSE (S)	47	%.	10-130	1	06/30/25 09:45	06/30/25 19:16		
13C2-PFTA (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 19:16		
13C7-PFUdA (S)	64	%.	30-130	1	06/30/25 09:45	06/30/25 19:16		
13C24:2FTS (S)	148	%.	40-200	1	06/30/25 09:45	06/30/25 19:16		
13C26:2FTS (S)	146	%.	40-200	1	06/30/25 09:45	06/30/25 19:16		
13C28:2FTS (S)	146	%.	40-300	1	06/30/25 09:45	06/30/25 19:16		
13C3-PFPrA (S)	42	%.	5-130	1	06/30/25 09:45	06/30/25 19:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW14-250610 **Lab ID: 10738459010** Collected: 06/10/25 10:35 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	763051-92-9	
3:3 FTCA	ND	ng/L	15.9	1	06/30/25 09:45	06/30/25 19:26	356-02-5	
4:2 FTS	ND	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	757124-72-4	
5:3 FTCA	ND	ng/L	79.5	1	06/30/25 09:45	06/30/25 19:26	914637-49-3	
6:2 FTS	**1580**	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	27619-97-2	
7:3 FTCA	ND	ng/L	79.5	1	06/30/25 09:45	06/30/25 19:26	812-70-4	
8:2 FTS	ND	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	39108-34-4	
9Cl-PF3ONS	ND	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	756426-58-1	
ADONA	ND	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	919005-14-4	
HFPO-DA	ND	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	13252-13-6	
NEtFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	2991-50-6	
NEtFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	4151-50-2	
NEtFOSE	ND	ng/L	31.8	1	06/30/25 09:45	06/30/25 19:26	1691-99-2	
NFDHA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:26	151772-58-6	
NMeFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	2355-31-9	
NMeFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	31506-32-8	
NMeFOSE	ND	ng/L	31.8	1	06/30/25 09:45	06/30/25 19:26	24448-09-7	
PFBS	**29.0**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	375-73-5	
PFDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	335-76-2	
PFHxA	**193**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	307-24-4	
PFBA	**75.6**	ng/L	12.7	1	06/30/25 09:45	06/30/25 19:26	375-22-4	
PFDS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	335-77-3	
PFDoS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	79780-39-5	
PFEESA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:26	113507-82-7	
PFHpS	**3.5**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	375-92-8	
PFMBA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:26	863090-89-5	
PFMPA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:26	377-73-1	
PFNS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	68259-12-1	
PFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	754-91-6	
PFPeA	**341**	ng/L	6.4	1	06/30/25 09:45	06/30/25 19:26	2706-90-3	
PFPeS	**28.2**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	2706-91-4	
PFDoA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	307-55-1	
PFHpA	**115**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	375-85-9	
PFHxS	**277**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	355-46-4	
PFNA	**4.0**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	375-95-1	
PFOS	**316**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	1763-23-1	
PFOA	**122**	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	335-67-1	
PFTeDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	376-06-7	
PFTrDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	72629-94-8	
PFUnA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 19:26	2058-94-8	
Surrogates								
13C2-PFDoA (S)	70	%.	10-130	1	06/30/25 09:45	06/30/25 19:26		
13C3HFPO-DA (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C3-PFBS (S)	79	%.	40-135	1	06/30/25 09:45	06/30/25 19:26		
13C3-PFHxS (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C4-PFBA (S)	81	%.	5-130	1	06/30/25 09:45	06/30/25 19:26		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW14-250610 **Lab ID: 10738459010** Collected: 06/10/25 10:35 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	81	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C5-PFHxA (S)	78	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C5-PFPeA (S)	80	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C6-PFDA (S)	77	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C8-PFOA (S)	79	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C8-PFOS (S)	78	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C8-PFOSA (S)	68	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
13C9-PFNA (S)	83	%.	40-130	1	06/30/25 09:45	06/30/25 19:26		
d3-MeFOSAA (S)	97	%.	40-170	1	06/30/25 09:45	06/30/25 19:26		
d3-NMeFOSA (S)	46	%.	10-130	1	06/30/25 09:45	06/30/25 19:26		
d5-EtFOSAA (S)	95	%.	25-135	1	06/30/25 09:45	06/30/25 19:26		
d5-NEtFOSA (S)	46	%.	10-130	1	06/30/25 09:45	06/30/25 19:26		
d7-NMeFOSE (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 19:26		
d9-NEtFOSE (S)	56	%.	10-130	1	06/30/25 09:45	06/30/25 19:26		
13C2-PFTA (S)	70	%.	10-130	1	06/30/25 09:45	06/30/25 19:26		
13C7-PFUdA (S)	76	%.	30-130	1	06/30/25 09:45	06/30/25 19:26		
13C24:2FTS (S)	124	%.	40-200	1	06/30/25 09:45	06/30/25 19:26		
13C26:2FTS (S)	121	%.	40-200	1	06/30/25 09:45	06/30/25 19:26		
13C28:2FTS (S)	152	%.	40-300	1	06/30/25 09:45	06/30/25 19:26		
13C3-PFPrA (S)	40	%.	5-130	1	06/30/25 09:45	06/30/25 19:26		

Pace Analytical Services, LLC
1700 Elm Street
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ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW8-250610 **Lab ID: 10738459011** Collected: 06/10/25 10:50 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	763051-92-9	
3:3 FTCA	ND	ng/L	15.7	1	06/30/25 09:45	06/30/25 19:56	356-02-5	
4:2 FTS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	757124-72-4	
5:3 FTCA	ND	ng/L	78.6	1	06/30/25 09:45	06/30/25 19:56	914637-49-3	
6:2 FTS	**630**	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	27619-97-2	
7:3 FTCA	ND	ng/L	78.6	1	06/30/25 09:45	06/30/25 19:56	812-70-4	
8:2 FTS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	39108-34-4	
9Cl-PF3ONS	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	756426-58-1	
ADONA	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	919005-14-4	
HFPO-DA	ND	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	13252-13-6	
NEtFOSAA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	2991-50-6	
NEtFOSA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	4151-50-2	
NEtFOSE	ND	ng/L	31.5	1	06/30/25 09:45	06/30/25 19:56	1691-99-2	
NFDHA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 19:56	151772-58-6	
NMeFOSAA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	2355-31-9	
NMeFOSA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	31506-32-8	
NMeFOSE	ND	ng/L	31.5	1	06/30/25 09:45	06/30/25 19:56	24448-09-7	
PFBS	**124**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	375-73-5	
PFDA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	335-76-2	
PFHxA	**506**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	307-24-4	
PFBA	**179**	ng/L	12.6	1	06/30/25 09:45	06/30/25 19:56	375-22-4	
PFDS	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	335-77-3	
PFDoS	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	79780-39-5	
PFEESA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 19:56	113507-82-7	
PFHpS	**30.8**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	375-92-8	
PFMBA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 19:56	863090-89-5	
PFMPA	ND	ng/L	6.3	1	06/30/25 09:45	06/30/25 19:56	377-73-1	
PFNS	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	68259-12-1	
PFOSA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	754-91-6	
PFPeA	**832**	ng/L	6.3	1	06/30/25 09:45	06/30/25 19:56	2706-90-3	
PFPeS	**192**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	2706-91-4	
PFDoA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	307-55-1	
PFHpA	**237**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	375-85-9	
PFHxS	**879**	ng/L	31.5	10	06/30/25 09:45	07/02/25 15:20	355-46-4	
PFNA	**11.5**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	375-95-1	
PFOS	**301**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	1763-23-1	
PFOA	**187**	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	335-67-1	
PFTeDA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	376-06-7	
PFTrDA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	72629-94-8	
PFUnA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 19:56	2058-94-8	
Surrogates								
13C2-PFDoA (S)	74	%.	10-130	1	06/30/25 09:45	06/30/25 19:56		
13C3HFPO-DA (S)	90	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C3-PFBS (S)	88	%.	40-135	1	06/30/25 09:45	06/30/25 19:56		
13C3-PFHxS (S)	80	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C4-PFBA (S)	84	%.	5-130	1	06/30/25 09:45	06/30/25 19:56		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW8-250610 **Lab ID: 10738459011** Collected: 06/10/25 10:50 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	87	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C5-PFHxA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C5-PFPeA (S)	80	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C6-PFDA (S)	80	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C8-PFOA (S)	81	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C8-PFOS (S)	79	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C8-PFOSA (S)	71	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
13C9-PFNA (S)	85	%.	40-130	1	06/30/25 09:45	06/30/25 19:56		
d3-MeFOSAA (S)	102	%.	40-170	1	06/30/25 09:45	06/30/25 19:56		
d3-NMeFOSA (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 19:56		
d5-EtFOSAA (S)	107	%.	25-135	1	06/30/25 09:45	06/30/25 19:56		
d5-NEtFOSA (S)	51	%.	10-130	1	06/30/25 09:45	06/30/25 19:56		
d7-NMeFOSE (S)	63	%.	10-130	1	06/30/25 09:45	06/30/25 19:56		
d9-NEtFOSE (S)	62	%.	10-130	1	06/30/25 09:45	06/30/25 19:56		
13C2-PFTA (S)	76	%.	10-130	1	06/30/25 09:45	06/30/25 19:56		
13C7-PFUdA (S)	80	%.	30-130	1	06/30/25 09:45	06/30/25 19:56		
13C24:2FTS (S)	190	%.	40-200	1	06/30/25 09:45	06/30/25 19:56		
13C26:2FTS (S)	154	%.	40-200	1	06/30/25 09:45	06/30/25 19:56		
13C28:2FTS (S)	185	%.	40-300	1	06/30/25 09:45	06/30/25 19:56		
13C3-PFPrA (S)	42	%.	5-130	1	06/30/25 09:45	06/30/25 19:56		

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ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW11-250610 **Lab ID: 10738459012** Collected: 06/10/25 11:35 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 20:07	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	757124-72-4	
5:3 FTCA	ND	ng/L	38.9	1	06/30/25 09:45	06/30/25 20:07	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	27619-97-2	
7:3 FTCA	ND	ng/L	38.9	1	06/30/25 09:45	06/30/25 20:07	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	4151-50-2	
NEtFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 20:07	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:07	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	31506-32-8	
NMeFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 20:07	24448-09-7	
PFBS	**26.6**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	335-76-2	
PFHxA	**26.1**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	307-24-4	
PFBA	**9.3**	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:07	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:07	113507-82-7	
PFHpS	**3.0**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:07	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:07	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	754-91-6	
PFPeA	**22.1**	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:07	2706-90-3	
PFPeS	**39.7**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	307-55-1	
PFHpA	**7.8**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	375-85-9	
PFHxS	**265**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	355-46-4	
PFNA	**3.7**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	375-95-1	
PFOS	**303**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	1763-23-1	
PFOA	**18.7**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:07	2058-94-8	
Surrogates								
13C2-PFDoA (S)	72	%.	10-130	1	06/30/25 09:45	06/30/25 20:07		
13C3HFPO-DA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C3-PFBS (S)	80	%.	40-135	1	06/30/25 09:45	06/30/25 20:07		
13C3-PFHxS (S)	78	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C4-PFBA (S)	80	%.	5-130	1	06/30/25 09:45	06/30/25 20:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW11-250610 **Lab ID: 10738459012** Collected: 06/10/25 11:35 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	81	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C5-PFHxA (S)	79	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C5-PFPeA (S)	78	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C6-PFDA (S)	77	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C8-PFOA (S)	78	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C8-PFOS (S)	76	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C8-PFOSA (S)	64	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
13C9-PFNA (S)	78	%.	40-130	1	06/30/25 09:45	06/30/25 20:07		
d3-MeFOSAA (S)	107	%.	40-170	1	06/30/25 09:45	06/30/25 20:07		
d3-NMeFOSA (S)	50	%.	10-130	1	06/30/25 09:45	06/30/25 20:07		
d5-EtFOSAA (S)	116	%.	25-135	1	06/30/25 09:45	06/30/25 20:07		
d5-NEtFOSA (S)	51	%.	10-130	1	06/30/25 09:45	06/30/25 20:07		
d7-NMeFOSE (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 20:07		
d9-NEtFOSE (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 20:07		
13C2-PFTA (S)	64	%.	10-130	1	06/30/25 09:45	06/30/25 20:07		
13C7-PFUdA (S)	78	%.	30-130	1	06/30/25 09:45	06/30/25 20:07		
13C24:2FTS (S)	168	%.	40-200	1	06/30/25 09:45	06/30/25 20:07		
13C26:2FTS (S)	198	%.	40-200	1	06/30/25 09:45	06/30/25 20:07		
13C28:2FTS (S)	177	%.	40-300	1	06/30/25 09:45	06/30/25 20:07		
13C3-PFPrA (S)	52	%.	5-130	1	06/30/25 09:45	06/30/25 20:07		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW7-250610 **Lab ID: 10738459013** Collected: 06/10/25 12:25 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 20:17	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	757124-72-4	
5:3 FTCA	ND	ng/L	39.0	1	06/30/25 09:45	06/30/25 20:17	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	27619-97-2	
7:3 FTCA	ND	ng/L	39.0	1	06/30/25 09:45	06/30/25 20:17	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	4151-50-2	
NEtFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 20:17	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:17	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	31506-32-8	
NMeFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 20:17	24448-09-7	
PFBS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	335-76-2	
PFHxA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	307-24-4	
PFBA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:17	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:17	113507-82-7	
PFHpS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:17	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:17	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	754-91-6	
PFPeA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:17	2706-90-3	
PFPeS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	307-55-1	
PFHpA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	375-85-9	
PFHxS	**1.9**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	355-46-4	
PFNA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	375-95-1	
PFOS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	1763-23-1	
PFOA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:17	2058-94-8	
Surrogates								
13C2-PFDoA (S)	77	%.	10-130	1	06/30/25 09:45	06/30/25 20:17		
13C3HFPO-DA (S)	86	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C3-PFBS (S)	79	%.	40-135	1	06/30/25 09:45	06/30/25 20:17		
13C3-PFHxS (S)	86	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C4-PFBA (S)	84	%.	5-130	1	06/30/25 09:45	06/30/25 20:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW7-250610 **Lab ID: 10738459013** Collected: 06/10/25 12:25 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	85	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C5-PFHxA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C5-PFPeA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C6-PFDA (S)	82	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C8-PFOA (S)	85	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C8-PFOS (S)	79	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C8-PFOSA (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
13C9-PFNA (S)	85	%.	40-130	1	06/30/25 09:45	06/30/25 20:17		
d3-MeFOSAA (S)	111	%.	40-170	1	06/30/25 09:45	06/30/25 20:17		
d3-NMeFOSA (S)	52	%.	10-130	1	06/30/25 09:45	06/30/25 20:17		
d5-EtFOSAA (S)	111	%.	25-135	1	06/30/25 09:45	06/30/25 20:17		
d5-NEtFOSA (S)	54	%.	10-130	1	06/30/25 09:45	06/30/25 20:17		
d7-NMeFOSE (S)	60	%.	10-130	1	06/30/25 09:45	06/30/25 20:17		
d9-NEtFOSE (S)	59	%.	10-130	1	06/30/25 09:45	06/30/25 20:17		
13C2-PFTA (S)	74	%.	10-130	1	06/30/25 09:45	06/30/25 20:17		
13C7-PFUdA (S)	82	%.	30-130	1	06/30/25 09:45	06/30/25 20:17		
13C24:2FTS (S)	168	%.	40-200	1	06/30/25 09:45	06/30/25 20:17		
13C26:2FTS (S)	160	%.	40-200	1	06/30/25 09:45	06/30/25 20:17		
13C28:2FTS (S)	163	%.	40-300	1	06/30/25 09:45	06/30/25 20:17		
13C3-PFPrA (S)	34	%.	5-130	1	06/30/25 09:45	06/30/25 20:17		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW10-250610 **Lab ID: 10738459014** Collected: 06/10/25 12:45 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	763051-92-9	
3:3 FTCA	ND	ng/L	16.0	1	06/30/25 09:45	06/30/25 20:27	356-02-5	
4:2 FTS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	757124-72-4	
5:3 FTCA	ND	ng/L	80.2	1	06/30/25 09:45	06/30/25 20:27	914637-49-3	
6:2 FTS	**849**	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	27619-97-2	
7:3 FTCA	ND	ng/L	80.2	1	06/30/25 09:45	06/30/25 20:27	812-70-4	
8:2 FTS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	39108-34-4	
9Cl-PF3ONS	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	756426-58-1	
ADONA	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	919005-14-4	
HFPO-DA	ND	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	13252-13-6	
NEtFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	2991-50-6	
NEtFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	4151-50-2	
NEtFOSE	ND	ng/L	32.1	1	06/30/25 09:45	06/30/25 20:27	1691-99-2	
NFDHA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 20:27	151772-58-6	
NMeFOSAA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	2355-31-9	
NMeFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	31506-32-8	
NMeFOSE	ND	ng/L	32.1	1	06/30/25 09:45	06/30/25 20:27	24448-09-7	
PFBS	**46.5**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	375-73-5	
PFDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	335-76-2	
PFHxA	**158**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	307-24-4	
PFBA	**69.5**	ng/L	12.8	1	06/30/25 09:45	06/30/25 20:27	375-22-4	
PFDS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	335-77-3	
PFDoS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	79780-39-5	
PFEESA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 20:27	113507-82-7	
PFHpS	**8.3**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	375-92-8	
PFMBA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 20:27	863090-89-5	
PFMPA	ND	ng/L	6.4	1	06/30/25 09:45	06/30/25 20:27	377-73-1	
PFNS	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	68259-12-1	
PFOSA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	754-91-6	
PFPeA	**267**	ng/L	6.4	1	06/30/25 09:45	06/30/25 20:27	2706-90-3	
PFPeS	**56.3**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	2706-91-4	
PFDoA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	307-55-1	
PFHpA	**103**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	375-85-9	
PFHxS	**469**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	355-46-4	
PFNA	**6.7**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	375-95-1	
PFOS	**357**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	1763-23-1	
PFOA	**131**	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	335-67-1	
PFTeDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	376-06-7	
PFTrDA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	72629-94-8	
PFUnA	ND	ng/L	3.2	1	06/30/25 09:45	06/30/25 20:27	2058-94-8	
Surrogates								
13C2-PFDoA (S)	70	%.	10-130	1	06/30/25 09:45	06/30/25 20:27		
13C3HFPO-DA (S)	71	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C3-PFBS (S)	70	%.	40-135	1	06/30/25 09:45	06/30/25 20:27		
13C3-PFHxS (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C4-PFBA (S)	67	%.	5-130	1	06/30/25 09:45	06/30/25 20:27		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW10-250610 **Lab ID: 10738459014** Collected: 06/10/25 12:45 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	72	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C5-PFHxA (S)	67	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C5-PFPeA (S)	66	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C6-PFDA (S)	72	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C8-PFOA (S)	67	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C8-PFOS (S)	69	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C8-PFOSA (S)	64	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
13C9-PFNA (S)	70	%.	40-130	1	06/30/25 09:45	06/30/25 20:27		
d3-MeFOSAA (S)	95	%.	40-170	1	06/30/25 09:45	06/30/25 20:27		
d3-NMeFOSA (S)	46	%.	10-130	1	06/30/25 09:45	06/30/25 20:27		
d5-EtFOSAA (S)	99	%.	25-135	1	06/30/25 09:45	06/30/25 20:27		
d5-NEtFOSA (S)	48	%.	10-130	1	06/30/25 09:45	06/30/25 20:27		
d7-NMeFOSE (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 20:27		
d9-NEtFOSE (S)	59	%.	10-130	1	06/30/25 09:45	06/30/25 20:27		
13C2-PFTA (S)	71	%.	10-130	1	06/30/25 09:45	06/30/25 20:27		
13C7-PFUdA (S)	74	%.	30-130	1	06/30/25 09:45	06/30/25 20:27		
13C24:2FTS (S)	150	%.	40-200	1	06/30/25 09:45	06/30/25 20:27		
13C26:2FTS (S)	130	%.	40-200	1	06/30/25 09:45	06/30/25 20:27		
13C28:2FTS (S)	147	%.	40-300	1	06/30/25 09:45	06/30/25 20:27		
13C3-PFPrA (S)	37	%.	5-130	1	06/30/25 09:45	06/30/25 20:27		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW5-250610 **Lab ID: 10738459015** Collected: 06/10/25 14:45 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	763051-92-9	
3:3 FTCA	ND	ng/L	7.8	1	06/30/25 09:45	06/30/25 20:37	356-02-5	
4:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	757124-72-4	
5:3 FTCA	ND	ng/L	39.0	1	06/30/25 09:45	06/30/25 20:37	914637-49-3	
6:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	27619-97-2	
7:3 FTCA	ND	ng/L	39.0	1	06/30/25 09:45	06/30/25 20:37	812-70-4	
8:2 FTS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	39108-34-4	
9Cl-PF3ONS	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	756426-58-1	
ADONA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	919005-14-4	
HFPO-DA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	13252-13-6	
NEtFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	2991-50-6	
NEtFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	4151-50-2	
NEtFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 20:37	1691-99-2	
NFDHA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:37	151772-58-6	
NMeFOSAA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	2355-31-9	
NMeFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	31506-32-8	
NMeFOSE	ND	ng/L	15.6	1	06/30/25 09:45	06/30/25 20:37	24448-09-7	
PFBS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	375-73-5	
PFDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	335-76-2	
PFHxA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	307-24-4	
PFBA	ND	ng/L	6.2	1	06/30/25 09:45	06/30/25 20:37	375-22-4	
PFDS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	335-77-3	
PFDoS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	79780-39-5	
PFEESA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:37	113507-82-7	
PFHpS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	375-92-8	
PFMBA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:37	863090-89-5	
PFMPA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:37	377-73-1	
PFNS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	68259-12-1	
PFOSA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	754-91-6	
PFPeA	ND	ng/L	3.1	1	06/30/25 09:45	06/30/25 20:37	2706-90-3	
PFPeS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	2706-91-4	
PFDoA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	307-55-1	
PFHpA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	375-85-9	
PFHxS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	355-46-4	
PFNA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	375-95-1	
PFOS	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	1763-23-1	
PFOA	**1.6**	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	335-67-1	
PFTeDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	376-06-7	
PFTrDA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	72629-94-8	
PFUnA	ND	ng/L	1.6	1	06/30/25 09:45	06/30/25 20:37	2058-94-8	
Surrogates								
13C2-PFDoA (S)	77	%.	10-130	1	06/30/25 09:45	06/30/25 20:37		
13C3HFPO-DA (S)	98	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C3-PFBS (S)	87	%.	40-135	1	06/30/25 09:45	06/30/25 20:37		
13C3-PFHxS (S)	91	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C4-PFBA (S)	92	%.	5-130	1	06/30/25 09:45	06/30/25 20:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Paine Airfield WA
Pace Project No.: 10738459

Sample: FP-MW5-250610 **Lab ID: 10738459015** Collected: 06/10/25 14:45 Received: 06/12/25 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	94	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C5-PFHxA (S)	92	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C5-PFPeA (S)	92	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C6-PFDA (S)	90	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C8-PFOA (S)	88	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C8-PFOS (S)	87	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C8-PFOSA (S)	75	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
13C9-PFNA (S)	94	%.	40-130	1	06/30/25 09:45	06/30/25 20:37		
d3-MeFOSAA (S)	122	%.	40-170	1	06/30/25 09:45	06/30/25 20:37		
d3-NMeFOSA (S)	52	%.	10-130	1	06/30/25 09:45	06/30/25 20:37		
d5-EtFOSAA (S)	120	%.	25-135	1	06/30/25 09:45	06/30/25 20:37		
d5-NEtFOSA (S)	52	%.	10-130	1	06/30/25 09:45	06/30/25 20:37		
d7-NMeFOSE (S)	58	%.	10-130	1	06/30/25 09:45	06/30/25 20:37		
d9-NEtFOSE (S)	57	%.	10-130	1	06/30/25 09:45	06/30/25 20:37		
13C2-PFTA (S)	72	%.	10-130	1	06/30/25 09:45	06/30/25 20:37		
13C7-PFUdA (S)	87	%.	30-130	1	06/30/25 09:45	06/30/25 20:37		
13C24:2FTS (S)	176	%.	40-200	1	06/30/25 09:45	06/30/25 20:37		
13C26:2FTS (S)	176	%.	40-200	1	06/30/25 09:45	06/30/25 20:37		
13C28:2FTS (S)	183	%.	40-300	1	06/30/25 09:45	06/30/25 20:37		
13C3-PFPrA (S)	53	%.	5-130	1	06/30/25 09:45	06/30/25 20:37		

Pace Analytical Services, LLC
1700 Elm Street
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(612)607-1700

QUALITY CONTROL DATA

Project: Paine Airfield WA
Pace Project No.: 10738459

QC Batch: 1015487
QC Batch Method: EPA 1633
Analysis Method: EPA 1633
Analysis Description: EPA 1633F Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738459001, 10738459002, 10738459003, 10738459004, 10738459005, 10738459006, 10738459007, 10738459008, 10738459009, 10738459010, 10738459011, 10738459012, 10738459013, 10738459014, 10738459015

METHOD BLANK: 5294358
Matrix: Water
Associated Lab Samples: 10738459001, 10738459002, 10738459003, 10738459004, 10738459005, 10738459006, 10738459007, 10738459008, 10738459009, 10738459010, 10738459011, 10738459012, 10738459013, 10738459014, 10738459015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ng/L	ND	6.4	06/30/25 17:24	
3:3 FTCA	ng/L	ND	8.0	06/30/25 17:24	
4:2 FTS	ng/L	ND	6.4	06/30/25 17:24	
5:3 FTCA	ng/L	ND	40.0	06/30/25 17:24	
6:2 FTS	ng/L	ND	6.4	06/30/25 17:24	
7:3 FTCA	ng/L	ND	40.0	06/30/25 17:24	
8:2 FTS	ng/L	ND	6.4	06/30/25 17:24	
9Cl-PF3ONS	ng/L	ND	6.4	06/30/25 17:24	
ADONA	ng/L	ND	6.4	06/30/25 17:24	
HFPO-DA	ng/L	ND	6.4	06/30/25 17:24	
NEtFOSA	ng/L	ND	1.6	06/30/25 17:24	
NEtFOSAA	ng/L	ND	1.6	06/30/25 17:24	
NEtFOSE	ng/L	ND	16.0	06/30/25 17:24	
NFDHA	ng/L	ND	3.2	06/30/25 17:24	
NMeFOSA	ng/L	ND	1.6	06/30/25 17:24	
NMeFOSAA	ng/L	ND	1.6	06/30/25 17:24	
NMeFOSE	ng/L	ND	16.0	06/30/25 17:24	
PFBA	ng/L	ND	6.4	06/30/25 17:24	
PFBS	ng/L	ND	1.6	06/30/25 17:24	
PFDA	ng/L	ND	1.6	06/30/25 17:24	
PFDoA	ng/L	ND	1.6	06/30/25 17:24	
PFDoS	ng/L	ND	1.6	06/30/25 17:24	
PFDS	ng/L	ND	1.6	06/30/25 17:24	
PFEESA	ng/L	ND	3.2	06/30/25 17:24	
PFHpA	ng/L	ND	1.6	06/30/25 17:24	
PFHpS	ng/L	ND	1.6	06/30/25 17:24	
PFHxA	ng/L	ND	1.6	06/30/25 17:24	
PFHxS	ng/L	ND	1.6	06/30/25 17:24	
PFMBA	ng/L	ND	3.2	06/30/25 17:24	
PFMPA	ng/L	ND	3.2	06/30/25 17:24	
PFNA	ng/L	ND	1.6	06/30/25 17:24	
PFNS	ng/L	ND	1.6	06/30/25 17:24	
PFOA	ng/L	ND	1.6	06/30/25 17:24	
PFOS	ng/L	ND	1.6	06/30/25 17:24	
PFOSA	ng/L	ND	1.6	06/30/25 17:24	
PFPeA	ng/L	ND	3.2	06/30/25 17:24	
PFPeS	ng/L	ND	1.6	06/30/25 17:24	

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REPORT OF LABORATORY ANALYSIS

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Paine Airfield WA
Pace Project No.: 10738459

METHOD BLANK: 5294358 Matrix: Water

Associated Lab Samples: 10738459001, 10738459002, 10738459003, 10738459004, 10738459005, 10738459006, 10738459007, 10738459008, 10738459009, 10738459010, 10738459011, 10738459012, 10738459013, 10738459014, 10738459015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PFTeDA	ng/L	ND	1.6	06/30/25 17:24	
PFTrDA	ng/L	ND	1.6	06/30/25 17:24	
PFUnA	ng/L	ND	1.6	06/30/25 17:24	
13C2-PFDoA (S)	%.	80	10-130	06/30/25 17:24	
13C2-PFTA (S)	%.	82	10-130	06/30/25 17:24	
13C24:2FTS (S)	%.	136	40-200	06/30/25 17:24	
13C26:2FTS (S)	%.	127	40-200	06/30/25 17:24	
13C28:2FTS (S)	%.	129	40-300	06/30/25 17:24	
13C3-PFBS (S)	%.	77	40-135	06/30/25 17:24	
13C3-PFHxS (S)	%.	82	40-130	06/30/25 17:24	
13C3-PFPrA (S)	%.	75	5-130	06/30/25 17:24	
13C3HFPO-DA (S)	%.	80	40-130	06/30/25 17:24	
13C4-PFBA (S)	%.	76	5-130	06/30/25 17:24	
13C4-PFHpA (S)	%.	80	40-130	06/30/25 17:24	
13C5-PFHxA (S)	%.	76	40-130	06/30/25 17:24	
13C5-PFPeA (S)	%.	76	40-130	06/30/25 17:24	
13C6-PFDA (S)	%.	79	40-130	06/30/25 17:24	
13C7-PFUdA (S)	%.	82	30-130	06/30/25 17:24	
13C8-PFOA (S)	%.	73	40-130	06/30/25 17:24	
13C8-PFOS (S)	%.	77	40-130	06/30/25 17:24	
13C8-PFOSA (S)	%.	69	40-130	06/30/25 17:24	
13C9-PFNA (S)	%.	81	40-130	06/30/25 17:24	
d3-MeFOSAA (S)	%.	101	40-170	06/30/25 17:24	
d3-NMeFOSA (S)	%.	60	10-130	06/30/25 17:24	
d5-EtFOSAA (S)	%.	103	25-135	06/30/25 17:24	
d5-NEtFOSA (S)	%.	62	10-130	06/30/25 17:24	
d7-NMeFOSE (S)	%.	70	10-130	06/30/25 17:24	
d9-NEtFOSE (S)	%.	72	10-130	06/30/25 17:24	

LABORATORY CONTROL SAMPLE: 5294359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	75.2	63.4	84	55-160	
3:3 FTCA	ng/L	99.2	80.7	81	65-130	
4:2 FTS	ng/L	75.2	66.6	89	70-145	
5:3 FTCA	ng/L	496	413	83	70-135	
6:2 FTS	ng/L	76.8	71.3	93	65-155	
7:3 FTCA	ng/L	496	378	76	50-145	
8:2 FTS	ng/L	76.8	73.0	95	60-150	
9Cl-PF3ONS	ng/L	75.2	64.7	86	70-155	
ADONA	ng/L	75.2	67.2	89	65-145	
HFPO-DA	ng/L	80	68.1	85	70-140	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Paine Airfield WA
Pace Project No.: 10738459

LABORATORY CONTROL SAMPLE: 5294359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSA	ng/L	19.2	16.5	86	65-145	
NEtFOSAA	ng/L	19.2	16.6	87	70-145	
NEtFOSE	ng/L	192	172	90	70-135	
NFDHA	ng/L	40	36.8	92	50-150	
NMeFOSA	ng/L	19.2	17.0	89	60-150	
NMeFOSAA	ng/L	19.2	17.9	93	50-140	
NMeFOSE	ng/L	192	169	88	70-145	
PFBA	ng/L	80	69.3	87	70-140	
PFBS	ng/L	17.6	15.2	87	60-145	
PFDA	ng/L	19.2	16.9	88	70-140	
PFDoA	ng/L	19.2	17.6	92	70-140	
PFDoS	ng/L	19.2	15.6	81	50-145	
PFDS	ng/L	19.2	16.2	84	60-145	
PFEESA	ng/L	35.2	30.6	87	70-140	
PFHpA	ng/L	19.2	16.5	86	70-150	
PFHpS	ng/L	19.2	15.9	83	70-150	
PFHxA	ng/L	19.2	17.1	89	70-145	
PFHxS	ng/L	17.6	15.2	86	65-145	
PFMBA	ng/L	40	34.1	85	60-150	
PFMPA	ng/L	40	33.8	85	55-140	
PFNA	ng/L	19.2	16.8	87	70-150	
PFNS	ng/L	19.2	16.4	85	65-145	
PFOA	ng/L	19.2	16.3	85	70-150	
PFOS	ng/L	19.2	14.9	78	55-150	
PFOSA	ng/L	19.2	16.9	88	70-145	
PFPeA	ng/L	40	34.1	85	65-135	
PFPeS	ng/L	19.2	16.3	85	65-140	
PFTeDA	ng/L	19.2	17.6	92	60-140	
PFTrDA	ng/L	19.2	17.9	93	65-140	
PFUnA	ng/L	19.2	16.8	87	70-145	
13C2-PFDoA (S)	%.			85	10-130	
13C2-PFTA (S)	%.			84	10-130	
13C24:2FTS (S)	%.			158	40-200	
13C26:2FTS (S)	%.			134	40-200	
13C28:2FTS (S)	%.			148	40-300	
13C3-PFBS (S)	%.			86	40-135	
13C3-PFHxS (S)	%.			89	40-130	
13C3-PFPrA (S)	%.			103	5-130	
13C3HFPO-DA (S)	%.			97	40-130	
13C4-PFBA (S)	%.			95	5-130	
13C4-PFHpA (S)	%.			97	40-130	
13C5-PFHxA (S)	%.			92	40-130	
13C5-PFPeA (S)	%.			93	40-130	
13C6-PFDA (S)	%.			90	40-130	
13C7-PFUdA (S)	%.			91	30-130	
13C8-PFOA (S)	%.			89	40-130	
13C8-PFOS (S)	%.			89	40-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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QUALITY CONTROL DATA

Project: Paine Airfield WA
Pace Project No.: 10738459

LABORATORY CONTROL SAMPLE: 5294359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOSA (S)	%.			80	40-130	
13C9-PFNA (S)	%.			92	40-130	
d3-MeFOSAA (S)	%.			115	40-170	
d3-NMeFOSA (S)	%.			68	10-130	
d5-EtFOSAA (S)	%.			122	25-135	
d5-NEtFOSA (S)	%.			71	10-130	
d7-NMeFOSE (S)	%.			77	10-130	
d9-NEtFOSE (S)	%.			77	10-130	

LABORATORY CONTROL SAMPLE: 5294360

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	12	9.8	81	55-160	
3:3 FTCA	ng/L	15.9	12.1	76	65-130	
4:2 FTS	ng/L	12	9.6	80	70-145	
5:3 FTCA	ng/L	79.4	59.9	75	70-135	
6:2 FTS	ng/L	12.3	9.9	81	65-155	
7:3 FTCA	ng/L	79.4	56.4	71	50-145	
8:2 FTS	ng/L	12.3	10.7	87	60-150	
9Cl-PF3ONS	ng/L	12	9.5	79	70-155	
ADONA	ng/L	12	10.1	84	65-145	
HFPO-DA	ng/L	12.8	10.2	80	70-140	
NEtFOSA	ng/L	3.1	2.5	81	65-145	
NEtFOSAA	ng/L	3.1	2.4	78	70-145	
NEtFOSE	ng/L	30.7	24.8	81	70-135	
NFDHA	ng/L	6.4	5.6	87	50-150	
NMeFOSA	ng/L	3.1	2.6	84	60-150	
NMeFOSAA	ng/L	3.1	2.6	84	50-140	
NMeFOSE	ng/L	30.7	24.8	81	70-145	
PFBA	ng/L	12.8	10.1	79	70-140	
PFBS	ng/L	2.8	2.1	74	60-145	
PFDA	ng/L	3.1	2.5	81	70-140	
PFDoA	ng/L	3.1	2.5	80	70-140	
PFDoS	ng/L	3.1	2.6	84	50-145	
PFDS	ng/L	3.1	2.6	85	60-145	
PFEESA	ng/L	5.6	4.6	81	70-140	
PFHpA	ng/L	3.1	2.4	78	70-150	
PFHpS	ng/L	3.1	2.4	77	70-150	
PFHxA	ng/L	3.1	2.4	80	70-145	
PFHxS	ng/L	2.8	2.3	81	65-145	
PFMBA	ng/L	6.4	5.0	78	60-150	
PFMPA	ng/L	6.4	5.4	84	55-140	
PFNA	ng/L	3.1	2.3	76	70-150	
PFNS	ng/L	3.1	2.3	76	65-145	
PFOA	ng/L	3.1	2.5	81	70-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Paine Airfield WA
Pace Project No.: 10738459

LABORATORY CONTROL SAMPLE: 5294360

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFOS	ng/L	3.1	2.4	79	55-150	
PFOSA	ng/L	3.1	2.6	83	70-145	
PFPeA	ng/L	6.4	5.0	78	65-135	
PFPeS	ng/L	3.1	2.4	78	65-140	
PFTeDA	ng/L	3.1	2.5	81	60-140	
PFTrDA	ng/L	3.1	2.6	86	65-140	
PFUnA	ng/L	3.1	2.4	78	70-145	
13C2-PFDoA (S)	%.			74	10-130	
13C2-PFTA (S)	%.			77	10-130	
13C24:2FTS (S)	%.			138	40-200	
13C26:2FTS (S)	%.			124	40-200	
13C28:2FTS (S)	%.			129	40-300	
13C3-PFBS (S)	%.			73	40-135	
13C3-PFHxS (S)	%.			74	40-130	
13C3-PFPrA (S)	%.			91	5-130	
13C3HFPO-DA (S)	%.			76	40-130	
13C4-PFBA (S)	%.			74	5-130	
13C4-PFHpA (S)	%.			76	40-130	
13C5-PFHxA (S)	%.			74	40-130	
13C5-PFPeA (S)	%.			74	40-130	
13C6-PFDA (S)	%.			73	40-130	
13C7-PFUdA (S)	%.			78	30-130	
13C8-PFOA (S)	%.			70	40-130	
13C8-PFOS (S)	%.			72	40-130	
13C8-PFOSA (S)	%.			62	40-130	
13C9-PFNA (S)	%.			75	40-130	
d3-MeFOSAA (S)	%.			97	40-170	
d3-NMeFOSA (S)	%.			55	10-130	
d5-EtFOSAA (S)	%.			101	25-135	
d5-NEtFOSA (S)	%.			59	10-130	
d7-NMeFOSE (S)	%.			64	10-130	
d9-NEtFOSE (S)	%.			66	10-130	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Paine Airfield WA
Pace Project No.: 10738459

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

S0	Surrogate recovery outside laboratory control limits.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Paine Airfield WA
Pace Project No.: 10738459

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10738459001	**DUP-1-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459002	**FP-MW16-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459003	**FP-MW17-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459004	**FP-MW18-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459005	**FP-MW15-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459006	**FP-MW19-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459007	**FP-MW20-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459008	**RB-1-250609**	EPA 1633	1015487	EPA 1633	1016389
10738459009	**FP-MW12-250610**	EPA 1633	1015487	EPA 1633	1016389
10738459010	**FP-MW14-250610**	EPA 1633	1015487	EPA 1633	1016389
10738459011	**FP-MW8-250610**	EPA 1633	1015487	EPA 1633	1016389
10738459012	**FP-MW11-250610**	EPA 1633	1015487	EPA 1633	1016389
10738459013	**FP-MW7-250610**	EPA 1633	1015487	EPA 1633	1016389
10738459014	**FP-MW10-250610**	EPA 1633	1015487	EPA 1633	1016389
10738459015	**FP-MW5-250610**	EPA 1633	1015487	EPA 1633	1016389

Pace® Location Requested (City/State):

CHAIN-OF-CUSTODY Analytical Request Document

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

WO#: 10738459

10738459

Company Name: GeoEngineers, Inc.
Street Address:
1101 Fawcett Avenue, Suite 200
Tacoma, Washington 98402
Customer Project #: 005530-015-00
Project Name: Paine Field FTP Supplemental Data Gaps Investigation
Site Collection Info/Facility ID (as applicable):
Paine Airfield

Contact/Report To: Jacob Letts
Phone #: 253.722.2419
E-Mail: jletts@geoengineers.com
Cc E-Mail: mbush@geoengineers.com
Invoice to:
Invoice E-mail: ap@geoengineers.com
Purchase Order # (if applicable):
Quote #:

Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Snohomish County, Washington

Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [X] EQUIS Geo-format emailed to Isaac [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other ______
Date Results Requested:

DW PWSID # or WW Permit # as applicable:
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

Specify Container Size **: 10
Identify Container Preservative Type***: 1
Analysis Requested: PFAS by EPA Method 1633

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: / AcctNum / Client ID: / Table #: / Profile / Template: / Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS by EPA Method 1633	Sample Comment
DUP-1-250609	GW	G			6/9/25	0600	2			X	001
FP-MW16-250609	GW	↓			↓	1245	2			X	002
FP-MW17-250609	GW	↓			↓	1300	2			X	003
FP-MW18-250609	GW	↓			↓	1400	2			X	004
FP-MW15-250609	GW	↓			↓	1400	2			X	005
FP-MW19-250609	GW	↓			↓	1500	2			X	006
FP-MW20-250609	GW	↓			↓	1515	2			X	007
RB-1-250609	GW	↓			↓	1140	2			X	008
FP-MW12-250610	GW	↓			6/10/25	1000	2			X	009
FP-MW14-250610	GW	↓			↓	1035	2			X	010

Additional Instructions from Pace®:
see email to PM for specific Equis EDD format request

Collected By: Printed Name / Signature

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: | Thermometer ID: T1e | Correction Factor (°C): True | Obs. Temp. (°C): 0.9, 1.3 | Corrected Temp. (°C): 0.9, 1.3 | [ ] On Ice Y

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature]	6/11/25 1000	[signature] / Pace	6/12/25 940

Tracking Number:
Delivered by: [ ] In-Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other

Page: 1 of 2

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

ENV-FRM-CORQ-0019_v02_110123 ©

E2: 3264616

Pace® Location Requested (City/State):

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

Scan QR Code for instructions

Company Name: GeoEngineers, Inc.	Contact/Report To: Jacob Letts
Street Address: 1101 Fawcett Avenue, Suite 200 Tacoma, Washington 98402	Phone #: 253.722.2419
	E-Mail: jletts@geoengineers.com
	Cc E-Mail: mbush@geoengineers.com
Customer Project #: 005530-015-00	Invoice to:
Project Name: Paine Field FTP Supplemental Data Gaps Investigation	Invoice E-mail: ap@geoengineers.com
Site Collection Info/Facility ID (as applicable): Paine Airfield	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	County / State origin of sample(s): Snohomish County, Washington
Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [X] EQUIS "Geo-format emailed to ISaac" [ ] Other	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other _____
	Date Results Requested:
	DW PWSID # or WW Permit # as applicable:
	Field Filtered (if applicable): [ ] Yes [ ] No
	Analysis:

Specify Container Size **: 10

Identify Container Preservative Type***: 1

Analysis Requested: PFAS by EPA Method 1633

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: / AcctNum / Client ID: / Table #: / Profile / Template: / Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS by EPA Method 1633	Sample Comment
FP-MW 8-250610	GW	G			6/10/25	1050	2			X	011
FP-MW11-250610	GW					1135	2			X	012
FP-MW7-250610	GW					1225	2			X	HOT 013
FP-MW10-250610	GW					1245	2			X	HOT 014
FP-MW5-250610	GW					1445	2			X	015
	GW						2			X	
	GW						2			X	
	GW						2			X	
	GW						2			X	
	GW						2			X	

Additional Instructions from Pace®: see email to PM for specific Equis EDD format request

Collected By: Printed Name / Signature

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C):	Corrected Temp. (°C):	[ ] On Ice
	T6	True	0.9, 1.3	0.9, 1.3	Y

Relinquished by/Company: (Signature)	Date/Time: 6/11/25 / 1000	Received by/Company: (Signature)	Date/Time: 6/12/25 0915	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 2

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

ENV-FRM-CORQ-0019_v02_110123 ©

ENV-FRM-MIN4-0150 v19_Sample Condition Upon Receipt

Person Examining & Date: JMW 6/12/25 **PROJECT #:** **WO#: 10738459**

PM: IJJ **Due Date: 07/03/25**

CLIENT: GEOENG

Client Name: GeoEngineers, Inc

Custody Seal Present: ☐ YES ☑ NO **Seals Intact:** ☐ YES ☑ NO

Tracking Number: 8818 0590 7947 ☑ See Exceptions form ENV-FRM-MIN4-0142.

Courier: ☐ Client ☐ Commercial ☐ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☐ Bubble Bags ☐ Bubble Wrap ☑ None ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☑ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0187) ☑ T6 (0396) ☐ T7 (0377) ☐ T8 (0775) ☐ T9 (0428) ☐ 01339252 (0710)

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

Temp Blank: ☑ YES ☐ NO

***NOTE:** Temp should be ≤ 6°C, but above freezing.*

Read Temp w/Temp Blank: 0.9, 1.3°C

Correction Factor: None

Corrected Temp w/Temp Blank: 0.9, 1.3°C

Did Samples Originate in West Virginia: ☐ YES ☑ NO **(list temps on exception)**

Were All Container Temps Taken: ☐ YES ☐ NO ☑ N/A

Average Corrected Temp (No Temp Blank Only): _____

☐ See Exceptions form ENV-FRM-MIN4-0142. ☐ 1 Container

USDA Regulated Soil: ☑ N/A – Water Sample/Other (describe): _____

Did Samples originate from one of the following states (check maps): ☐ YES ☑ NO

Circle State: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA

Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☑ NO

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

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☐	☑	☐	3.
Samples Arrived within Hold Time? If Fecal: ☐ <8 hrs ☐ >8 hr but <24 hr ☐ >24 hr	☑	☐		4.
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other:
Rush Turn Around Time Requested?	☐	☑		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date:
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☐	☐ ☑	☐	8.
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐	☐	11. ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐	☐	☑	12.
Sample #: ☐ HNO3 _____ ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____ **pH Paper Lot #:** ☐ Residual Chlorine _____ ☐ 0-6 Roll _____ ☐ 0-6 Strip _____ ☐ 0-14 Strip _____ **Positive for Residual Chlorine (NaOH containers only):** ☐ YES ☐ NO				
Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0142
EXCECTIONS (water only): VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☐	☐	☑	
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☑	13.
Headspace in Methyl Mercury Container?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☑	☐	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION / RESOLUTION: **Labeled By:** JMW **Line:** 5

Person Contacted & Date/Time: _____ **PM Review & Date:** Isaac Johnson 6/13/25

***NOTE:** When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

ENV-FRM-MIN4-0142 v05_Sample Condition Upon Receipt - Exceptions

Workorder #: _____

Anything is OVER 6.0°C, MUST be documented in the sections below.

Tracking Number	Temperature (°C)
8818 0590 7947	0.9
8818 0590 7936	1.3

Out of Temp Sample ID	Container Type	# of Containers

PM Notified of Out of Temp Cooler? ☐ YES ☐ NO **Multiple Cooler Project?** ☐ YES ☐ NO

If **YES**, indicate who was contacted, date, and time: _____

If **NO**, indicate reason why: ☐ All Nitric ☐ Not on ice ☐ Sampled same day ☐ Other: _____

No Temp Blank

Temp Gun: _____ **Correction Factor:** _____

Read Temp	Corrected Temp	Average Temp

Other	

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative		pH Upon Receipt	Date / Time Adjusted	Amount Added (mL)	Lot # Added	ph After	In Compliance After?		Initials
	HNO_3	H_2SO_4						YES	NO	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	

COMMENT(S):

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

July 01, 2025

Jacob Letts
Geoengineers
1101 S Fawcett Ave
Suite 200

Tacoma, WA 98402

RE: Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Dear Jacob Letts:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2025. 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,

Isaac Johnson
isaac.johnson@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10738053001	**FP-MW14-15-16.5**	Solid	06/04/25 09:02	06/10/25 08:50
10738053002	**FP-MW14-30-31.5**	Solid	06/04/25 09:25	06/10/25 08:50
10738053003	**FP-MW14-40-41.5**	Solid	06/04/25 09:50	06/10/25 08:50
10738053004	**FP-MW15-5-6.5**	Solid	06/04/25 13:45	06/10/25 08:50
10738053005	**FP-MW15-20-21.5**	Solid	06/04/25 14:00	06/10/25 08:50
10738053006	**FP-MW15-25-26.5**	Solid	06/04/25 14:10	06/10/25 08:50
10738053007	**FP-MW15-30-31.5**	Solid	06/04/25 14:20	06/10/25 08:50
10738053008	**FP-MW16-5-6.5**	Solid	06/03/25 08:15	06/10/25 08:50
10738053009	**FP-MW16-10-11.5**	Solid	06/03/25 08:20	06/10/25 08:50
10738053010	**FP-MW16-25-26.5**	Solid	06/03/25 09:00	06/10/25 08:50
10738053011	**FP-MW17-5-6.5**	Solid	06/03/25 10:55	06/10/25 08:50
10738053012	**FP-MW17-10-11.5**	Solid	06/03/25 11:05	06/10/25 08:50
10738053013	**FP-MW17-25-26.5**	Solid	06/03/25 11:15	06/10/25 08:50
10738053014	**FP-MW18-5-6**	Solid	06/02/25 12:35	06/10/25 08:50
10738053015	**FP-MW18-10-11.5**	Solid	06/02/25 12:45	06/10/25 08:50
10738053016	**FP-MW18-20-20.5**	Solid	06/02/25 13:10	06/10/25 08:50
10738053017	**FP-MW19-5-6**	Solid	06/02/25 09:24	06/10/25 08:50
10738053018	**FP-MW19-10-11**	Solid	06/02/25 09:30	06/10/25 08:50
10738053019	**FP-MW19-30-30.5**	Solid	06/02/25 10:15	06/10/25 08:50
10738053020	**FP-MW20-5-6.5**	Solid	06/03/25 14:55	06/10/25 08:50
10738053021	**FP-MW20-10-11.5**	Solid	06/03/25 15:02	06/10/25 08:50
10738053022	**FP-MW20-20-20.5**	Solid	06/03/25 15:40	06/10/25 08:50
10738053023	**FP-CB4-2.0**	Solid	06/03/25 12:45	06/10/25 08:50
10738053024	**FP-CB5-6.5-6.75**	Solid	06/03/25 09:50	06/10/25 08:50
10738053025	**FP-GEI-1-1.0**	Solid	06/03/25 10:45	06/10/25 08:50
10738053026	**FP-GEI-2-1.0**	Solid	06/03/25 13:45	06/10/25 08:50
10738053027	**FP-GEI-3-1.0**	Solid	06/03/25 15:00	06/10/25 08:50

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10738053001	**FP-MW14-15-16.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053002	**FP-MW14-30-31.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053003	**FP-MW14-40-41.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053004	**FP-MW15-5-6.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053005	**FP-MW15-20-21.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053006	**FP-MW15-25-26.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053007	**FP-MW15-30-31.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053008	**FP-MW16-5-6.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053009	**FP-MW16-10-11.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053010	**FP-MW16-25-26.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053011	**FP-MW17-5-6.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053012	**FP-MW17-10-11.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053013	**FP-MW17-25-26.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053014	**FP-MW18-5-6**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053015	**FP-MW18-10-11.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053016	**FP-MW18-20-20.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053017	**FP-MW19-5-6**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053018	**FP-MW19-10-11**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053019	**FP-MW19-30-30.5**	ASTM D2974	AGG1	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 1633	MJL	65
10738053020	**FP-MW20-5-6.5**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053021	**FP-MW20-10-11.5**	ASTM D2974	AGG1	1
		EPA 1633	NBH	65
10738053022	**FP-MW20-20-20.5**	ASTM D2974	AGG1	1
		EPA 1633	NBH	65
10738053023	**FP-CB4-2.0**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053024	**FP-CB5-6.5-6.75**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053025	**FP-GEI-1-1.0**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053026	**FP-GEI-2-1.0**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65
10738053027	**FP-GEI-3-1.0**	ASTM D2974	AGG1	1
		EPA 1633	MJL	65

PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW14-15-16.5 **Lab ID: 10738053001** Collected: 06/04/25 09:02 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**15.5**	%	0.10	1		06/19/25 14:29		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 14:23	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 14:23	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 14:23	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:23	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:23	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:23	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 14:23	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:23	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:23	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:23	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:23	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	375-85-9	
PFHxS	**0.35**	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	375-95-1	
PFOS	**0.48**	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:23	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW14-15-16.5 **Lab ID: 10738053001** Collected: 06/04/25 09:02 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C3HFPO-DA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C3-PFBS (S)	83	%.	40-135	1	06/29/25 09:06	06/30/25 14:23		
13C3-PFHxS (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C4-PFBA (S)	72	%.	8-130	1	06/29/25 09:06	06/30/25 14:23		
13C4-PFHpA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C5-PFHxA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C5-PFPeA (S)	84	%.	35-130	1	06/29/25 09:06	06/30/25 14:23		
13C6-PFDA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C8-PFOA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C8-PFOS (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C8-PFOSA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C9-PFNA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
d3-MeFOSAA (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 14:23		
d3-NMeFOSA (S)	72	%.	10-130	1	06/29/25 09:06	06/30/25 14:23		
d5-EtFOSAA (S)	88	%.	40-150	1	06/29/25 09:06	06/30/25 14:23		
d5-NEtFOSA (S)	75	%.	10-130	1	06/29/25 09:06	06/30/25 14:23		
d7-NMeFOSE (S)	86	%.	20-130	1	06/29/25 09:06	06/30/25 14:23		
d9-NEtFOSE (S)	84	%.	15-130	1	06/29/25 09:06	06/30/25 14:23		
13C2-PFTA (S)	67	%.	20-130	1	06/29/25 09:06	06/30/25 14:23		
13C7-PFUdA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 14:23		
13C24:2FTS (S)	86	%.	40-135	1	06/29/25 09:06	06/30/25 14:23		
13C26:2FTS (S)	81	%.	40-215	1	06/29/25 09:06	06/30/25 14:23		
13C28:2FTS (S)	77	%.	40-275	1	06/29/25 09:06	06/30/25 14:23		
13C3-PFPrA (S)	62	%.	8-130	1	06/29/25 09:06	06/30/25 14:23		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW14-30-31.5 **Lab ID: 10738053002** Collected: 06/04/25 09:25 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**11.7**	%	0.10	1		06/19/25 14:33		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	763051-92-9	
3:3 FTCA	ND	ug/kg	0.98	1	06/29/25 09:06	06/30/25 14:33	356-02-5	
4:2 FTS	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 14:33	914637-49-3	
6:2 FTS	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 14:33	812-70-4	
8:2 FTS	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	756426-58-1	
ADONA	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	919005-14-4	
HFPO-DA	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:33	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 14:33	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:33	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	307-24-4	
PFBA	ND	ug/kg	0.78	1	06/29/25 09:06	06/30/25 14:33	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 14:33	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 14:33	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 14:33	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 14:33	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:33	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW14-30-31.5 **Lab ID: 10738053002** Collected: 06/04/25 09:25 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C3HFPO-DA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C3-PFBS (S)	97	%.	40-135	1	06/29/25 09:06	06/30/25 14:33		
13C3-PFHxS (S)	93	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C4-PFBA (S)	67	%.	8-130	1	06/29/25 09:06	06/30/25 14:33		
13C4-PFHpA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C5-PFHxA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C5-PFPeA (S)	86	%.	35-130	1	06/29/25 09:06	06/30/25 14:33		
13C6-PFDA (S)	92	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C8-PFOA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C8-PFOS (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C8-PFOSA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C9-PFNA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
d3-MeFOSAA (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 14:33		
d3-NMeFOSA (S)	70	%.	10-130	1	06/29/25 09:06	06/30/25 14:33		
d5-EtFOSAA (S)	82	%.	40-150	1	06/29/25 09:06	06/30/25 14:33		
d5-NEtFOSA (S)	65	%.	10-130	1	06/29/25 09:06	06/30/25 14:33		
d7-NMeFOSE (S)	79	%.	20-130	1	06/29/25 09:06	06/30/25 14:33		
d9-NEtFOSE (S)	70	%.	15-130	1	06/29/25 09:06	06/30/25 14:33		
13C2-PFTA (S)	76	%.	20-130	1	06/29/25 09:06	06/30/25 14:33		
13C7-PFUdA (S)	92	%.	40-130	1	06/29/25 09:06	06/30/25 14:33		
13C24:2FTS (S)	101	%.	40-135	1	06/29/25 09:06	06/30/25 14:33		
13C26:2FTS (S)	95	%.	40-215	1	06/29/25 09:06	06/30/25 14:33		
13C28:2FTS (S)	86	%.	40-275	1	06/29/25 09:06	06/30/25 14:33		
13C3-PFPrA (S)	62	%.	8-130	1	06/29/25 09:06	06/30/25 14:33		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW14-40-41.5 **Lab ID: 10738053003** Collected: 06/04/25 09:50 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**14.3**	%	0.10	1		06/19/25 14:34		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 14:43	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 14:43	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 14:43	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:43	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:43	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:43	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:43	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:43	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:43	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:43	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:43	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	375-95-1	
PFOS	**0.28**	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:43	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW14-40-41.5 **Lab ID: 10738053003** Collected: 06/04/25 09:50 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C3HFPO-DA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C3-PFBS (S)	83	%.	40-135	1	06/29/25 09:06	06/30/25 14:43		
13C3-PFHxS (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C4-PFBA (S)	59	%.	8-130	1	06/29/25 09:06	06/30/25 14:43		
13C4-PFHpA (S)	76	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C5-PFHxA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C5-PFPeA (S)	78	%.	35-130	1	06/29/25 09:06	06/30/25 14:43		
13C6-PFDA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C8-PFOA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C8-PFOS (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C8-PFOSA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C9-PFNA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
d3-MeFOSAA (S)	84	%.	40-135	1	06/29/25 09:06	06/30/25 14:43		
d3-NMeFOSA (S)	67	%.	10-130	1	06/29/25 09:06	06/30/25 14:43		
d5-EtFOSAA (S)	82	%.	40-150	1	06/29/25 09:06	06/30/25 14:43		
d5-NEtFOSA (S)	72	%.	10-130	1	06/29/25 09:06	06/30/25 14:43		
d7-NMeFOSE (S)	81	%.	20-130	1	06/29/25 09:06	06/30/25 14:43		
d9-NEtFOSE (S)	85	%.	15-130	1	06/29/25 09:06	06/30/25 14:43		
13C2-PFTA (S)	69	%.	20-130	1	06/29/25 09:06	06/30/25 14:43		
13C7-PFUdA (S)	91	%.	40-130	1	06/29/25 09:06	06/30/25 14:43		
13C24:2FTS (S)	87	%.	40-135	1	06/29/25 09:06	06/30/25 14:43		
13C26:2FTS (S)	88	%.	40-215	1	06/29/25 09:06	06/30/25 14:43		
13C28:2FTS (S)	83	%.	40-275	1	06/29/25 09:06	06/30/25 14:43		
13C3-PFPrA (S)	58	%.	8-130	1	06/29/25 09:06	06/30/25 14:43		

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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-5-6.5 **Lab ID: 10738053004** Collected: 06/04/25 13:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**9.2**	%	0.10	1		06/19/25 14:36		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 14:53	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 14:53	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 14:53	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:53	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:53	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 14:53	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 14:53	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:53	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:53	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:53	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 14:53	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	375-95-1	
PFOS	**0.39**	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 14:53	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-5-6.5 **Lab ID: 10738053004** Collected: 06/04/25 13:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C3HFPO-DA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C3-PFBS (S)	92	%.	40-135	1	06/29/25 09:06	06/30/25 14:53		
13C3-PFHxS (S)	92	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C4-PFBA (S)	76	%.	8-130	1	06/29/25 09:06	06/30/25 14:53		
13C4-PFHpA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C5-PFHxA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C5-PFPeA (S)	85	%.	35-130	1	06/29/25 09:06	06/30/25 14:53		
13C6-PFDA (S)	89	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C8-PFOA (S)	89	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C8-PFOS (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C8-PFOSA (S)	76	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C9-PFNA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
d3-MeFOSAA (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 14:53		
d3-NMeFOSA (S)	52	%.	10-130	1	06/29/25 09:06	06/30/25 14:53		
d5-EtFOSAA (S)	90	%.	40-150	1	06/29/25 09:06	06/30/25 14:53		
d5-NEtFOSA (S)	35	%.	10-130	1	06/29/25 09:06	06/30/25 14:53		
d7-NMeFOSE (S)	60	%.	20-130	1	06/29/25 09:06	06/30/25 14:53		
d9-NEtFOSE (S)	44	%.	15-130	1	06/29/25 09:06	06/30/25 14:53		
13C2-PFTA (S)	84	%.	20-130	1	06/29/25 09:06	06/30/25 14:53		
13C7-PFUdA (S)	92	%.	40-130	1	06/29/25 09:06	06/30/25 14:53		
13C24:2FTS (S)	105	%.	40-135	1	06/29/25 09:06	06/30/25 14:53		
13C26:2FTS (S)	127	%.	40-215	1	06/29/25 09:06	06/30/25 14:53		
13C28:2FTS (S)	119	%.	40-275	1	06/29/25 09:06	06/30/25 14:53		
13C3-PFPrA (S)	68	%.	8-130	1	06/29/25 09:06	06/30/25 14:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-20-21.5 **Lab ID: 10738053005** Collected: 06/04/25 14:00 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**9.6**	%	0.10	1		06/19/25 14:37		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 15:03	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:03	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:03	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:03	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:03	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:03	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:03	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:03	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:03	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:03	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:03	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:03	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-20-21.5 **Lab ID: 10738053005** Collected: 06/04/25 14:00 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C3HFPO-DA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C3-PFBS (S)	86	%.	40-135	1	06/29/25 09:06	06/30/25 15:03		
13C3-PFHxS (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C4-PFBA (S)	60	%.	8-130	1	06/29/25 09:06	06/30/25 15:03		
13C4-PFHpA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C5-PFHxA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C5-PFPeA (S)	82	%.	35-130	1	06/29/25 09:06	06/30/25 15:03		
13C6-PFDA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C8-PFOA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C8-PFOS (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C8-PFOSA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C9-PFNA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
d3-MeFOSAA (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 15:03		
d3-NMeFOSA (S)	67	%.	10-130	1	06/29/25 09:06	06/30/25 15:03		
d5-EtFOSAA (S)	79	%.	40-150	1	06/29/25 09:06	06/30/25 15:03		
d5-NEtFOSA (S)	63	%.	10-130	1	06/29/25 09:06	06/30/25 15:03		
d7-NMeFOSE (S)	78	%.	20-130	1	06/29/25 09:06	06/30/25 15:03		
d9-NEtFOSE (S)	79	%.	15-130	1	06/29/25 09:06	06/30/25 15:03		
13C2-PFTA (S)	71	%.	20-130	1	06/29/25 09:06	06/30/25 15:03		
13C7-PFUdA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 15:03		
13C24:2FTS (S)	90	%.	40-135	1	06/29/25 09:06	06/30/25 15:03		
13C26:2FTS (S)	92	%.	40-215	1	06/29/25 09:06	06/30/25 15:03		
13C28:2FTS (S)	91	%.	40-275	1	06/29/25 09:06	06/30/25 15:03		
13C3-PFPrA (S)	58	%.	8-130	1	06/29/25 09:06	06/30/25 15:03		

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-25-26.5 **Lab ID: 10738053006** Collected: 06/04/25 14:10 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**14.0**	%	0.10	1		06/19/25 14:38		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 15:14	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:14	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:14	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:14	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:14	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:14	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:14	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:14	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:14	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:14	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:14	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:14	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-25-26.5 **Lab ID: 10738053006** Collected: 06/04/25 14:10 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C3HFPO-DA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C3-PFBS (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 15:14		
13C3-PFHxS (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C4-PFBA (S)	63	%.	8-130	1	06/29/25 09:06	06/30/25 15:14		
13C4-PFHpA (S)	73	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C5-PFHxA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C5-PFPeA (S)	82	%.	35-130	1	06/29/25 09:06	06/30/25 15:14		
13C6-PFDA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C8-PFOA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C8-PFOS (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C8-PFOSA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C9-PFNA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
d3-MeFOSAA (S)	76	%.	40-135	1	06/29/25 09:06	06/30/25 15:14		
d3-NMeFOSA (S)	63	%.	10-130	1	06/29/25 09:06	06/30/25 15:14		
d5-EtFOSAA (S)	70	%.	40-150	1	06/29/25 09:06	06/30/25 15:14		
d5-NEtFOSA (S)	65	%.	10-130	1	06/29/25 09:06	06/30/25 15:14		
d7-NMeFOSE (S)	76	%.	20-130	1	06/29/25 09:06	06/30/25 15:14		
d9-NEtFOSE (S)	78	%.	15-130	1	06/29/25 09:06	06/30/25 15:14		
13C2-PFTA (S)	65	%.	20-130	1	06/29/25 09:06	06/30/25 15:14		
13C7-PFUdA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 15:14		
13C24:2FTS (S)	89	%.	40-135	1	06/29/25 09:06	06/30/25 15:14		
13C26:2FTS (S)	85	%.	40-215	1	06/29/25 09:06	06/30/25 15:14		
13C28:2FTS (S)	78	%.	40-275	1	06/29/25 09:06	06/30/25 15:14		
13C3-PFPrA (S)	61	%.	8-130	1	06/29/25 09:06	06/30/25 15:14		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-30-31.5 **Lab ID: 10738053007** Collected: 06/04/25 14:20 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**9.3**	%	0.10	1		06/19/25 14:40		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 15:24	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:24	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:24	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:24	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:24	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:24	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:24	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:24	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:24	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:24	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:24	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:24	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW15-30-31.5 **Lab ID: 10738053007** Collected: 06/04/25 14:20 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	76	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C3HFPO-DA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C3-PFBS (S)	85	%.	40-135	1	06/29/25 09:06	06/30/25 15:24		
13C3-PFHxS (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C4-PFBA (S)	66	%.	8-130	1	06/29/25 09:06	06/30/25 15:24		
13C4-PFHpA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C5-PFHxA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C5-PFPeA (S)	84	%.	35-130	1	06/29/25 09:06	06/30/25 15:24		
13C6-PFDA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C8-PFOA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C8-PFOS (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C8-PFOSA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C9-PFNA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
d3-MeFOSAA (S)	76	%.	40-135	1	06/29/25 09:06	06/30/25 15:24		
d3-NMeFOSA (S)	66	%.	10-130	1	06/29/25 09:06	06/30/25 15:24		
d5-EtFOSAA (S)	77	%.	40-150	1	06/29/25 09:06	06/30/25 15:24		
d5-NEtFOSA (S)	65	%.	10-130	1	06/29/25 09:06	06/30/25 15:24		
d7-NMeFOSE (S)	78	%.	20-130	1	06/29/25 09:06	06/30/25 15:24		
d9-NEtFOSE (S)	79	%.	15-130	1	06/29/25 09:06	06/30/25 15:24		
13C2-PFTA (S)	63	%.	20-130	1	06/29/25 09:06	06/30/25 15:24		
13C7-PFUdA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 15:24		
13C24:2FTS (S)	90	%.	40-135	1	06/29/25 09:06	06/30/25 15:24		
13C26:2FTS (S)	87	%.	40-215	1	06/29/25 09:06	06/30/25 15:24		
13C28:2FTS (S)	81	%.	40-275	1	06/29/25 09:06	06/30/25 15:24		
13C3-PFPrA (S)	63	%.	8-130	1	06/29/25 09:06	06/30/25 15:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW16-5-6.5 **Lab ID: 10738053008** Collected: 06/03/25 08:15 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**10.6**	%	0.10	1		06/19/25 14:41		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 15:34	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:34	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:34	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:34	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:34	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:34	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:34	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:34	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:34	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:34	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:34	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:34	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW16-5-6.5 **Lab ID: 10738053008** Collected: 06/03/25 08:15 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C3HFPO-DA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C3-PFBS (S)	93	%.	40-135	1	06/29/25 09:06	06/30/25 15:34		
13C3-PFHxS (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C4-PFBA (S)	69	%.	8-130	1	06/29/25 09:06	06/30/25 15:34		
13C4-PFHpA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C5-PFHxA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C5-PFPeA (S)	85	%.	35-130	1	06/29/25 09:06	06/30/25 15:34		
13C6-PFDA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C8-PFOA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C8-PFOS (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C8-PFOSA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C9-PFNA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
d3-MeFOSAA (S)	84	%.	40-135	1	06/29/25 09:06	06/30/25 15:34		
d3-NMeFOSA (S)	69	%.	10-130	1	06/29/25 09:06	06/30/25 15:34		
d5-EtFOSAA (S)	88	%.	40-150	1	06/29/25 09:06	06/30/25 15:34		
d5-NEtFOSA (S)	68	%.	10-130	1	06/29/25 09:06	06/30/25 15:34		
d7-NMeFOSE (S)	81	%.	20-130	1	06/29/25 09:06	06/30/25 15:34		
d9-NEtFOSE (S)	76	%.	15-130	1	06/29/25 09:06	06/30/25 15:34		
13C2-PFTA (S)	61	%.	20-130	1	06/29/25 09:06	06/30/25 15:34		
13C7-PFUdA (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 15:34		
13C24:2FTS (S)	95	%.	40-135	1	06/29/25 09:06	06/30/25 15:34		
13C26:2FTS (S)	91	%.	40-215	1	06/29/25 09:06	06/30/25 15:34		
13C28:2FTS (S)	92	%.	40-275	1	06/29/25 09:06	06/30/25 15:34		
13C3-PFPrA (S)	62	%.	8-130	1	06/29/25 09:06	06/30/25 15:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW16-10-11.5 **Lab ID: 10738053009** Collected: 06/03/25 08:20 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**18.1**	%	0.10	1		06/19/25 14:42		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 15:44	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:44	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 15:44	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:44	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:44	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:44	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 15:44	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:44	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:44	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:44	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:44	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:44	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW16-10-11.5 **Lab ID: 10738053009** Collected: 06/03/25 08:20 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C3HFPO-DA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C3-PFBS (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 15:44		
13C3-PFHxS (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C4-PFBA (S)	64	%.	8-130	1	06/29/25 09:06	06/30/25 15:44		
13C4-PFHpA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C5-PFHxA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C5-PFPeA (S)	82	%.	35-130	1	06/29/25 09:06	06/30/25 15:44		
13C6-PFDA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C8-PFOA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C8-PFOS (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C8-PFOSA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C9-PFNA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
d3-MeFOSAA (S)	82	%.	40-135	1	06/29/25 09:06	06/30/25 15:44		
d3-NMeFOSA (S)	69	%.	10-130	1	06/29/25 09:06	06/30/25 15:44		
d5-EtFOSAA (S)	85	%.	40-150	1	06/29/25 09:06	06/30/25 15:44		
d5-NEtFOSA (S)	69	%.	10-130	1	06/29/25 09:06	06/30/25 15:44		
d7-NMeFOSE (S)	80	%.	20-130	1	06/29/25 09:06	06/30/25 15:44		
d9-NEtFOSE (S)	84	%.	15-130	1	06/29/25 09:06	06/30/25 15:44		
13C2-PFTA (S)	74	%.	20-130	1	06/29/25 09:06	06/30/25 15:44		
13C7-PFUdA (S)	92	%.	40-130	1	06/29/25 09:06	06/30/25 15:44		
13C24:2FTS (S)	92	%.	40-135	1	06/29/25 09:06	06/30/25 15:44		
13C26:2FTS (S)	89	%.	40-215	1	06/29/25 09:06	06/30/25 15:44		
13C28:2FTS (S)	81	%.	40-275	1	06/29/25 09:06	06/30/25 15:44		
13C3-PFPrA (S)	60	%.	8-130	1	06/29/25 09:06	06/30/25 15:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW16-25-26.5 **Lab ID: 10738053010** Collected: 06/03/25 09:00 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**19.0**	%	0.10	1		06/19/25 14:44		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 15:54	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 15:54	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 15:54	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:54	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:54	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 15:54	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 15:54	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:54	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:54	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:54	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 15:54	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 15:54	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW16-25-26.5 **Lab ID: 10738053010** Collected: 06/03/25 09:00 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	94	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C3HFPO-DA (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C3-PFBS (S)	90	%.	40-135	1	06/29/25 09:06	06/30/25 15:54		
13C3-PFHxS (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C4-PFBA (S)	73	%.	8-130	1	06/29/25 09:06	06/30/25 15:54		
13C4-PFHpA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C5-PFHxA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C5-PFPeA (S)	90	%.	35-130	1	06/29/25 09:06	06/30/25 15:54		
13C6-PFDA (S)	94	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C8-PFOA (S)	94	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C8-PFOS (S)	94	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C8-PFOSA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C9-PFNA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
d3-MeFOSAA (S)	89	%.	40-135	1	06/29/25 09:06	06/30/25 15:54		
d3-NMeFOSA (S)	76	%.	10-130	1	06/29/25 09:06	06/30/25 15:54		
d5-EtFOSAA (S)	89	%.	40-150	1	06/29/25 09:06	06/30/25 15:54		
d5-NEtFOSA (S)	80	%.	10-130	1	06/29/25 09:06	06/30/25 15:54		
d7-NMeFOSE (S)	86	%.	20-130	1	06/29/25 09:06	06/30/25 15:54		
d9-NEtFOSE (S)	92	%.	15-130	1	06/29/25 09:06	06/30/25 15:54		
13C2-PFTA (S)	77	%.	20-130	1	06/29/25 09:06	06/30/25 15:54		
13C7-PFUdA (S)	101	%.	40-130	1	06/29/25 09:06	06/30/25 15:54		
13C24:2FTS (S)	100	%.	40-135	1	06/29/25 09:06	06/30/25 15:54		
13C26:2FTS (S)	91	%.	40-215	1	06/29/25 09:06	06/30/25 15:54		
13C28:2FTS (S)	94	%.	40-275	1	06/29/25 09:06	06/30/25 15:54		
13C3-PFPrA (S)	61	%.	8-130	1	06/29/25 09:06	06/30/25 15:54		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW17-5-6.5 **Lab ID: 10738053011** Collected: 06/03/25 10:55 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**24.0**	%	0.10	1		06/19/25 14:45		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 16:24	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 16:24	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 16:24	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 16:24	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:24	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 16:24	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:24	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:24	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:24	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:24	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:24	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:24	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW17-5-6.5 **Lab ID: 10738053011** Collected: 06/03/25 10:55 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C3HFPO-DA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C3-PFBS (S)	88	%.	40-135	1	06/29/25 09:06	06/30/25 16:24		
13C3-PFHxS (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C4-PFBA (S)	76	%.	8-130	1	06/29/25 09:06	06/30/25 16:24		
13C4-PFHpA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C5-PFHxA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C5-PFPeA (S)	84	%.	35-130	1	06/29/25 09:06	06/30/25 16:24		
13C6-PFDA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C8-PFOA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C8-PFOS (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C8-PFOSA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C9-PFNA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
d3-MeFOSAA (S)	78	%.	40-135	1	06/29/25 09:06	06/30/25 16:24		
d3-NMeFOSA (S)	66	%.	10-130	1	06/29/25 09:06	06/30/25 16:24		
d5-EtFOSAA (S)	79	%.	40-150	1	06/29/25 09:06	06/30/25 16:24		
d5-NEtFOSA (S)	64	%.	10-130	1	06/29/25 09:06	06/30/25 16:24		
d7-NMeFOSE (S)	74	%.	20-130	1	06/29/25 09:06	06/30/25 16:24		
d9-NEtFOSE (S)	71	%.	15-130	1	06/29/25 09:06	06/30/25 16:24		
13C2-PFTA (S)	72	%.	20-130	1	06/29/25 09:06	06/30/25 16:24		
13C7-PFUdA (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 16:24		
13C24:2FTS (S)	98	%.	40-135	1	06/29/25 09:06	06/30/25 16:24		
13C26:2FTS (S)	92	%.	40-215	1	06/29/25 09:06	06/30/25 16:24		
13C28:2FTS (S)	79	%.	40-275	1	06/29/25 09:06	06/30/25 16:24		
13C3-PFPrA (S)	67	%.	8-130	1	06/29/25 09:06	06/30/25 16:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW17-10-11.5 **Lab ID: 10738053012** Collected: 06/03/25 11:05 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**11.5**	%	0.10	1		06/19/25 14:49		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	763051-92-9	
3:3 FTCA	ND	ug/kg	1.0	1	06/29/25 09:06	06/30/25 16:35	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 16:35	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 16:35	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 16:35	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:35	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 16:35	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 16:35	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:35	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:35	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:35	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 16:35	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:35	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW17-10-11.5 **Lab ID: 10738053012** Collected: 06/03/25 11:05 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C3HFPO-DA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C3-PFBS (S)	92	%.	40-135	1	06/29/25 09:06	06/30/25 16:35		
13C3-PFHxS (S)	89	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C4-PFBA (S)	65	%.	8-130	1	06/29/25 09:06	06/30/25 16:35		
13C4-PFHpA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C5-PFHxA (S)	89	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C5-PFPeA (S)	89	%.	35-130	1	06/29/25 09:06	06/30/25 16:35		
13C6-PFDA (S)	91	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C8-PFOA (S)	92	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C8-PFOS (S)	91	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C8-PFOSA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C9-PFNA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
d3-MeFOSAA (S)	87	%.	40-135	1	06/29/25 09:06	06/30/25 16:35		
d3-NMeFOSA (S)	74	%.	10-130	1	06/29/25 09:06	06/30/25 16:35		
d5-EtFOSAA (S)	95	%.	40-150	1	06/29/25 09:06	06/30/25 16:35		
d5-NEtFOSA (S)	77	%.	10-130	1	06/29/25 09:06	06/30/25 16:35		
d7-NMeFOSE (S)	84	%.	20-130	1	06/29/25 09:06	06/30/25 16:35		
d9-NEtFOSE (S)	89	%.	15-130	1	06/29/25 09:06	06/30/25 16:35		
13C2-PFTA (S)	76	%.	20-130	1	06/29/25 09:06	06/30/25 16:35		
13C7-PFUdA (S)	95	%.	40-130	1	06/29/25 09:06	06/30/25 16:35		
13C24:2FTS (S)	107	%.	40-135	1	06/29/25 09:06	06/30/25 16:35		
13C26:2FTS (S)	99	%.	40-215	1	06/29/25 09:06	06/30/25 16:35		
13C28:2FTS (S)	98	%.	40-275	1	06/29/25 09:06	06/30/25 16:35		
13C3-PFPrA (S)	60	%.	8-130	1	06/29/25 09:06	06/30/25 16:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW17-25-26.5 **Lab ID: 10738053013** Collected: 06/03/25 11:15 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**18.9**	%	0.10	1		06/19/25 14:51		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 16:53	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 16:53	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 16:53	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 16:53	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 16:53	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 16:53	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 16:53	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 16:53	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 16:53	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 16:53	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 16:53	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 16:53	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW17-25-26.5 **Lab ID: 10738053013** Collected: 06/03/25 11:15 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C3HFPO-DA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C3-PFBS (S)	77	%.	40-135	1	06/29/25 09:06	06/30/25 16:53		
13C3-PFHxS (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C4-PFBA (S)	62	%.	8-130	1	06/29/25 09:06	06/30/25 16:53		
13C4-PFHpA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C5-PFHxA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C5-PFPeA (S)	76	%.	35-130	1	06/29/25 09:06	06/30/25 16:53		
13C6-PFDA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C8-PFOA (S)	72	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C8-PFOS (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C8-PFOSA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C9-PFNA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
d3-MeFOSAA (S)	82	%.	40-135	1	06/29/25 09:06	06/30/25 16:53		
d3-NMeFOSA (S)	64	%.	10-130	1	06/29/25 09:06	06/30/25 16:53		
d5-EtFOSAA (S)	82	%.	40-150	1	06/29/25 09:06	06/30/25 16:53		
d5-NEtFOSA (S)	66	%.	10-130	1	06/29/25 09:06	06/30/25 16:53		
d7-NMeFOSE (S)	76	%.	20-130	1	06/29/25 09:06	06/30/25 16:53		
d9-NEtFOSE (S)	81	%.	15-130	1	06/29/25 09:06	06/30/25 16:53		
13C2-PFTA (S)	63	%.	20-130	1	06/29/25 09:06	06/30/25 16:53		
13C7-PFUdA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 16:53		
13C24:2FTS (S)	90	%.	40-135	1	06/29/25 09:06	06/30/25 16:53		
13C26:2FTS (S)	79	%.	40-215	1	06/29/25 09:06	06/30/25 16:53		
13C28:2FTS (S)	80	%.	40-275	1	06/29/25 09:06	06/30/25 16:53		
13C3-PFPrA (S)	59	%.	8-130	1	06/29/25 09:06	06/30/25 16:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW18-5-6 **Lab ID: 10738053014** Collected: 06/02/25 12:35 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**12.9**	%	0.10	1		06/19/25 14:52		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 17:03	356-02-5	
4:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 17:03	914637-49-3	
6:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 17:03	812-70-4	
8:2 FTS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	756426-58-1	
ADONA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	919005-14-4	
HFPO-DA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:03	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:03	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:03	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	307-24-4	
PFBA	ND	ug/kg	0.80	1	06/29/25 09:06	06/30/25 17:03	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:03	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:03	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:03	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:03	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	375-95-1	
PFOS	**0.21**	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:03	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW18-5-6 **Lab ID: 10738053014** Collected: 06/02/25 12:35 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C3HFPO-DA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C3-PFBS (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 17:03		
13C3-PFHxS (S)	76	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C4-PFBA (S)	70	%.	8-130	1	06/29/25 09:06	06/30/25 17:03		
13C4-PFHpA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C5-PFHxA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C5-PFPeA (S)	80	%.	35-130	1	06/29/25 09:06	06/30/25 17:03		
13C6-PFDA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C8-PFOA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C8-PFOS (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C8-PFOSA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C9-PFNA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
d3-MeFOSAA (S)	82	%.	40-135	1	06/29/25 09:06	06/30/25 17:03		
d3-NMeFOSA (S)	59	%.	10-130	1	06/29/25 09:06	06/30/25 17:03		
d5-EtFOSAA (S)	82	%.	40-150	1	06/29/25 09:06	06/30/25 17:03		
d5-NEtFOSA (S)	58	%.	10-130	1	06/29/25 09:06	06/30/25 17:03		
d7-NMeFOSE (S)	71	%.	20-130	1	06/29/25 09:06	06/30/25 17:03		
d9-NEtFOSE (S)	67	%.	15-130	1	06/29/25 09:06	06/30/25 17:03		
13C2-PFTA (S)	67	%.	20-130	1	06/29/25 09:06	06/30/25 17:03		
13C7-PFUdA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 17:03		
13C24:2FTS (S)	92	%.	40-135	1	06/29/25 09:06	06/30/25 17:03		
13C26:2FTS (S)	88	%.	40-215	1	06/29/25 09:06	06/30/25 17:03		
13C28:2FTS (S)	83	%.	40-275	1	06/29/25 09:06	06/30/25 17:03		
13C3-PFPrA (S)	65	%.	8-130	1	06/29/25 09:06	06/30/25 17:03		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW18-10-11.5 **Lab ID: 10738053015** Collected: 06/02/25 12:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**13.5**	%	0.10	1		06/19/25 14:54		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	763051-92-9	
3:3 FTCA	ND	ug/kg	0.98	1	06/29/25 09:06	06/30/25 17:13	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:13	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:13	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:13	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:13	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:13	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:13	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:13	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:13	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:13	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:13	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:13	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW18-10-11.5 **Lab ID: 10738053015** Collected: 06/02/25 12:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C3HFPO-DA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C3-PFBS (S)	87	%.	40-135	1	06/29/25 09:06	06/30/25 17:13		
13C3-PFHxS (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C4-PFBA (S)	59	%.	8-130	1	06/29/25 09:06	06/30/25 17:13		
13C4-PFHpA (S)	76	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C5-PFHxA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C5-PFPeA (S)	79	%.	35-130	1	06/29/25 09:06	06/30/25 17:13		
13C6-PFDA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C8-PFOA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C8-PFOS (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C8-PFOSA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C9-PFNA (S)	88	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
d3-MeFOSAA (S)	81	%.	40-135	1	06/29/25 09:06	06/30/25 17:13		
d3-NMeFOSA (S)	66	%.	10-130	1	06/29/25 09:06	06/30/25 17:13		
d5-EtFOSAA (S)	82	%.	40-150	1	06/29/25 09:06	06/30/25 17:13		
d5-NEtFOSA (S)	68	%.	10-130	1	06/29/25 09:06	06/30/25 17:13		
d7-NMeFOSE (S)	73	%.	20-130	1	06/29/25 09:06	06/30/25 17:13		
d9-NEtFOSE (S)	80	%.	15-130	1	06/29/25 09:06	06/30/25 17:13		
13C2-PFTA (S)	67	%.	20-130	1	06/29/25 09:06	06/30/25 17:13		
13C7-PFUdA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 17:13		
13C24:2FTS (S)	96	%.	40-135	1	06/29/25 09:06	06/30/25 17:13		
13C26:2FTS (S)	94	%.	40-215	1	06/29/25 09:06	06/30/25 17:13		
13C28:2FTS (S)	95	%.	40-275	1	06/29/25 09:06	06/30/25 17:13		
13C3-PFPrA (S)	58	%.	8-130	1	06/29/25 09:06	06/30/25 17:13		

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW18-20-20.5 **Lab ID: 10738053016** Collected: 06/02/25 13:10 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**12.6**	%	0.10	1		06/19/25 14:56		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 17:23	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:23	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:23	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:23	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:23	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:23	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:23	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:23	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:23	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:23	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:23	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:23	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW18-20-20.5 **Lab ID: 10738053016** Collected: 06/02/25 13:10 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C3HFPO-DA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C3-PFBS (S)	86	%.	40-135	1	06/29/25 09:06	06/30/25 17:23		
13C3-PFHxS (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C4-PFBA (S)	62	%.	8-130	1	06/29/25 09:06	06/30/25 17:23		
13C4-PFHpA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C5-PFHxA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C5-PFPeA (S)	80	%.	35-130	1	06/29/25 09:06	06/30/25 17:23		
13C6-PFDA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C8-PFOA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C8-PFOS (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C8-PFOSA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C9-PFNA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
d3-MeFOSAA (S)	79	%.	40-135	1	06/29/25 09:06	06/30/25 17:23		
d3-NMeFOSA (S)	64	%.	10-130	1	06/29/25 09:06	06/30/25 17:23		
d5-EtFOSAA (S)	86	%.	40-150	1	06/29/25 09:06	06/30/25 17:23		
d5-NEtFOSA (S)	68	%.	10-130	1	06/29/25 09:06	06/30/25 17:23		
d7-NMeFOSE (S)	76	%.	20-130	1	06/29/25 09:06	06/30/25 17:23		
d9-NEtFOSE (S)	80	%.	15-130	1	06/29/25 09:06	06/30/25 17:23		
13C2-PFTA (S)	64	%.	20-130	1	06/29/25 09:06	06/30/25 17:23		
13C7-PFUdA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 17:23		
13C24:2FTS (S)	105	%.	40-135	1	06/29/25 09:06	06/30/25 17:23		
13C26:2FTS (S)	91	%.	40-215	1	06/29/25 09:06	06/30/25 17:23		
13C28:2FTS (S)	94	%.	40-275	1	06/29/25 09:06	06/30/25 17:23		
13C3-PFPrA (S)	60	%.	8-130	1	06/29/25 09:06	06/30/25 17:23		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW19-5-6 **Lab ID: 10738053017** Collected: 06/02/25 09:24 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**13.7**	%	0.10	1		06/19/25 14:57		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 17:33	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 17:33	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/29/25 09:06	06/30/25 17:33	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:33	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:33	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:33	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:33	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:33	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:33	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:33	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 17:33	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:33	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW19-5-6 **Lab ID: 10738053017** Collected: 06/02/25 09:24 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C3HFPO-DA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C3-PFBS (S)	87	%.	40-135	1	06/29/25 09:06	06/30/25 17:33		
13C3-PFHxS (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C4-PFBA (S)	71	%.	8-130	1	06/29/25 09:06	06/30/25 17:33		
13C4-PFHpA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C5-PFHxA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C5-PFPeA (S)	81	%.	35-130	1	06/29/25 09:06	06/30/25 17:33		
13C6-PFDA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C8-PFOA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C8-PFOS (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C8-PFOSA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C9-PFNA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
d3-MeFOSAA (S)	82	%.	40-135	1	06/29/25 09:06	06/30/25 17:33		
d3-NMeFOSA (S)	67	%.	10-130	1	06/29/25 09:06	06/30/25 17:33		
d5-EtFOSAA (S)	86	%.	40-150	1	06/29/25 09:06	06/30/25 17:33		
d5-NEtFOSA (S)	67	%.	10-130	1	06/29/25 09:06	06/30/25 17:33		
d7-NMeFOSE (S)	79	%.	20-130	1	06/29/25 09:06	06/30/25 17:33		
d9-NEtFOSE (S)	75	%.	15-130	1	06/29/25 09:06	06/30/25 17:33		
13C2-PFTA (S)	65	%.	20-130	1	06/29/25 09:06	06/30/25 17:33		
13C7-PFUdA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 17:33		
13C24:2FTS (S)	101	%.	40-135	1	06/29/25 09:06	06/30/25 17:33		
13C26:2FTS (S)	94	%.	40-215	1	06/29/25 09:06	06/30/25 17:33		
13C28:2FTS (S)	91	%.	40-275	1	06/29/25 09:06	06/30/25 17:33		
13C3-PFPrA (S)	64	%.	8-130	1	06/29/25 09:06	06/30/25 17:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW19-10-11 **Lab ID: 10738053018** Collected: 06/02/25 09:30 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**10.3**	%	0.10	1		06/19/25 14:58		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	763051-92-9	
3:3 FTCA	ND	ug/kg	0.98	1	06/29/25 09:06	06/30/25 17:43	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:43	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:43	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:43	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:43	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:43	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:43	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:43	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:43	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:43	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:43	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:43	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW19-10-11 **Lab ID: 10738053018** Collected: 06/02/25 09:30 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	69	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C3HFPO-DA (S)	74	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C3-PFBS (S)	78	%.	40-135	1	06/29/25 09:06	06/30/25 17:43		
13C3-PFHxS (S)	73	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C4-PFBA (S)	61	%.	8-130	1	06/29/25 09:06	06/30/25 17:43		
13C4-PFHpA (S)	74	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C5-PFHxA (S)	77	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C5-PFPeA (S)	77	%.	35-130	1	06/29/25 09:06	06/30/25 17:43		
13C6-PFDA (S)	76	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C8-PFOA (S)	75	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C8-PFOS (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C8-PFOSA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C9-PFNA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
d3-MeFOSAA (S)	74	%.	40-135	1	06/29/25 09:06	06/30/25 17:43		
d3-NMeFOSA (S)	65	%.	10-130	1	06/29/25 09:06	06/30/25 17:43		
d5-EtFOSAA (S)	76	%.	40-150	1	06/29/25 09:06	06/30/25 17:43		
d5-NEtFOSA (S)	70	%.	10-130	1	06/29/25 09:06	06/30/25 17:43		
d7-NMeFOSE (S)	71	%.	20-130	1	06/29/25 09:06	06/30/25 17:43		
d9-NEtFOSE (S)	78	%.	15-130	1	06/29/25 09:06	06/30/25 17:43		
13C2-PFTA (S)	59	%.	20-130	1	06/29/25 09:06	06/30/25 17:43		
13C7-PFUdA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 17:43		
13C24:2FTS (S)	91	%.	40-135	1	06/29/25 09:06	06/30/25 17:43		
13C26:2FTS (S)	88	%.	40-215	1	06/29/25 09:06	06/30/25 17:43		
13C28:2FTS (S)	83	%.	40-275	1	06/29/25 09:06	06/30/25 17:43		
13C3-PFPrA (S)	61	%.	8-130	1	06/29/25 09:06	06/30/25 17:43		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW19-30-30.5 **Lab ID: 10738053019** Collected: 06/02/25 10:15 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**10.7**	%	0.10	1		06/19/25 14:59		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	763051-92-9	
3:3 FTCA	ND	ug/kg	0.98	1	06/29/25 09:06	06/30/25 17:54	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:54	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 17:54	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:54	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:54	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 17:54	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 17:54	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:54	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:54	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:54	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/29/25 09:06	06/30/25 17:54	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 17:54	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW19-30-30.5 **Lab ID: 10738053019** Collected: 06/02/25 10:15 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C3HFPO-DA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C3-PFBS (S)	87	%.	40-135	1	06/29/25 09:06	06/30/25 17:54		
13C3-PFHxS (S)	89	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C4-PFBA (S)	65	%.	8-130	1	06/29/25 09:06	06/30/25 17:54		
13C4-PFHpA (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C5-PFHxA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C5-PFPeA (S)	86	%.	35-130	1	06/29/25 09:06	06/30/25 17:54		
13C6-PFDA (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C8-PFOA (S)	86	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C8-PFOS (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C8-PFOSA (S)	87	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C9-PFNA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
d3-MeFOSAA (S)	85	%.	40-135	1	06/29/25 09:06	06/30/25 17:54		
d3-NMeFOSA (S)	72	%.	10-130	1	06/29/25 09:06	06/30/25 17:54		
d5-EtFOSAA (S)	85	%.	40-150	1	06/29/25 09:06	06/30/25 17:54		
d5-NEtFOSA (S)	76	%.	10-130	1	06/29/25 09:06	06/30/25 17:54		
d7-NMeFOSE (S)	78	%.	20-130	1	06/29/25 09:06	06/30/25 17:54		
d9-NEtFOSE (S)	84	%.	15-130	1	06/29/25 09:06	06/30/25 17:54		
13C2-PFTA (S)	64	%.	20-130	1	06/29/25 09:06	06/30/25 17:54		
13C7-PFUdA (S)	90	%.	40-130	1	06/29/25 09:06	06/30/25 17:54		
13C24:2FTS (S)	107	%.	40-135	1	06/29/25 09:06	06/30/25 17:54		
13C26:2FTS (S)	101	%.	40-215	1	06/29/25 09:06	06/30/25 17:54		
13C28:2FTS (S)	88	%.	40-275	1	06/29/25 09:06	06/30/25 17:54		
13C3-PFPrA (S)	61	%.	8-130	1	06/29/25 09:06	06/30/25 17:54		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW20-5-6.5 **Lab ID: 10738053020** Collected: 06/03/25 14:55 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**10.9**	%	0.10	1		06/19/25 15:01		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/29/25 09:06	06/30/25 18:04	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 18:04	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/29/25 09:06	06/30/25 18:04	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 18:04	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 18:04	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/29/25 09:06	06/30/25 18:04	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/29/25 09:06	06/30/25 18:04	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 18:04	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 18:04	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 18:04	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/29/25 09:06	06/30/25 18:04	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/29/25 09:06	06/30/25 18:04	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW20-5-6.5 **Lab ID: 10738053020** Collected: 06/03/25 14:55 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	80	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C3HFPO-DA (S)	79	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C3-PFBS (S)	88	%.	40-135	1	06/29/25 09:06	06/30/25 18:04		
13C3-PFHxS (S)	85	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C4-PFBA (S)	68	%.	8-130	1	06/29/25 09:06	06/30/25 18:04		
13C4-PFHpA (S)	78	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C5-PFHxA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C5-PFPeA (S)	80	%.	35-130	1	06/29/25 09:06	06/30/25 18:04		
13C6-PFDA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C8-PFOA (S)	82	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C8-PFOS (S)	83	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C8-PFOSA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C9-PFNA (S)	81	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
d3-MeFOSAA (S)	80	%.	40-135	1	06/29/25 09:06	06/30/25 18:04		
d3-NMeFOSA (S)	67	%.	10-130	1	06/29/25 09:06	06/30/25 18:04		
d5-EtFOSAA (S)	85	%.	40-150	1	06/29/25 09:06	06/30/25 18:04		
d5-NEtFOSA (S)	72	%.	10-130	1	06/29/25 09:06	06/30/25 18:04		
d7-NMeFOSE (S)	74	%.	20-130	1	06/29/25 09:06	06/30/25 18:04		
d9-NEtFOSE (S)	81	%.	15-130	1	06/29/25 09:06	06/30/25 18:04		
13C2-PFTA (S)	63	%.	20-130	1	06/29/25 09:06	06/30/25 18:04		
13C7-PFUdA (S)	84	%.	40-130	1	06/29/25 09:06	06/30/25 18:04		
13C24:2FTS (S)	99	%.	40-135	1	06/29/25 09:06	06/30/25 18:04		
13C26:2FTS (S)	93	%.	40-215	1	06/29/25 09:06	06/30/25 18:04		
13C28:2FTS (S)	94	%.	40-275	1	06/29/25 09:06	06/30/25 18:04		
13C3-PFPrA (S)	60	%.	8-130	1	06/29/25 09:06	06/30/25 18:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW20-10-11.5 **Lab ID: 10738053021** Collected: 06/03/25 15:02 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**7.3**	%	0.10	1		06/19/25 15:36		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	763051-92-9	
3:3 FTCA	ND	ug/kg	0.98	1	06/26/25 14:05	06/30/25 15:05	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/26/25 14:05	06/30/25 15:05	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/26/25 14:05	06/30/25 15:05	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/26/25 14:05	06/30/25 15:05	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/26/25 14:05	06/30/25 15:05	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/26/25 14:05	06/30/25 15:05	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:05	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/26/25 14:05	06/30/25 15:05	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/26/25 14:05	06/30/25 15:05	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/26/25 14:05	06/30/25 15:05	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/26/25 14:05	06/30/25 15:05	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:05	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW20-10-11.5 **Lab ID: 10738053021** Collected: 06/03/25 15:02 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	66	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C3HFPO-DA (S)	69	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C3-PFBS (S)	69	%.	40-135	1	06/26/25 14:05	06/30/25 15:05		
13C3-PFHxS (S)	70	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C4-PFBA (S)	48	%.	8-130	1	06/26/25 14:05	06/30/25 15:05		
13C4-PFHpA (S)	67	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C5-PFHxA (S)	65	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C5-PFPeA (S)	65	%.	35-130	1	06/26/25 14:05	06/30/25 15:05		
13C6-PFDA (S)	68	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C8-PFOA (S)	71	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C8-PFOS (S)	68	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C8-PFOSA (S)	64	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C9-PFNA (S)	69	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
d3-MeFOSAA (S)	65	%.	40-135	1	06/26/25 14:05	06/30/25 15:05		
d3-NMeFOSA (S)	59	%.	10-130	1	06/26/25 14:05	06/30/25 15:05		
d5-EtFOSAA (S)	65	%.	40-150	1	06/26/25 14:05	06/30/25 15:05		
d5-NEtFOSA (S)	58	%.	10-130	1	06/26/25 14:05	06/30/25 15:05		
d7-NMeFOSE (S)	66	%.	20-130	1	06/26/25 14:05	06/30/25 15:05		
d9-NEtFOSE (S)	63	%.	15-130	1	06/26/25 14:05	06/30/25 15:05		
13C2-PFTA (S)	61	%.	20-130	1	06/26/25 14:05	06/30/25 15:05		
13C7-PFUdA (S)	75	%.	40-130	1	06/26/25 14:05	06/30/25 15:05		
13C24:2FTS (S)	78	%.	40-135	1	06/26/25 14:05	06/30/25 15:05		
13C26:2FTS (S)	86	%.	40-215	1	06/26/25 14:05	06/30/25 15:05		
13C28:2FTS (S)	87	%.	40-275	1	06/26/25 14:05	06/30/25 15:05		
13C3-PFPrA (S)	55	%.	8-130	1	06/26/25 14:05	06/30/25 15:05		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW20-20-20.5 **Lab ID: 10738053022** Collected: 06/03/25 15:40 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**5.1**	%	0.10	1		06/19/25 15:38		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/26/25 14:05	06/30/25 15:15	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/26/25 14:05	06/30/25 15:15	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/26/25 14:05	06/30/25 15:15	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/26/25 14:05	06/30/25 15:15	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/26/25 14:05	06/30/25 15:15	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/26/25 14:05	06/30/25 15:15	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/26/25 14:05	06/30/25 15:15	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/26/25 14:05	06/30/25 15:15	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/26/25 14:05	06/30/25 15:15	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/26/25 14:05	06/30/25 15:15	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/26/25 14:05	06/30/25 15:15	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/26/25 14:05	06/30/25 15:15	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-MW20-20-20.5 **Lab ID: 10738053022** Collected: 06/03/25 15:40 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	91	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C3HFPO-DA (S)	93	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C3-PFBS (S)	90	%.	40-135	1	06/26/25 14:05	06/30/25 15:15		
13C3-PFHxS (S)	91	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C4-PFBA (S)	66	%.	8-130	1	06/26/25 14:05	06/30/25 15:15		
13C4-PFHpA (S)	93	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C5-PFHxA (S)	89	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C5-PFPeA (S)	89	%.	35-130	1	06/26/25 14:05	06/30/25 15:15		
13C6-PFDA (S)	93	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C8-PFOA (S)	93	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C8-PFOS (S)	89	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C8-PFOSA (S)	85	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C9-PFNA (S)	92	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
d3-MeFOSAA (S)	87	%.	40-135	1	06/26/25 14:05	06/30/25 15:15		
d3-NMeFOSA (S)	77	%.	10-130	1	06/26/25 14:05	06/30/25 15:15		
d5-EtFOSAA (S)	89	%.	40-150	1	06/26/25 14:05	06/30/25 15:15		
d5-NEtFOSA (S)	80	%.	10-130	1	06/26/25 14:05	06/30/25 15:15		
d7-NMeFOSE (S)	83	%.	20-130	1	06/26/25 14:05	06/30/25 15:15		
d9-NEtFOSE (S)	71	%.	15-130	1	06/26/25 14:05	06/30/25 15:15		
13C2-PFTA (S)	86	%.	20-130	1	06/26/25 14:05	06/30/25 15:15		
13C7-PFUdA (S)	102	%.	40-130	1	06/26/25 14:05	06/30/25 15:15		
13C24:2FTS (S)	99	%.	40-135	1	06/26/25 14:05	06/30/25 15:15		
13C26:2FTS (S)	109	%.	40-215	1	06/26/25 14:05	06/30/25 15:15		
13C28:2FTS (S)	113	%.	40-275	1	06/26/25 14:05	06/30/25 15:15		
13C3-PFPrA (S)	64	%.	8-130	1	06/26/25 14:05	06/30/25 15:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-CB4-2.0 **Lab ID: 10738053023** Collected: 06/03/25 12:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**88.0**	%	0.10	1		06/19/25 15:39		N2
EPA 1633F Bio Solid	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	763051-92-9	
3:3 FTCA	ND	ug/kg	9.9	1	06/27/25 08:54	06/27/25 19:08	356-02-5	
4:2 FTS	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	757124-72-4	
5:3 FTCA	ND	ug/kg	49.4	1	06/27/25 08:54	06/27/25 19:08	914637-49-3	
6:2 FTS	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	27619-97-2	
7:3 FTCA	ND	ug/kg	49.4	1	06/27/25 08:54	06/27/25 19:08	812-70-4	
8:2 FTS	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	756426-58-1	
ADONA	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	919005-14-4	
HFPO-DA	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	13252-13-6	
NEtFOSAA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	2991-50-6	
NEtFOSA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	4151-50-2	
NEtFOSE	ND	ug/kg	19.8	1	06/27/25 08:54	06/27/25 19:08	1691-99-2	
NFDHA	ND	ug/kg	4.0	1	06/27/25 08:54	06/27/25 19:08	151772-58-6	
NMeFOSAA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	2355-31-9	
NMeFOSA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	31506-32-8	
NMeFOSE	ND	ug/kg	19.8	1	06/27/25 08:54	06/27/25 19:08	24448-09-7	
PFBS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	375-73-5	
PFDA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	335-76-2	
PFHxA	**2.1**	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	307-24-4	
PFBA	ND	ug/kg	7.9	1	06/27/25 08:54	06/27/25 19:08	375-22-4	
PFDS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	335-77-3	
PFDoS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	79780-39-5	
PFEESA	ND	ug/kg	4.0	1	06/27/25 08:54	06/27/25 19:08	113507-82-7	
PFHpS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	375-92-8	
PFMBA	ND	ug/kg	4.0	1	06/27/25 08:54	06/27/25 19:08	863090-89-5	
PFMPA	ND	ug/kg	4.0	1	06/27/25 08:54	06/27/25 19:08	377-73-1	
PFNS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	68259-12-1	
PFOSA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	754-91-6	
PFPeA	**4.3**	ug/kg	4.0	1	06/27/25 08:54	06/27/25 19:08	2706-90-3	
PFPeS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	2706-91-4	
PFDoA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	307-55-1	
PFHpA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	375-85-9	
PFHxS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	355-46-4	
PFNA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	375-95-1	
PFOS	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	1763-23-1	
PFOA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	335-67-1	
PFTeDA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	376-06-7	
PFTrDA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	72629-94-8	
PFUnA	ND	ug/kg	2.0	1	06/27/25 08:54	06/27/25 19:08	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-CB4-2.0 **Lab ID: 10738053023** Collected: 06/03/25 12:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Bio Solid	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	88	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C3HFPO-DA (S)	100	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C3-PFBS (S)	101	%.	40-150	1	06/27/25 08:54	06/27/25 19:08		
13C3-PFHxS (S)	96	%.	40-140	1	06/27/25 08:54	06/27/25 19:08		
13C4-PFBA (S)	81	%.	5-130	1	06/27/25 08:54	06/27/25 19:08		
13C4-PFHpA (S)	96	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C5-PFHxA (S)	96	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C5-PFPeA (S)	99	%.	35-130	1	06/27/25 08:54	06/27/25 19:08		
13C6-PFDA (S)	98	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C8-PFOA (S)	101	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C8-PFOS (S)	95	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C8-PFOSA (S)	90	%.	20-140	1	06/27/25 08:54	06/27/25 19:08		
13C9-PFNA (S)	96	%.	40-145	1	06/27/25 08:54	06/27/25 19:08		
d3-MeFOSAA (S)	91	%.	30-150	1	06/27/25 08:54	06/27/25 19:08		
d3-NMeFOSA (S)	70	%.	20-130	1	06/27/25 08:54	06/27/25 19:08		
d5-EtFOSAA (S)	95	%.	20-140	1	06/27/25 08:54	06/27/25 19:08		
d5-NEtFOSA (S)	63	%.	20-130	1	06/27/25 08:54	06/27/25 19:08		
d7-NMeFOSE (S)	71	%.	25-130	1	06/27/25 08:54	06/27/25 19:08		
d9-NEtFOSE (S)	69	%.	20-130	1	06/27/25 08:54	06/27/25 19:08		
13C2-PFTA (S)	71	%.	10-160	1	06/27/25 08:54	06/27/25 19:08		
13C7-PFUdA (S)	96	%.	40-130	1	06/27/25 08:54	06/27/25 19:08		
13C24:2FTS (S)	106	%.	40-300	1	06/27/25 08:54	06/27/25 19:08		
13C26:2FTS (S)	88	%.	40-300	1	06/27/25 08:54	06/27/25 19:08		
13C28:2FTS (S)	73	%.	40-300	1	06/27/25 08:54	06/27/25 19:08		
13C3-PFPrA (S)	71	%.	5-130	1	06/27/25 08:54	06/27/25 19:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-CB5-6.5-6.75 **Lab ID: 10738053024** Collected: 06/03/25 09:50 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**41.1**	%	0.10	1		06/19/25 15:41		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	763051-92-9	
3:3 FTCA	ND	ug/kg	0.98	1	06/26/25 09:45	06/26/25 22:06	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	757124-72-4	
5:3 FTCA	ND	ug/kg	4.9	1	06/26/25 09:45	06/26/25 22:06	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/26/25 09:45	06/26/25 22:06	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/26/25 09:45	06/26/25 22:06	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:06	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/26/25 09:45	06/26/25 22:06	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:06	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:06	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:06	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:06	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	754-91-6	
PFPeA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:06	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	375-95-1	
PFOS	**0.22**	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:06	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-CB5-6.5-6.75 **Lab ID: 10738053024** Collected: 06/03/25 09:50 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	58	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C3HFPO-DA (S)	55	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C3-PFBS (S)	62	%.	40-135	1	06/26/25 09:45	06/26/25 22:06		
13C3-PFHxS (S)	59	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C4-PFBA (S)	52	%.	8-130	1	06/26/25 09:45	06/26/25 22:06		
13C4-PFHpA (S)	55	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C5-PFHxA (S)	56	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C5-PFPeA (S)	56	%.	35-130	1	06/26/25 09:45	06/26/25 22:06		
13C6-PFDA (S)	61	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C8-PFOA (S)	57	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C8-PFOS (S)	61	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C8-PFOSA (S)	59	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C9-PFNA (S)	57	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
d3-MeFOSAA (S)	60	%.	40-135	1	06/26/25 09:45	06/26/25 22:06		
d3-NMeFOSA (S)	53	%.	10-130	1	06/26/25 09:45	06/26/25 22:06		
d5-EtFOSAA (S)	56	%.	40-150	1	06/26/25 09:45	06/26/25 22:06		
d5-NEtFOSA (S)	54	%.	10-130	1	06/26/25 09:45	06/26/25 22:06		
d7-NMeFOSE (S)	54	%.	20-130	1	06/26/25 09:45	06/26/25 22:06		
d9-NEtFOSE (S)	51	%.	15-130	1	06/26/25 09:45	06/26/25 22:06		
13C2-PFTA (S)	57	%.	20-130	1	06/26/25 09:45	06/26/25 22:06		
13C7-PFUdA (S)	68	%.	40-130	1	06/26/25 09:45	06/26/25 22:06		
13C24:2FTS (S)	45	%.	40-135	1	06/26/25 09:45	06/26/25 22:06		
13C26:2FTS (S)	54	%.	40-215	1	06/26/25 09:45	06/26/25 22:06		
13C28:2FTS (S)	74	%.	40-275	1	06/26/25 09:45	06/26/25 22:06		
13C3-PFPrA (S)	58	%.	8-130	1	06/26/25 09:45	06/26/25 22:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-GEI-1-1.0 **Lab ID: 10738053025** Collected: 06/03/25 10:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**27.6**	%	0.10	1		06/19/25 15:43		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	763051-92-9	
3:3 FTCA	ND	ug/kg	1.1	1	06/26/25 09:45	06/26/25 22:16	356-02-5	
4:2 FTS	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	757124-72-4	
5:3 FTCA	ND	ug/kg	5.7	1	06/26/25 09:45	06/26/25 22:16	914637-49-3	
6:2 FTS	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	27619-97-2	
7:3 FTCA	ND	ug/kg	5.7	1	06/26/25 09:45	06/26/25 22:16	812-70-4	
8:2 FTS	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	756426-58-1	
ADONA	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	919005-14-4	
HFPO-DA	ND	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	13252-13-6	
NEtFOSAA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	2991-50-6	
NEtFOSA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	4151-50-2	
NEtFOSE	ND	ug/kg	2.3	1	06/26/25 09:45	06/26/25 22:16	1691-99-2	
NFDHA	ND	ug/kg	0.46	1	06/26/25 09:45	06/26/25 22:16	151772-58-6	
NMeFOSAA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	2355-31-9	
NMeFOSA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	31506-32-8	
NMeFOSE	ND	ug/kg	2.3	1	06/26/25 09:45	06/26/25 22:16	24448-09-7	
PFBS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	375-73-5	
PFDA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	335-76-2	
PFHxA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	307-24-4	
PFBA	**0.97**	ug/kg	0.92	1	06/26/25 09:45	06/26/25 22:16	375-22-4	
PFDS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	335-77-3	
PFDoS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	79780-39-5	
PFEESA	ND	ug/kg	0.46	1	06/26/25 09:45	06/26/25 22:16	113507-82-7	
PFHpS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	375-92-8	
PFMBA	ND	ug/kg	0.46	1	06/26/25 09:45	06/26/25 22:16	863090-89-5	
PFMPA	ND	ug/kg	0.46	1	06/26/25 09:45	06/26/25 22:16	377-73-1	
PFNS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	68259-12-1	
PFOSA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	754-91-6	
PFPeA	ND	ug/kg	0.46	1	06/26/25 09:45	06/26/25 22:16	2706-90-3	
PFPeS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	2706-91-4	
PFDoA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	307-55-1	
PFHpA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	375-85-9	
PFHxS	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	355-46-4	
PFNA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	375-95-1	
PFOS	**0.80**	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	1763-23-1	
PFOA	**0.31**	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	335-67-1	
PFTeDA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	376-06-7	
PFTrDA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	72629-94-8	
PFUnA	ND	ug/kg	0.23	1	06/26/25 09:45	06/26/25 22:16	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-GEI-1-1.0 **Lab ID: 10738053025** Collected: 06/03/25 10:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	42	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C3HFPO-DA (S)	39	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		S0
13C3-PFBS (S)	44	%.	40-135	1	06/26/25 09:45	06/26/25 22:16		
13C3-PFHxS (S)	45	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C4-PFBA (S)	41	%.	8-130	1	06/26/25 09:45	06/26/25 22:16		
13C4-PFHpA (S)	38	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		S0
13C5-PFHxA (S)	40	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C5-PFPeA (S)	39	%.	35-130	1	06/26/25 09:45	06/26/25 22:16		
13C6-PFDA (S)	45	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C8-PFOA (S)	39	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		S0
13C8-PFOS (S)	46	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C8-PFOSA (S)	46	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C9-PFNA (S)	42	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
d3-MeFOSAA (S)	49	%.	40-135	1	06/26/25 09:45	06/26/25 22:16		
d3-NMeFOSA (S)	36	%.	10-130	1	06/26/25 09:45	06/26/25 22:16		
d5-EtFOSAA (S)	47	%.	40-150	1	06/26/25 09:45	06/26/25 22:16		
d5-NEtFOSA (S)	32	%.	10-130	1	06/26/25 09:45	06/26/25 22:16		
d7-NMeFOSE (S)	37	%.	20-130	1	06/26/25 09:45	06/26/25 22:16		
d9-NEtFOSE (S)	32	%.	15-130	1	06/26/25 09:45	06/26/25 22:16		
13C2-PFTA (S)	41	%.	20-130	1	06/26/25 09:45	06/26/25 22:16		
13C7-PFUdA (S)	49	%.	40-130	1	06/26/25 09:45	06/26/25 22:16		
13C24:2FTS (S)	38	%.	40-135	1	06/26/25 09:45	06/26/25 22:16		S0
13C26:2FTS (S)	59	%.	40-215	1	06/26/25 09:45	06/26/25 22:16		
13C28:2FTS (S)	66	%.	40-275	1	06/26/25 09:45	06/26/25 22:16		
13C3-PFPrA (S)	42	%.	8-130	1	06/26/25 09:45	06/26/25 22:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-GEI-2-1.0 **Lab ID: 10738053026** Collected: 06/03/25 13:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**46.3**	%	0.10	1		06/19/25 15:44		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/26/25 09:45	06/26/25 22:26	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	757124-72-4	
5:3 FTCA	**16.0**	ug/kg	4.9	1	06/26/25 09:45	06/26/25 22:26	914637-49-3	
6:2 FTS	**2.6**	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	27619-97-2	
7:3 FTCA	ND	ug/kg	4.9	1	06/26/25 09:45	06/26/25 22:26	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/26/25 09:45	06/26/25 22:26	1691-99-2	
NFDHA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:26	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/26/25 09:45	06/26/25 22:26	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	335-76-2	
PFHxA	**6.7**	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	307-24-4	
PFBA	**1.3**	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:26	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	79780-39-5	
PFEESA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:26	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	375-92-8	
PFMBA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:26	863090-89-5	
PFMPA	ND	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:26	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	754-91-6	
PFPeA	**11.9**	ug/kg	0.39	1	06/26/25 09:45	06/26/25 22:26	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	307-55-1	
PFHpA	**2.1**	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	375-85-9	
PFHxS	**0.96**	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	375-95-1	
PFOS	**2.2**	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	1763-23-1	
PFOA	**0.56**	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:26	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-GEI-2-1.0 **Lab ID: 10738053026** Collected: 06/03/25 13:45 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	67	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C3HFPO-DA (S)	66	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C3-PFBS (S)	72	%.	40-135	1	06/26/25 09:45	06/26/25 22:26		
13C3-PFHxS (S)	71	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C4-PFBA (S)	68	%.	8-130	1	06/26/25 09:45	06/26/25 22:26		
13C4-PFHpA (S)	64	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C5-PFHxA (S)	67	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C5-PFPeA (S)	64	%.	35-130	1	06/26/25 09:45	06/26/25 22:26		
13C6-PFDA (S)	69	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C8-PFOA (S)	70	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C8-PFOS (S)	70	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C8-PFOSA (S)	65	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C9-PFNA (S)	68	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
d3-MeFOSAA (S)	71	%.	40-135	1	06/26/25 09:45	06/26/25 22:26		
d3-NMeFOSA (S)	59	%.	10-130	1	06/26/25 09:45	06/26/25 22:26		
d5-EtFOSAA (S)	70	%.	40-150	1	06/26/25 09:45	06/26/25 22:26		
d5-NEtFOSA (S)	50	%.	10-130	1	06/26/25 09:45	06/26/25 22:26		
d7-NMeFOSE (S)	57	%.	20-130	1	06/26/25 09:45	06/26/25 22:26		
d9-NEtFOSE (S)	53	%.	15-130	1	06/26/25 09:45	06/26/25 22:26		
13C2-PFTA (S)	63	%.	20-130	1	06/26/25 09:45	06/26/25 22:26		
13C7-PFUdA (S)	76	%.	40-130	1	06/26/25 09:45	06/26/25 22:26		
13C24:2FTS (S)	53	%.	40-135	1	06/26/25 09:45	06/26/25 22:26		
13C26:2FTS (S)	76	%.	40-215	1	06/26/25 09:45	06/26/25 22:26		
13C28:2FTS (S)	88	%.	40-275	1	06/26/25 09:45	06/26/25 22:26		
13C3-PFPrA (S)	76	%.	8-130	1	06/26/25 09:45	06/26/25 22:26		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-GEI-3-1.0 **Lab ID: 10738053027** Collected: 06/03/25 15:00 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**40.3**	%	0.10	1		06/19/25 15:46		N2
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	763051-92-9	
3:3 FTCA	ND	ug/kg	0.99	1	06/26/25 09:45	06/26/25 22:37	356-02-5	
4:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	757124-72-4	
5:3 FTCA	ND	ug/kg	5.0	1	06/26/25 09:45	06/26/25 22:37	914637-49-3	
6:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	27619-97-2	
7:3 FTCA	ND	ug/kg	5.0	1	06/26/25 09:45	06/26/25 22:37	812-70-4	
8:2 FTS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	39108-34-4	
9Cl-PF3ONS	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	756426-58-1	
ADONA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	919005-14-4	
HFPO-DA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	13252-13-6	
NEtFOSAA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	2991-50-6	
NEtFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	4151-50-2	
NEtFOSE	ND	ug/kg	2.0	1	06/26/25 09:45	06/26/25 22:37	1691-99-2	
NFDHA	ND	ug/kg	0.40	1	06/26/25 09:45	06/26/25 22:37	151772-58-6	
NMeFOSAA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	2355-31-9	
NMeFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	31506-32-8	
NMeFOSE	ND	ug/kg	2.0	1	06/26/25 09:45	06/26/25 22:37	24448-09-7	
PFBS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	375-73-5	
PFDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	335-76-2	
PFHxA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	307-24-4	
PFBA	ND	ug/kg	0.79	1	06/26/25 09:45	06/26/25 22:37	375-22-4	
PFDS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	335-77-3	
PFDoS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	79780-39-5	
PFEESA	ND	ug/kg	0.40	1	06/26/25 09:45	06/26/25 22:37	113507-82-7	
PFHpS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	375-92-8	
PFMBA	ND	ug/kg	0.40	1	06/26/25 09:45	06/26/25 22:37	863090-89-5	
PFMPA	ND	ug/kg	0.40	1	06/26/25 09:45	06/26/25 22:37	377-73-1	
PFNS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	68259-12-1	
PFOSA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	754-91-6	
PFPeA	ND	ug/kg	0.40	1	06/26/25 09:45	06/26/25 22:37	2706-90-3	
PFPeS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	2706-91-4	
PFDoA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	307-55-1	
PFHpA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	375-85-9	
PFHxS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	355-46-4	
PFNA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	375-95-1	
PFOS	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	1763-23-1	
PFOA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	335-67-1	
PFTeDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	376-06-7	
PFTrDA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	72629-94-8	
PFUnA	ND	ug/kg	0.20	1	06/26/25 09:45	06/26/25 22:37	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Sample: FP-GEI-3-1.0 **Lab ID: 10738053027** Collected: 06/03/25 15:00 Received: 06/10/25 08:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Soil	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	52	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C3HFPO-DA (S)	44	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C3-PFBS (S)	50	%.	40-135	1	06/26/25 09:45	06/26/25 22:37		
13C3-PFHxS (S)	49	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C4-PFBA (S)	42	%.	8-130	1	06/26/25 09:45	06/26/25 22:37		
13C4-PFHpA (S)	44	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C5-PFHxA (S)	44	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C5-PFPeA (S)	43	%.	35-130	1	06/26/25 09:45	06/26/25 22:37		
13C6-PFDA (S)	50	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C8-PFOA (S)	44	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C8-PFOS (S)	52	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C8-PFOSA (S)	47	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C9-PFNA (S)	48	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
d3-MeFOSAA (S)	52	%.	40-135	1	06/26/25 09:45	06/26/25 22:37		
d3-NMeFOSA (S)	48	%.	10-130	1	06/26/25 09:45	06/26/25 22:37		
d5-EtFOSAA (S)	50	%.	40-150	1	06/26/25 09:45	06/26/25 22:37		
d5-NEtFOSA (S)	46	%.	10-130	1	06/26/25 09:45	06/26/25 22:37		
d7-NMeFOSE (S)	47	%.	20-130	1	06/26/25 09:45	06/26/25 22:37		
d9-NEtFOSE (S)	47	%.	15-130	1	06/26/25 09:45	06/26/25 22:37		
13C2-PFTA (S)	51	%.	20-130	1	06/26/25 09:45	06/26/25 22:37		
13C7-PFUdA (S)	56	%.	40-130	1	06/26/25 09:45	06/26/25 22:37		
13C24:2FTS (S)	37	%.	40-135	1	06/26/25 09:45	06/26/25 22:37		S0
13C26:2FTS (S)	51	%.	40-215	1	06/26/25 09:45	06/26/25 22:37		
13C28:2FTS (S)	60	%.	40-275	1	06/26/25 09:45	06/26/25 22:37		
13C3-PFPrA (S)	56	%.	8-130	1	06/26/25 09:45	06/26/25 22:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

QC Batch: 1013873
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight / %M by ASTM D2974
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738053001, 10738053002, 10738053003, 10738053004, 10738053005, 10738053006, 10738053007, 10738053008, 10738053009, 10738053010, 10738053011, 10738053012, 10738053013, 10738053014, 10738053015, 10738053016, 10738053017, 10738053018, 10738053019, 10738053020

SAMPLE DUPLICATE: 5285814

Parameter	Units	10738053001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.5	15.7	1	30	N2

SAMPLE DUPLICATE: 5285815

Parameter	Units	10738053011 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.0	23.1	4	30	N2

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

QC Batch: 1013874
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight / %M by ASTM D2974
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738053021, 10738053022, 10738053023, 10738053024, 10738053025, 10738053026, 10738053027

SAMPLE DUPLICATE: 5285843

Parameter	Units	10736324002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	97.2	97.2	0	30	N2

SAMPLE DUPLICATE: 5285844

Parameter	Units	10738599003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.7	2	30	N2

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

QC Batch: 1015015
QC Batch Method: EPA 1633
Analysis Method: EPA 1633
Analysis Description: EPA 1633F Bio Solid
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10738053023

METHOD BLANK: 5291431 Matrix: Solid
Associated Lab Samples: 10738053023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/kg	ND	8.0	06/27/25 18:28	
3:3 FTCA	ug/kg	ND	10.0	06/27/25 18:28	
4:2 FTS	ug/kg	ND	8.0	06/27/25 18:28	
5:3 FTCA	ug/kg	ND	50.0	06/27/25 18:28	
6:2 FTS	ug/kg	ND	8.0	06/27/25 18:28	
7:3 FTCA	ug/kg	ND	50.0	06/27/25 18:28	
8:2 FTS	ug/kg	ND	8.0	06/27/25 18:28	
9Cl-PF3ONS	ug/kg	ND	8.0	06/27/25 18:28	
ADONA	ug/kg	ND	8.0	06/27/25 18:28	
HFPO-DA	ug/kg	ND	8.0	06/27/25 18:28	
NEtFOSA	ug/kg	ND	2.0	06/27/25 18:28	
NEtFOSAA	ug/kg	ND	2.0	06/27/25 18:28	
NEtFOSE	ug/kg	ND	20.0	06/27/25 18:28	
NFDHA	ug/kg	ND	4.0	06/27/25 18:28	
NMeFOSA	ug/kg	ND	2.0	06/27/25 18:28	
NMeFOSAA	ug/kg	ND	2.0	06/27/25 18:28	
NMeFOSE	ug/kg	ND	20.0	06/27/25 18:28	
PFBA	ug/kg	ND	8.0	06/27/25 18:28	
PFBS	ug/kg	ND	2.0	06/27/25 18:28	
PFDA	ug/kg	ND	2.0	06/27/25 18:28	
PFDoA	ug/kg	ND	2.0	06/27/25 18:28	
PFDoS	ug/kg	ND	2.0	06/27/25 18:28	
PFDS	ug/kg	ND	2.0	06/27/25 18:28	
PFEESA	ug/kg	ND	4.0	06/27/25 18:28	
PFHpA	ug/kg	ND	2.0	06/27/25 18:28	
PFHpS	ug/kg	ND	2.0	06/27/25 18:28	
PFHxA	ug/kg	ND	2.0	06/27/25 18:28	
PFHxS	ug/kg	ND	2.0	06/27/25 18:28	
PFMBA	ug/kg	ND	4.0	06/27/25 18:28	
PFMPA	ug/kg	ND	4.0	06/27/25 18:28	
PFNA	ug/kg	ND	2.0	06/27/25 18:28	
PFNS	ug/kg	ND	2.0	06/27/25 18:28	
PFOA	ug/kg	ND	2.0	06/27/25 18:28	
PFOS	ug/kg	ND	2.0	06/27/25 18:28	
PFOSA	ug/kg	ND	2.0	06/27/25 18:28	
PFPeA	ug/kg	ND	4.0	06/27/25 18:28	
PFPeS	ug/kg	ND	2.0	06/27/25 18:28	
PFTeDA	ug/kg	ND	2.0	06/27/25 18:28	
PFTrDA	ug/kg	ND	2.0	06/27/25 18:28	
PFUnA	ug/kg	ND	2.0	06/27/25 18:28	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

METHOD BLANK: 5291431 Matrix: Solid
Associated Lab Samples: 10738053023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C2-PFDoA (S)	%.	87	40-130	06/27/25 18:28	
13C2-PFTA (S)	%.	71	10-160	06/27/25 18:28	
13C24:2FTS (S)	%.	104	40-300	06/27/25 18:28	
13C26:2FTS (S)	%.	103	40-300	06/27/25 18:28	
13C28:2FTS (S)	%.	101	40-300	06/27/25 18:28	
13C3-PFBS (S)	%.	89	40-150	06/27/25 18:28	
13C3-PFHxS (S)	%.	86	40-140	06/27/25 18:28	
13C3-PFPrA (S)	%.	57	5-130	06/27/25 18:28	
13C3HFPO-DA (S)	%.	93	40-130	06/27/25 18:28	
13C4-PFBA (S)	%.	56	5-130	06/27/25 18:28	
13C4-PFHpA (S)	%.	89	40-130	06/27/25 18:28	
13C5-PFHxA (S)	%.	90	40-130	06/27/25 18:28	
13C5-PFPeA (S)	%.	91	35-130	06/27/25 18:28	
13C6-PFDA (S)	%.	92	40-130	06/27/25 18:28	
13C7-PFUdA (S)	%.	93	40-130	06/27/25 18:28	
13C8-PFOA (S)	%.	88	40-130	06/27/25 18:28	
13C8-PFOS (S)	%.	83	40-130	06/27/25 18:28	
13C8-PFOSA (S)	%.	86	20-140	06/27/25 18:28	
13C9-PFNA (S)	%.	89	40-145	06/27/25 18:28	
d3-MeFOSAA (S)	%.	87	30-150	06/27/25 18:28	
d3-NMeFOSA (S)	%.	62	20-130	06/27/25 18:28	
d5-EtFOSAA (S)	%.	83	20-140	06/27/25 18:28	
d5-NEtFOSA (S)	%.	65	20-130	06/27/25 18:28	
d7-NMeFOSE (S)	%.	73	25-130	06/27/25 18:28	
d9-NEtFOSE (S)	%.	76	20-130	06/27/25 18:28	

LABORATORY CONTROL SAMPLE: 5291432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	75.2	70.5	94	45-160	
3:3 FTCA	ug/kg	99.2	47.2	48	45-130	
4:2 FTS	ug/kg	75.2	72.3	96	60-150	
5:3 FTCA	ug/kg	496	463	93	60-130	
6:2 FTS	ug/kg	76.8	73.6	96	55-200	
7:3 FTCA	ug/kg	496	478	96	60-150	
8:2 FTS	ug/kg	76.8	72.0	94	70-150	
9Cl-PF3ONS	ug/kg	75.2	75.7	101	70-150	
ADONA	ug/kg	75.2	76.9	102	70-160	
HFPO-DA	ug/kg	80	74.5	93	70-145	
NEtFOSA	ug/kg	19.2	17.8	93	70-140	
NEtFOSAA	ug/kg	19.2	17.6	92	65-165	
NEtFOSE	ug/kg	192	181	95	70-135	
NFDHA	ug/kg	40	36.4	91	60-155	
NMeFOSA	ug/kg	19.2	18.7	98	70-155	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5291432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NMeFOSAA	ug/kg	19.2	17.7	92	65-155	
NMeFOSE	ug/kg	192	187	97	70-140	
PFBA	ug/kg	80	74.5	93	70-140	
PFBS	ug/kg	17.6	16.2	92	65-145	
PFDA	ug/kg	19.2	17.5	91	70-155	
PFDoA	ug/kg	19.2	17.7	92	70-150	
PFDoS	ug/kg	19.2	15.8	82	25-160	
PFDS	ug/kg	19.2	16.2	84	40-155	
PFEESA	ug/kg	35.2	34.4	98	70-140	
PFHpA	ug/kg	19.2	18.6	97	65-145	
PFHpS	ug/kg	19.2	17.0	88	65-155	
PFHxA	ug/kg	19.2	18.6	97	65-140	
PFHxS	ug/kg	17.6	16.1	92	60-150	
PFMBA	ug/kg	40	37.2	93	60-150	
PFMPA	ug/kg	40	43.1	108	30-140	
PFNA	ug/kg	19.2	17.9	93	70-155	
PFNS	ug/kg	19.2	18.7	97	55-140	
PFOA	ug/kg	19.2	18.3	95	70-150	
PFOS	ug/kg	19.2	16.4	85	65-160	
PFOSA	ug/kg	19.2	17.9	93	70-140	
PFPeA	ug/kg	40	36.9	92	60-150	
PFPeS	ug/kg	19.2	16.9	88	55-160	
PFTeDA	ug/kg	19.2	18.6	97	65-150	
PFTrDA	ug/kg	19.2	17.6	92	65-150	
PFUnA	ug/kg	19.2	19.0	99	70-155	
13C2-PFDoA (S)	%.			90	40-130	
13C2-PFTA (S)	%.			73	10-160	
13C24:2FTS (S)	%.			103	40-300	
13C26:2FTS (S)	%.			101	40-300	
13C28:2FTS (S)	%.			107	40-300	
13C3-PFBS (S)	%.			94	40-150	
13C3-PFHxS (S)	%.			92	40-140	
13C3-PFPrA (S)	%.			55	5-130	
13C3HFPO-DA (S)	%.			92	40-130	
13C4-PFBA (S)	%.			56	5-130	
13C4-PFHpA (S)	%.			91	40-130	
13C5-PFHxA (S)	%.			93	40-130	
13C5-PFPeA (S)	%.			91	35-130	
13C6-PFDA (S)	%.			94	40-130	
13C7-PFUdA (S)	%.			94	40-130	
13C8-PFOA (S)	%.			93	40-130	
13C8-PFOS (S)	%.			94	40-130	
13C8-PFOSA (S)	%.			91	20-140	
13C9-PFNA (S)	%.			96	40-145	
d3-MeFOSAA (S)	%.			94	30-150	
d3-NMeFOSA (S)	%.			72	20-130	
d5-EtFOSAA (S)	%.			92	20-140	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5291432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
d5-NEtFOSA (S)	%.			75	20-130	
d7-NMeFOSE (S)	%.			78	25-130	
d9-NEtFOSE (S)	%.			81	20-130	

LABORATORY CONTROL SAMPLE: 5291433

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	15	14.5	96	45-160	
3:3 FTCA	ug/kg	19.8	9J	45	45-130	
4:2 FTS	ug/kg	15	13.7	91	60-150	
5:3 FTCA	ug/kg	99.2	91.3	92	60-130	
6:2 FTS	ug/kg	15.4	14.6	95	55-200	
7:3 FTCA	ug/kg	99.2	90.1	91	60-150	
8:2 FTS	ug/kg	15.4	14.8	96	70-150	
9Cl-PF3ONS	ug/kg	15	15.5	103	70-150	
ADONA	ug/kg	15	14.5	96	70-160	
HFPO-DA	ug/kg	16	14.6	92	70-145	
NEtFOSA	ug/kg	3.8	3.6	93	70-140	
NEtFOSAA	ug/kg	3.8	3.1	80	65-165	
NEtFOSE	ug/kg	38.4	34.8	91	70-135	
NFDHA	ug/kg	8	7.5	94	60-155	
NMeFOSA	ug/kg	3.8	3.7	97	70-155	
NMeFOSAA	ug/kg	3.8	3.6	93	65-155	
NMeFOSE	ug/kg	38.4	36.0	94	70-140	
PFBA	ug/kg	16	14.8	93	70-140	
PFBS	ug/kg	3.5	3.4	96	65-145	
PFDA	ug/kg	3.8	3.5	90	70-155	
PFDoA	ug/kg	3.8	3.5	92	70-150	
PFDoS	ug/kg	3.8	3.2	85	25-160	
PFDS	ug/kg	3.8	3.7	95	40-155	
PFEESA	ug/kg	7	6.7	95	70-140	
PFHpA	ug/kg	3.8	3.6	94	65-145	
PFHpS	ug/kg	3.8	3.7	97	65-155	
PFHxA	ug/kg	3.8	3.7	97	65-140	
PFHxS	ug/kg	3.5	3.2	91	60-150	
PFMBA	ug/kg	8	7.1	89	60-150	
PFMPA	ug/kg	8	8.7	108	30-140	
PFNA	ug/kg	3.8	3.5	91	70-155	
PFNS	ug/kg	3.8	3.7	96	55-140	
PFOA	ug/kg	3.8	3.4	88	70-150	
PFOS	ug/kg	3.8	3.2	82	65-160	
PFOSA	ug/kg	3.8	3.6	93	70-140	
PFPeA	ug/kg	8	7.1	89	60-150	
PFPeS	ug/kg	3.8	3.5	90	55-160	
PFTeDA	ug/kg	3.8	3.8	98	65-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5291433

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFTrDA	ug/kg	3.8	3.4	88	65-150	
PFUnA	ug/kg	3.8	3.6	95	70-155	
13C2-PFDoA (S)	%.			94	40-130	
13C2-PFTA (S)	%.			78	10-160	
13C24:2FTS (S)	%.			114	40-300	
13C26:2FTS (S)	%.			108	40-300	
13C28:2FTS (S)	%.			102	40-300	
13C3-PFBS (S)	%.			95	40-150	
13C3-PFHxS (S)	%.			94	40-140	
13C3-PFPrA (S)	%.			58	5-130	
13C3HFPO-DA (S)	%.			92	40-130	
13C4-PFBA (S)	%.			59	5-130	
13C4-PFHpA (S)	%.			94	40-130	
13C5-PFHxA (S)	%.			94	40-130	
13C5-PFPeA (S)	%.			95	35-130	
13C6-PFDA (S)	%.			100	40-130	
13C7-PFUdA (S)	%.			102	40-130	
13C8-PFOA (S)	%.			99	40-130	
13C8-PFOS (S)	%.			92	40-130	
13C8-PFOSA (S)	%.			93	20-140	
13C9-PFNA (S)	%.			97	40-145	
d3-MeFOSAA (S)	%.			94	30-150	
d3-NMeFOSA (S)	%.			77	20-130	
d5-EtFOSAA (S)	%.			99	20-140	
d5-NEtFOSA (S)	%.			83	20-130	
d7-NMeFOSE (S)	%.			81	25-130	
d9-NEtFOSE (S)	%.			87	20-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

QC Batch: 1014701
QC Batch Method: EPA 1633
Analysis Method: EPA 1633
Analysis Description: EPA 1633F Soil
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738053021, 10738053022

METHOD BLANK: 5289926 Matrix: Solid
Associated Lab Samples: 10738053021, 10738053022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/kg	ND	0.80	06/30/25 11:24	
3:3 FTCA	ug/kg	ND	1.0	06/30/25 11:24	
4:2 FTS	ug/kg	ND	0.80	06/30/25 11:24	
5:3 FTCA	ug/kg	ND	5.0	06/30/25 11:24	
6:2 FTS	ug/kg	ND	0.80	06/30/25 11:24	
7:3 FTCA	ug/kg	ND	5.0	06/30/25 11:24	
8:2 FTS	ug/kg	ND	0.80	06/30/25 11:24	
9Cl-PF3ONS	ug/kg	ND	0.80	06/30/25 11:24	
ADONA	ug/kg	ND	0.80	06/30/25 11:24	
HFPO-DA	ug/kg	ND	0.80	06/30/25 11:24	
NEtFOSA	ug/kg	ND	0.20	06/30/25 11:24	
NEtFOSAA	ug/kg	ND	0.20	06/30/25 11:24	
NEtFOSE	ug/kg	ND	2.0	06/30/25 11:24	
NFDHA	ug/kg	ND	0.40	06/30/25 11:24	
NMeFOSA	ug/kg	ND	0.20	06/30/25 11:24	
NMeFOSAA	ug/kg	ND	0.20	06/30/25 11:24	
NMeFOSE	ug/kg	ND	2.0	06/30/25 11:24	
PFBA	ug/kg	ND	0.80	06/30/25 11:24	
PFBS	ug/kg	ND	0.20	06/30/25 11:24	
PFDA	ug/kg	ND	0.20	06/30/25 11:24	
PFDoA	ug/kg	ND	0.20	06/30/25 11:24	
PFDoS	ug/kg	ND	0.20	06/30/25 11:24	
PFDS	ug/kg	ND	0.20	06/30/25 11:24	
PFEESA	ug/kg	ND	0.40	06/30/25 11:24	
PFHpA	ug/kg	ND	0.20	06/30/25 11:24	
PFHpS	ug/kg	ND	0.20	06/30/25 11:24	
PFHxA	ug/kg	ND	0.20	06/30/25 11:24	
PFHxS	ug/kg	ND	0.20	06/30/25 11:24	
PFMBA	ug/kg	ND	0.40	06/30/25 11:24	
PFMPA	ug/kg	ND	0.40	06/30/25 11:24	
PFNA	ug/kg	ND	0.20	06/30/25 11:24	
PFNS	ug/kg	ND	0.20	06/30/25 11:24	
PFOA	ug/kg	ND	0.20	06/30/25 11:24	
PFOS	ug/kg	ND	0.20	06/30/25 11:24	
PFOSA	ug/kg	ND	0.20	06/30/25 11:24	
PFPeA	ug/kg	ND	0.40	06/30/25 11:24	
PFPeS	ug/kg	ND	0.20	06/30/25 11:24	
PFTeDA	ug/kg	ND	0.20	06/30/25 11:24	
PFTrDA	ug/kg	ND	0.20	06/30/25 11:24	
PFUnA	ug/kg	ND	0.20	06/30/25 11:24	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

METHOD BLANK: 5289926 Matrix: Solid
Associated Lab Samples: 10738053021, 10738053022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C2-PFDoA (S)	%.	42	40-130	06/30/25 11:24	
13C2-PFTA (S)	%.	45	20-130	06/30/25 11:24	
13C24:2FTS (S)	%.	37	40-135	06/30/25 11:24	S0
13C26:2FTS (S)	%.	44	40-215	06/30/25 11:24	
13C28:2FTS (S)	%.	42	40-275	06/30/25 11:24	
13C3-PFBS (S)	%.	39	40-135	06/30/25 11:24	S0
13C3-PFHxS (S)	%.	46	40-130	06/30/25 11:24	
13C3-PFPrA (S)	%.	52	8-130	06/30/25 11:24	
13C3HFPO-DA (S)	%.	40	40-130	06/30/25 11:24	
13C4-PFBA (S)	%.	38	8-130	06/30/25 11:24	
13C4-PFHpA (S)	%.	46	40-130	06/30/25 11:24	
13C5-PFHxA (S)	%.	38	40-130	06/30/25 11:24	S0
13C5-PFPeA (S)	%.	37	35-130	06/30/25 11:24	
13C6-PFDA (S)	%.	44	40-130	06/30/25 11:24	
13C7-PFUdA (S)	%.	45	40-130	06/30/25 11:24	
13C8-PFOA (S)	%.	44	40-130	06/30/25 11:24	
13C8-PFOS (S)	%.	45	40-130	06/30/25 11:24	
13C8-PFOSA (S)	%.	43	40-130	06/30/25 11:24	
13C9-PFNA (S)	%.	46	40-130	06/30/25 11:24	
d3-MeFOSAA (S)	%.	37	40-135	06/30/25 11:24	S0
d3-NMeFOSA (S)	%.	38	10-130	06/30/25 11:24	
d5-EtFOSAA (S)	%.	35	40-150	06/30/25 11:24	S0
d5-NEtFOSA (S)	%.	36	10-130	06/30/25 11:24	
d7-NMeFOSE (S)	%.	44	20-130	06/30/25 11:24	
d9-NEtFOSE (S)	%.	42	15-130	06/30/25 11:24	

LABORATORY CONTROL SAMPLE: 5289927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	7.5	6.8	90	45-160	
3:3 FTCA	ug/kg	9.9	8.0	80	45-130	
4:2 FTS	ug/kg	7.5	6.8	91	60-150	
5:3 FTCA	ug/kg	49.6	51.5	104	60-130	
6:2 FTS	ug/kg	7.7	7.3	96	55-200	
7:3 FTCA	ug/kg	49.6	42.2	85	60-150	
8:2 FTS	ug/kg	7.7	7.1	92	70-150	
9Cl-PF3ONS	ug/kg	7.5	7.0	93	70-150	
ADONA	ug/kg	7.5	6.8	91	70-160	
HFPO-DA	ug/kg	8	6.9	86	70-145	
NEtFOSA	ug/kg	1.9	1.8	92	70-140	
NEtFOSAA	ug/kg	1.9	1.8	91	65-165	
NEtFOSE	ug/kg	19.2	17.9	93	70-135	
NFDHA	ug/kg	4	3.4	84	60-155	
NMeFOSA	ug/kg	1.9	1.8	95	70-155	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5289927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NMeFOSAA	ug/kg	1.9	1.7	89	65-155	
NMeFOSE	ug/kg	19.2	17.7	92	70-140	
PFBA	ug/kg	8	7.3	91	70-140	
PFBS	ug/kg	1.8	1.5	87	65-145	
PFDA	ug/kg	1.9	1.7	91	70-155	
PFDoA	ug/kg	1.9	1.8	95	70-150	
PFDoS	ug/kg	1.9	1.7	86	25-160	
PFDS	ug/kg	1.9	1.7	89	40-155	
PFEESA	ug/kg	3.5	3.4	97	70-140	
PFHpA	ug/kg	1.9	1.7	87	65-145	
PFHpS	ug/kg	1.9	1.7	90	65-155	
PFHxA	ug/kg	1.9	1.8	94	65-140	
PFHxS	ug/kg	1.8	1.5	85	60-150	
PFMBA	ug/kg	4	3.7	92	60-150	
PFMPA	ug/kg	4	3.7	93	30-140	
PFNA	ug/kg	1.9	1.8	92	70-155	
PFNS	ug/kg	1.9	1.7	90	55-140	
PFOA	ug/kg	1.9	1.7	89	70-150	
PFOS	ug/kg	1.9	1.6	83	65-160	
PFOSA	ug/kg	1.9	1.8	91	70-140	
PFPeA	ug/kg	4	3.5	88	60-150	
PFPeS	ug/kg	1.9	1.7	88	55-160	
PFTeDA	ug/kg	1.9	1.8	93	65-150	
PFTrDA	ug/kg	1.9	1.9	100	65-150	
PFUnA	ug/kg	1.9	1.7	89	70-155	
13C2-PFDoA (S)	%.			75	40-130	
13C2-PFTA (S)	%.			75	20-130	
13C24:2FTS (S)	%.			58	40-135	
13C26:2FTS (S)	%.			70	40-215	
13C28:2FTS (S)	%.			72	40-275	
13C3-PFBS (S)	%.			73	40-135	
13C3-PFHxS (S)	%.			80	40-130	
13C3-PFPrA (S)	%.			63	8-130	
13C3HFPO-DA (S)	%.			74	40-130	
13C4-PFBA (S)	%.			57	8-130	
13C4-PFHpA (S)	%.			81	40-130	
13C5-PFHxA (S)	%.			71	40-130	
13C5-PFPeA (S)	%.			63	35-130	
13C6-PFDA (S)	%.			79	40-130	
13C7-PFUdA (S)	%.			84	40-130	
13C8-PFOA (S)	%.			84	40-130	
13C8-PFOS (S)	%.			77	40-130	
13C8-PFOSA (S)	%.			74	40-130	
13C9-PFNA (S)	%.			79	40-130	
d3-MeFOSAA (S)	%.			68	40-135	
d3-NMeFOSA (S)	%.			66	10-130	
d5-EtFOSAA (S)	%.			65	40-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5289927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
d5-NEtFOSA (S)	%.			66	10-130	
d7-NMeFOSE (S)	%.			77	20-130	
d9-NEtFOSE (S)	%.			73	15-130	

LABORATORY CONTROL SAMPLE: 5289928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	1.5	1.3	88	45-160	
3:3 FTCA	ug/kg	2	1.7	87	45-130	
4:2 FTS	ug/kg	1.5	1.3	86	60-150	
5:3 FTCA	ug/kg	9.9	8.7	88	60-130	
6:2 FTS	ug/kg	1.5	1.3	87	55-200	
7:3 FTCA	ug/kg	9.9	8.5	86	60-150	
8:2 FTS	ug/kg	1.5	1.4	92	70-150	
9Cl-PF3ONS	ug/kg	1.5	1.4	90	70-150	
ADONA	ug/kg	1.5	1.3	87	70-160	
HFPO-DA	ug/kg	1.6	1.3	82	70-145	
NEtFOSA	ug/kg	0.38	0.32	83	70-140	
NEtFOSAA	ug/kg	0.38	0.34	89	65-165	
NEtFOSE	ug/kg	3.8	3.4	89	70-135	
NFDHA	ug/kg	0.8	0.68	84	60-155	
NMeFOSA	ug/kg	0.38	0.36	95	70-155	
NMeFOSAA	ug/kg	0.38	0.36	94	65-155	
NMeFOSE	ug/kg	3.8	3.5	91	70-140	
PFBA	ug/kg	1.6	1.5	95	70-140	
PFBS	ug/kg	0.35	0.29	83	65-145	
PFDA	ug/kg	0.38	0.35	92	70-155	
PFDoA	ug/kg	0.38	0.38	98	70-150	
PFDoS	ug/kg	0.38	0.37	97	25-160	
PFDS	ug/kg	0.38	0.32	83	40-155	
PFEESA	ug/kg	0.7	0.66	94	70-140	
PFHpA	ug/kg	0.38	0.35	91	65-145	
PFHpS	ug/kg	0.38	0.30	78	65-155	
PFHxA	ug/kg	0.38	0.38	98	65-140	
PFHxS	ug/kg	0.35	0.32	90	60-150	
PFMBA	ug/kg	0.8	0.67	84	60-150	
PFMPA	ug/kg	0.8	0.77	97	30-140	
PFNA	ug/kg	0.38	0.38	99	70-155	
PFNS	ug/kg	0.38	0.34	88	55-140	
PFOA	ug/kg	0.38	0.33	87	70-150	
PFOS	ug/kg	0.38	0.37	96	65-160	
PFOSA	ug/kg	0.38	0.34	88	70-140	
PFPeA	ug/kg	0.8	0.70	88	60-150	
PFPeS	ug/kg	0.38	0.33	85	55-160	
PFTeDA	ug/kg	0.38	0.37	95	65-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5289928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFTrDA	ug/kg	0.38	0.40	103	65-150	
PFUnA	ug/kg	0.38	0.34	90	70-155	
13C2-PFDoA (S)	%.			41	40-130	
13C2-PFTA (S)	%.			44	20-130	
13C24:2FTS (S)	%.			46	40-135	
13C26:2FTS (S)	%.			46	40-215	
13C28:2FTS (S)	%.			44	40-275	
13C3-PFBS (S)	%.			50	40-135	
13C3-PFHxS (S)	%.			46	40-130	
13C3-PFPrA (S)	%.			52	8-130	
13C3HFPO-DA (S)	%.			49	40-130	
13C4-PFBA (S)	%.			38	8-130	
13C4-PFHpA (S)	%.			46	40-130	
13C5-PFHxA (S)	%.			46	40-130	
13C5-PFPeA (S)	%.			44	35-130	
13C6-PFDA (S)	%.			43	40-130	
13C7-PFUdA (S)	%.			45	40-130	
13C8-PFOA (S)	%.			42	40-130	
13C8-PFOS (S)	%.			45	40-130	
13C8-PFOSA (S)	%.			42	40-130	
13C9-PFNA (S)	%.			42	40-130	
d3-MeFOSAA (S)	%.			39	40-135	S0
d3-NMeFOSA (S)	%.			36	10-130	
d5-EtFOSAA (S)	%.			39	40-150	S0
d5-NEtFOSA (S)	%.			38	10-130	
d7-NMeFOSE (S)	%.			43	20-130	
d9-NEtFOSE (S)	%.			41	15-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

QC Batch: 1014707
QC Batch Method: EPA 1633
Analysis Method: EPA 1633
Analysis Description: EPA 1633F Soil
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738053024, 10738053025, 10738053026, 10738053027

METHOD BLANK: 5289940 Matrix: Solid
Associated Lab Samples: 10738053024, 10738053025, 10738053026, 10738053027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/kg	ND	0.80	06/26/25 18:33	
3:3 FTCA	ug/kg	ND	1.0	06/26/25 18:33	
4:2 FTS	ug/kg	ND	0.80	06/26/25 18:33	
5:3 FTCA	ug/kg	ND	5.0	06/26/25 18:33	
6:2 FTS	ug/kg	ND	0.80	06/26/25 18:33	
7:3 FTCA	ug/kg	ND	5.0	06/26/25 18:33	
8:2 FTS	ug/kg	ND	0.80	06/26/25 18:33	
9Cl-PF3ONS	ug/kg	ND	0.80	06/26/25 18:33	
ADONA	ug/kg	ND	0.80	06/26/25 18:33	
HFPO-DA	ug/kg	ND	0.80	06/26/25 18:33	
NEtFOSA	ug/kg	ND	0.20	06/26/25 18:33	
NEtFOSAA	ug/kg	ND	0.20	06/26/25 18:33	
NEtFOSE	ug/kg	ND	2.0	06/26/25 18:33	
NFDHA	ug/kg	ND	0.40	06/26/25 18:33	
NMeFOSA	ug/kg	ND	0.20	06/26/25 18:33	
NMeFOSAA	ug/kg	ND	0.20	06/26/25 18:33	
NMeFOSE	ug/kg	ND	2.0	06/26/25 18:33	
PFBA	ug/kg	ND	0.80	06/26/25 18:33	
PFBS	ug/kg	ND	0.20	06/26/25 18:33	
PFDA	ug/kg	ND	0.20	06/26/25 18:33	
PFDoA	ug/kg	ND	0.20	06/26/25 18:33	
PFDoS	ug/kg	ND	0.20	06/26/25 18:33	
PFDS	ug/kg	ND	0.20	06/26/25 18:33	
PFEESA	ug/kg	ND	0.40	06/26/25 18:33	
PFHpA	ug/kg	ND	0.20	06/26/25 18:33	
PFHpS	ug/kg	ND	0.20	06/26/25 18:33	
PFHxA	ug/kg	ND	0.20	06/26/25 18:33	
PFHxS	ug/kg	ND	0.20	06/26/25 18:33	
PFMBA	ug/kg	ND	0.40	06/26/25 18:33	
PFMPA	ug/kg	ND	0.40	06/26/25 18:33	
PFNA	ug/kg	ND	0.20	06/26/25 18:33	
PFNS	ug/kg	ND	0.20	06/26/25 18:33	
PFOA	ug/kg	ND	0.20	06/26/25 18:33	
PFOS	ug/kg	ND	0.20	06/26/25 18:33	
PFOSA	ug/kg	ND	0.20	06/26/25 18:33	
PFPeA	ug/kg	ND	0.40	06/26/25 18:33	
PFPeS	ug/kg	ND	0.20	06/26/25 18:33	
PFTeDA	ug/kg	ND	0.20	06/26/25 18:33	
PFTrDA	ug/kg	ND	0.20	06/26/25 18:33	
PFUnA	ug/kg	ND	0.20	06/26/25 18:33	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

METHOD BLANK: 5289940 Matrix: Solid
Associated Lab Samples: 10738053024, 10738053025, 10738053026, 10738053027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C2-PFDoA (S)	%.	74	40-130	06/26/25 18:33	
13C2-PFTA (S)	%.	64	20-130	06/26/25 18:33	
13C24:2FTS (S)	%.	50	40-135	06/26/25 18:33	
13C26:2FTS (S)	%.	56	40-215	06/26/25 18:33	
13C28:2FTS (S)	%.	64	40-275	06/26/25 18:33	
13C3-PFBS (S)	%.	83	40-135	06/26/25 18:33	
13C3-PFHxS (S)	%.	78	40-130	06/26/25 18:33	
13C3-PFPrA (S)	%.	61	8-130	06/26/25 18:33	
13C3HFPO-DA (S)	%.	76	40-130	06/26/25 18:33	
13C4-PFBA (S)	%.	67	8-130	06/26/25 18:33	
13C4-PFHpA (S)	%.	76	40-130	06/26/25 18:33	
13C5-PFHxA (S)	%.	77	40-130	06/26/25 18:33	
13C5-PFPeA (S)	%.	77	35-130	06/26/25 18:33	
13C6-PFDA (S)	%.	79	40-130	06/26/25 18:33	
13C7-PFUdA (S)	%.	82	40-130	06/26/25 18:33	
13C8-PFOA (S)	%.	75	40-130	06/26/25 18:33	
13C8-PFOS (S)	%.	76	40-130	06/26/25 18:33	
13C8-PFOSA (S)	%.	71	40-130	06/26/25 18:33	
13C9-PFNA (S)	%.	77	40-130	06/26/25 18:33	
d3-MeFOSAA (S)	%.	55	40-135	06/26/25 18:33	
d3-NMeFOSA (S)	%.	64	10-130	06/26/25 18:33	
d5-EtFOSAA (S)	%.	50	40-150	06/26/25 18:33	
d5-NEtFOSA (S)	%.	66	10-130	06/26/25 18:33	
d7-NMeFOSE (S)	%.	71	20-130	06/26/25 18:33	
d9-NEtFOSE (S)	%.	69	15-130	06/26/25 18:33	

LABORATORY CONTROL SAMPLE: 5289941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	7.5	7.3	97	45-160	
3:3 FTCA	ug/kg	9.9	7.8	78	45-130	
4:2 FTS	ug/kg	7.5	7.4	98	60-150	
5:3 FTCA	ug/kg	49.6	43.6	88	60-130	
6:2 FTS	ug/kg	7.7	7.4	97	55-200	
7:3 FTCA	ug/kg	49.6	44.4	90	60-150	
8:2 FTS	ug/kg	7.7	7.7	100	70-150	
9Cl-PF3ONS	ug/kg	7.5	7.4	99	70-150	
ADONA	ug/kg	7.5	7.3	97	70-160	
HFPO-DA	ug/kg	8	8.0	100	70-145	
NEtFOSA	ug/kg	1.9	1.9	97	70-140	
NEtFOSAA	ug/kg	1.9	2.0	105	65-165	
NEtFOSE	ug/kg	19.2	19.0	99	70-135	
NFDHA	ug/kg	4	4.2	105	60-155	
NMeFOSA	ug/kg	1.9	1.8	96	70-155	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5289941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NMeFOSAA	ug/kg	1.9	1.9	98	65-155	
NMeFOSE	ug/kg	19.2	19.0	99	70-140	
PFBA	ug/kg	8	7.7	97	70-140	
PFBS	ug/kg	1.8	1.7	98	65-145	
PFDA	ug/kg	1.9	1.9	99	70-155	
PFDoA	ug/kg	1.9	1.9	101	70-150	
PFDoS	ug/kg	1.9	1.7	89	25-160	
PFDS	ug/kg	1.9	1.7	87	40-155	
PFEESA	ug/kg	3.5	3.4	97	70-140	
PFHpA	ug/kg	1.9	1.8	94	65-145	
PFHpS	ug/kg	1.9	1.7	91	65-155	
PFHxA	ug/kg	1.9	2.0	102	65-140	
PFHxS	ug/kg	1.8	1.7	96	60-150	
PFMBA	ug/kg	4	3.8	96	60-150	
PFMPA	ug/kg	4	4.3	108	30-140	
PFNA	ug/kg	1.9	1.9	99	70-155	
PFNS	ug/kg	1.9	1.8	91	55-140	
PFOA	ug/kg	1.9	1.9	97	70-150	
PFOS	ug/kg	1.9	1.7	87	65-160	
PFOSA	ug/kg	1.9	1.9	97	70-140	
PFPeA	ug/kg	4	3.8	95	60-150	
PFPeS	ug/kg	1.9	1.8	92	55-160	
PFTeDA	ug/kg	1.9	1.9	100	65-150	
PFTrDA	ug/kg	1.9	2.0	104	65-150	
PFUnA	ug/kg	1.9	2.0	103	70-155	
13C2-PFDoA (S)	%.			54	40-130	
13C2-PFTA (S)	%.			50	20-130	
13C24:2FTS (S)	%.			34	40-135	S0
13C26:2FTS (S)	%.			39	40-215	S0
13C28:2FTS (S)	%.			45	40-275	
13C3-PFBS (S)	%.			55	40-135	
13C3-PFHxS (S)	%.			56	40-130	
13C3-PFPrA (S)	%.			52	8-130	
13C3HFPO-DA (S)	%.			52	40-130	
13C4-PFBA (S)	%.			44	8-130	
13C4-PFHpA (S)	%.			52	40-130	
13C5-PFHxA (S)	%.			54	40-130	
13C5-PFPeA (S)	%.			53	35-130	
13C6-PFDA (S)	%.			57	40-130	
13C7-PFUdA (S)	%.			56	40-130	
13C8-PFOA (S)	%.			52	40-130	
13C8-PFOS (S)	%.			57	40-130	
13C8-PFOSA (S)	%.			52	40-130	
13C9-PFNA (S)	%.			55	40-130	
d3-MeFOSAA (S)	%.			40	40-135	
d3-NMeFOSA (S)	%.			51	10-130	
d5-EtFOSAA (S)	%.			38	40-150	S0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5289941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
d5-NEtFOSA (S)	%.			49	10-130	
d7-NMeFOSE (S)	%.			52	20-130	
d9-NEtFOSE (S)	%.			51	15-130	

LABORATORY CONTROL SAMPLE: 5289942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	1.5	1.3	86	45-160	
3:3 FTCA	ug/kg	2	1.4	68	45-130	
4:2 FTS	ug/kg	1.5	1.4	91	60-150	
5:3 FTCA	ug/kg	9.9	7.3	74	60-130	
6:2 FTS	ug/kg	1.5	1.3	87	55-200	
7:3 FTCA	ug/kg	9.9	7.4	75	60-150	
8:2 FTS	ug/kg	1.5	1.5	99	70-150	
9Cl-PF3ONS	ug/kg	1.5	1.3	89	70-150	
ADONA	ug/kg	1.5	1.3	88	70-160	
HFPO-DA	ug/kg	1.6	1.4	86	70-145	
NEtFOSA	ug/kg	0.38	0.37	97	70-140	
NEtFOSAA	ug/kg	0.38	0.38	98	65-165	
NEtFOSE	ug/kg	3.8	3.5	91	70-135	
NFDHA	ug/kg	0.8	0.78	98	60-155	
NMeFOSA	ug/kg	0.38	0.36	93	70-155	
NMeFOSAA	ug/kg	0.38	0.34	88	65-155	
NMeFOSE	ug/kg	3.8	3.4	90	70-140	
PFBA	ug/kg	1.6	1.4	90	70-140	
PFBS	ug/kg	0.35	0.30	86	65-145	
PFDA	ug/kg	0.38	0.34	88	70-155	
PFDoA	ug/kg	0.38	0.34	90	70-150	
PFDoS	ug/kg	0.38	0.31	80	25-160	
PFDS	ug/kg	0.38	0.29	77	40-155	
PFEESA	ug/kg	0.7	0.59	84	70-140	
PFHpA	ug/kg	0.38	0.33	86	65-145	
PFHpS	ug/kg	0.38	0.33	86	65-155	
PFHxA	ug/kg	0.38	0.34	89	65-140	
PFHxS	ug/kg	0.35	0.31	89	60-150	
PFMBA	ug/kg	0.8	0.69	86	60-150	
PFMPA	ug/kg	0.8	0.76	95	30-140	
PFNA	ug/kg	0.38	0.35	90	70-155	
PFNS	ug/kg	0.38	0.30	79	55-140	
PFOA	ug/kg	0.38	0.33	86	70-150	
PFOS	ug/kg	0.38	0.33	85	65-160	
PFOSA	ug/kg	0.38	0.35	91	70-140	
PFPeA	ug/kg	0.8	0.67	84	60-150	
PFPeS	ug/kg	0.38	0.33	87	55-160	
PFTeDA	ug/kg	0.38	0.34	89	65-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5289942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFTrDA	ug/kg	0.38	0.35	91	65-150	
PFUnA	ug/kg	0.38	0.33	85	70-155	
13C2-PFDoA (S)	%.			90	40-130	
13C2-PFTA (S)	%.			76	20-130	
13C24:2FTS (S)	%.			61	40-135	
13C26:2FTS (S)	%.			69	40-215	
13C28:2FTS (S)	%.			72	40-275	
13C3-PFBS (S)	%.			96	40-135	
13C3-PFHxS (S)	%.			89	40-130	
13C3-PFPrA (S)	%.			65	8-130	
13C3HFPO-DA (S)	%.			90	40-130	
13C4-PFBA (S)	%.			74	8-130	
13C4-PFHpA (S)	%.			85	40-130	
13C5-PFHxA (S)	%.			91	40-130	
13C5-PFPeA (S)	%.			91	35-130	
13C6-PFDA (S)	%.			93	40-130	
13C7-PFUdA (S)	%.			98	40-130	
13C8-PFOA (S)	%.			89	40-130	
13C8-PFOS (S)	%.			95	40-130	
13C8-PFOSA (S)	%.			87	40-130	
13C9-PFNA (S)	%.			94	40-130	
d3-MeFOSAA (S)	%.			69	40-135	
d3-NMeFOSA (S)	%.			79	10-130	
d5-EtFOSAA (S)	%.			64	40-150	
d5-NEtFOSA (S)	%.			79	10-130	
d7-NMeFOSE (S)	%.			86	20-130	
d9-NEtFOSE (S)	%.			83	15-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

QC Batch: 1014955
QC Batch Method: EPA 1633
Analysis Method: EPA 1633
Analysis Description: EPA 1633F Soil
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738053001, 10738053002, 10738053003, 10738053004, 10738053005, 10738053006, 10738053007, 10738053008, 10738053009, 10738053010, 10738053011, 10738053012, 10738053013, 10738053014, 10738053015, 10738053016, 10738053017, 10738053018, 10738053019, 10738053020

METHOD BLANK: 5291240
Matrix: Solid
Associated Lab Samples: 10738053001, 10738053002, 10738053003, 10738053004, 10738053005, 10738053006, 10738053007, 10738053008, 10738053009, 10738053010, 10738053011, 10738053012, 10738053013, 10738053014, 10738053015, 10738053016, 10738053017, 10738053018, 10738053019, 10738053020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/kg	ND	0.80	06/30/25 13:53	
3:3 FTCA	ug/kg	ND	1.0	06/30/25 13:53	
4:2 FTS	ug/kg	ND	0.80	06/30/25 13:53	
5:3 FTCA	ug/kg	ND	5.0	06/30/25 13:53	
6:2 FTS	ug/kg	ND	0.80	06/30/25 13:53	
7:3 FTCA	ug/kg	ND	5.0	06/30/25 13:53	
8:2 FTS	ug/kg	ND	0.80	06/30/25 13:53	
9Cl-PF3ONS	ug/kg	ND	0.80	06/30/25 13:53	
ADONA	ug/kg	ND	0.80	06/30/25 13:53	
HFPO-DA	ug/kg	ND	0.80	06/30/25 13:53	
NEtFOSA	ug/kg	ND	0.20	06/30/25 13:53	
NEtFOSAA	ug/kg	ND	0.20	06/30/25 13:53	
NEtFOSE	ug/kg	ND	2.0	06/30/25 13:53	
NFDHA	ug/kg	ND	0.40	06/30/25 13:53	
NMeFOSA	ug/kg	ND	0.20	06/30/25 13:53	
NMeFOSAA	ug/kg	ND	0.20	06/30/25 13:53	
NMeFOSE	ug/kg	ND	2.0	06/30/25 13:53	
PFBA	ug/kg	ND	0.80	06/30/25 13:53	
PFBS	ug/kg	ND	0.20	06/30/25 13:53	
PFDA	ug/kg	ND	0.20	06/30/25 13:53	
PFDoA	ug/kg	ND	0.20	06/30/25 13:53	
PFDoS	ug/kg	ND	0.20	06/30/25 13:53	
PFDS	ug/kg	ND	0.20	06/30/25 13:53	
PFEESA	ug/kg	ND	0.40	06/30/25 13:53	
PFHpA	ug/kg	ND	0.20	06/30/25 13:53	
PFHpS	ug/kg	ND	0.20	06/30/25 13:53	
PFHxA	ug/kg	ND	0.20	06/30/25 13:53	
PFHxS	ug/kg	ND	0.20	06/30/25 13:53	
PFMBA	ug/kg	ND	0.40	06/30/25 13:53	
PFMPA	ug/kg	ND	0.40	06/30/25 13:53	
PFNA	ug/kg	ND	0.20	06/30/25 13:53	
PFNS	ug/kg	ND	0.20	06/30/25 13:53	
PFOA	ug/kg	ND	0.20	06/30/25 13:53	
PFOS	ug/kg	ND	0.20	06/30/25 13:53	
PFOSA	ug/kg	ND	0.20	06/30/25 13:53	
PFPeA	ug/kg	ND	0.40	06/30/25 13:53	
PFPeS	ug/kg	ND	0.20	06/30/25 13:53	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

METHOD BLANK: 5291240 Matrix: Solid

Associated Lab Samples: 10738053001, 10738053002, 10738053003, 10738053004, 10738053005, 10738053006, 10738053007, 10738053008, 10738053009, 10738053010, 10738053011, 10738053012, 10738053013, 10738053014, 10738053015, 10738053016, 10738053017, 10738053018, 10738053019, 10738053020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PFTeDA	ug/kg	ND	0.20	06/30/25 13:53	
PFTrDA	ug/kg	ND	0.20	06/30/25 13:53	
PFUnA	ug/kg	ND	0.20	06/30/25 13:53	
13C2-PFDoA (S)	%.	60	40-130	06/30/25 13:53	
13C2-PFTA (S)	%.	52	20-130	06/30/25 13:53	
13C24:2FTS (S)	%.	70	40-135	06/30/25 13:53	
13C26:2FTS (S)	%.	62	40-215	06/30/25 13:53	
13C28:2FTS (S)	%.	60	40-275	06/30/25 13:53	
13C3-PFBS (S)	%.	73	40-135	06/30/25 13:53	
13C3-PFHxS (S)	%.	63	40-130	06/30/25 13:53	
13C3-PFPrA (S)	%.	56	8-130	06/30/25 13:53	
13C3HFPO-DA (S)	%.	70	40-130	06/30/25 13:53	
13C4-PFBA (S)	%.	59	8-130	06/30/25 13:53	
13C4-PFHpA (S)	%.	65	40-130	06/30/25 13:53	
13C5-PFHxA (S)	%.	69	40-130	06/30/25 13:53	
13C5-PFPeA (S)	%.	74	35-130	06/30/25 13:53	
13C6-PFDA (S)	%.	63	40-130	06/30/25 13:53	
13C7-PFUdA (S)	%.	63	40-130	06/30/25 13:53	
13C8-PFOA (S)	%.	66	40-130	06/30/25 13:53	
13C8-PFOS (S)	%.	63	40-130	06/30/25 13:53	
13C8-PFOSA (S)	%.	70	40-130	06/30/25 13:53	
13C9-PFNA (S)	%.	66	40-130	06/30/25 13:53	
d3-MeFOSAA (S)	%.	59	40-135	06/30/25 13:53	
d3-NMeFOSA (S)	%.	57	10-130	06/30/25 13:53	
d5-EtFOSAA (S)	%.	62	40-150	06/30/25 13:53	
d5-NEtFOSA (S)	%.	58	10-130	06/30/25 13:53	
d7-NMeFOSE (S)	%.	65	20-130	06/30/25 13:53	
d9-NEtFOSE (S)	%.	73	15-130	06/30/25 13:53	

LABORATORY CONTROL SAMPLE: 5291241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	7.5	8.3	110	45-160	
3:3 FTCA	ug/kg	9.9	7.6	77	45-130	
4:2 FTS	ug/kg	7.5	8.6	115	60-150	
5:3 FTCA	ug/kg	49.6	57.5	116	60-130	
6:2 FTS	ug/kg	7.7	9.0	117	55-200	
7:3 FTCA	ug/kg	49.6	59.9	121	60-150	
8:2 FTS	ug/kg	7.7	8.6	112	70-150	
9Cl-PF3ONS	ug/kg	7.5	8.9	119	70-150	
ADONA	ug/kg	7.5	9.1	120	70-160	
HFPO-DA	ug/kg	8	8.3	104	70-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5291241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSA	ug/kg	1.9	2.1	107	70-140	
NEtFOSAA	ug/kg	1.9	1.8	96	65-165	
NEtFOSE	ug/kg	19.2	21.4	111	70-135	
NFDHA	ug/kg	4	4.4	109	60-155	
NMeFOSA	ug/kg	1.9	2.2	115	70-155	
NMeFOSAA	ug/kg	1.9	2.2	116	65-155	
NMeFOSE	ug/kg	19.2	21.2	110	70-140	
PFBA	ug/kg	8	8.6	107	70-140	
PFBS	ug/kg	1.8	1.9	109	65-145	
PFDA	ug/kg	1.9	2.1	110	70-155	
PFDoA	ug/kg	1.9	2.1	112	70-150	
PFDoS	ug/kg	1.9	1.9	100	25-160	
PFDS	ug/kg	1.9	2.0	104	40-155	
PFEESA	ug/kg	3.5	4.0	113	70-140	
PFHpA	ug/kg	1.9	2.1	112	65-145	
PFHpS	ug/kg	1.9	1.9	101	65-155	
PFHxA	ug/kg	1.9	2.1	110	65-140	
PFHxS	ug/kg	1.8	2.0	116	60-150	
PFMBA	ug/kg	4	4.4	109	60-150	
PFMPA	ug/kg	4	5.0	124	30-140	
PFNA	ug/kg	1.9	2.3	117	70-155	
PFNS	ug/kg	1.9	2.1	111	55-140	
PFOA	ug/kg	1.9	2.1	112	70-150	
PFOS	ug/kg	1.9	1.8	94	65-160	
PFOSA	ug/kg	1.9	2.2	114	70-140	
PFPeA	ug/kg	4	4.3	108	60-150	
PFPeS	ug/kg	1.9	2.1	111	55-160	
PFTeDA	ug/kg	1.9	2.2	116	65-150	
PFTrDA	ug/kg	1.9	2.1	109	65-150	
PFUnA	ug/kg	1.9	2.2	117	70-155	
13C2-PFDoA (S)	%.			57	40-130	
13C2-PFTA (S)	%.			50	20-130	
13C24:2FTS (S)	%.			65	40-135	
13C26:2FTS (S)	%.			59	40-215	
13C28:2FTS (S)	%.			58	40-275	
13C3-PFBS (S)	%.			69	40-135	
13C3-PFHxS (S)	%.			61	40-130	
13C3-PFPrA (S)	%.			50	8-130	
13C3HFPO-DA (S)	%.			70	40-130	
13C4-PFBA (S)	%.			55	8-130	
13C4-PFHpA (S)	%.			63	40-130	
13C5-PFHxA (S)	%.			69	40-130	
13C5-PFPeA (S)	%.			73	35-130	
13C6-PFDA (S)	%.			61	40-130	
13C7-PFUdA (S)	%.			60	40-130	
13C8-PFOA (S)	%.			64	40-130	
13C8-PFOS (S)	%.			63	40-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5291241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOSA (S)	%.			69	40-130	
13C9-PFNA (S)	%.			61	40-130	
d3-MeFOSAA (S)	%.			57	40-135	
d3-NMeFOSA (S)	%.			54	10-130	
d5-EtFOSAA (S)	%.			62	40-150	
d5-NEtFOSA (S)	%.			57	10-130	
d7-NMeFOSE (S)	%.			66	20-130	
d9-NEtFOSE (S)	%.			68	15-130	

LABORATORY CONTROL SAMPLE: 5291242

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	1.5	1.7	110	45-160	
3:3 FTCA	ug/kg	2	1.3	68	45-130	
4:2 FTS	ug/kg	1.5	1.6	107	60-150	
5:3 FTCA	ug/kg	9.9	11.3	114	60-130	
6:2 FTS	ug/kg	1.5	1.8	116	55-200	
7:3 FTCA	ug/kg	9.9	11.2	113	60-150	
8:2 FTS	ug/kg	1.5	1.9	127	70-150	
9Cl-PF3ONS	ug/kg	1.5	1.8	119	70-150	
ADONA	ug/kg	1.5	1.8	116	70-160	
HFPO-DA	ug/kg	1.6	1.7	107	70-145	
NEtFOSA	ug/kg	0.38	0.40	104	70-140	
NEtFOSAA	ug/kg	0.38	0.38	99	65-165	
NEtFOSE	ug/kg	3.8	4.1	106	70-135	
NFDHA	ug/kg	0.8	0.86	108	60-155	
NMeFOSA	ug/kg	0.38	0.45	118	70-155	
NMeFOSAA	ug/kg	0.38	0.43	111	65-155	
NMeFOSE	ug/kg	3.8	4.1	106	70-140	
PFBA	ug/kg	1.6	1.7	107	70-140	
PFBS	ug/kg	0.35	0.36	103	65-145	
PFDA	ug/kg	0.38	0.41	106	70-155	
PFDoA	ug/kg	0.38	0.42	109	70-150	
PFDoS	ug/kg	0.38	0.38	100	25-160	
PFDS	ug/kg	0.38	0.42	109	40-155	
PFEESA	ug/kg	0.7	0.79	112	70-140	
PFHpA	ug/kg	0.38	0.41	106	65-145	
PFHpS	ug/kg	0.38	0.41	106	65-155	
PFHxA	ug/kg	0.38	0.43	113	65-140	
PFHxS	ug/kg	0.35	0.38	108	60-150	
PFMBA	ug/kg	0.8	0.85	107	60-150	
PFMPA	ug/kg	0.8	0.98	123	30-140	
PFNA	ug/kg	0.38	0.40	104	70-155	
PFNS	ug/kg	0.38	0.44	116	55-140	
PFOA	ug/kg	0.38	0.41	107	70-150	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

LABORATORY CONTROL SAMPLE: 5291242

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFOS	ug/kg	0.38	0.40	105	65-160	
PFOSA	ug/kg	0.38	0.41	106	70-140	
PFPeA	ug/kg	0.8	0.85	106	60-150	
PFPeS	ug/kg	0.38	0.39	103	55-160	
PFTeDA	ug/kg	0.38	0.43	111	65-150	
PFTrDA	ug/kg	0.38	0.40	105	65-150	
PFUnA	ug/kg	0.38	0.46	119	70-155	
13C2-PFDoA (S)	%.			86	40-130	
13C2-PFTA (S)	%.			72	20-130	
13C24:2FTS (S)	%.			91	40-135	
13C26:2FTS (S)	%.			85	40-215	
13C28:2FTS (S)	%.			77	40-275	
13C3-PFBS (S)	%.			89	40-135	
13C3-PFHxS (S)	%.			87	40-130	
13C3-PFPrA (S)	%.			59	8-130	
13C3HFPO-DA (S)	%.			84	40-130	
13C4-PFBA (S)	%.			64	8-130	
13C4-PFHpA (S)	%.			84	40-130	
13C5-PFHxA (S)	%.			84	40-130	
13C5-PFPeA (S)	%.			87	35-130	
13C6-PFDA (S)	%.			88	40-130	
13C7-PFUdA (S)	%.			87	40-130	
13C8-PFOA (S)	%.			90	40-130	
13C8-PFOS (S)	%.			93	40-130	
13C8-PFOSA (S)	%.			96	40-130	
13C9-PFNA (S)	%.			87	40-130	
d3-MeFOSAA (S)	%.			94	40-135	
d3-NMeFOSA (S)	%.			74	10-130	
d5-EtFOSAA (S)	%.			90	40-150	
d5-NEtFOSA (S)	%.			81	10-130	
d7-NMeFOSE (S)	%.			90	20-130	
d9-NEtFOSE (S)	%.			99	15-130	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

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.
S0	Surrogate recovery outside laboratory control limits.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10738053001	**FP-MW14-15-16.5**	ASTM D2974	1013873		
10738053002	**FP-MW14-30-31.5**	ASTM D2974	1013873		
10738053003	**FP-MW14-40-41.5**	ASTM D2974	1013873		
10738053004	**FP-MW15-5-6.5**	ASTM D2974	1013873		
10738053005	**FP-MW15-20-21.5**	ASTM D2974	1013873		
10738053006	**FP-MW15-25-26.5**	ASTM D2974	1013873		
10738053007	**FP-MW15-30-31.5**	ASTM D2974	1013873		
10738053008	**FP-MW16-5-6.5**	ASTM D2974	1013873		
10738053009	**FP-MW16-10-11.5**	ASTM D2974	1013873		
10738053010	**FP-MW16-25-26.5**	ASTM D2974	1013873		
10738053011	**FP-MW17-5-6.5**	ASTM D2974	1013873		
10738053012	**FP-MW17-10-11.5**	ASTM D2974	1013873		
10738053013	**FP-MW17-25-26.5**	ASTM D2974	1013873		
10738053014	**FP-MW18-5-6**	ASTM D2974	1013873		
10738053015	**FP-MW18-10-11.5**	ASTM D2974	1013873		
10738053016	**FP-MW18-20-20.5**	ASTM D2974	1013873		
10738053017	**FP-MW19-5-6**	ASTM D2974	1013873		
10738053018	**FP-MW19-10-11**	ASTM D2974	1013873		
10738053019	**FP-MW19-30-30.5**	ASTM D2974	1013873		
10738053020	**FP-MW20-5-6.5**	ASTM D2974	1013873		
10738053021	**FP-MW20-10-11.5**	ASTM D2974	1013874		
10738053022	**FP-MW20-20-20.5**	ASTM D2974	1013874		
10738053023	**FP-CB4-2.0**	ASTM D2974	1013874		
10738053024	**FP-CB5-6.5-6.75**	ASTM D2974	1013874		
10738053025	**FP-GEI-1-1.0**	ASTM D2974	1013874		
10738053026	**FP-GEI-2-1.0**	ASTM D2974	1013874		
10738053027	**FP-GEI-3-1.0**	ASTM D2974	1013874		
10738053023	**FP-CB4-2.0**	EPA 1633	1015015	EPA 1633	1015884
10738053001	**FP-MW14-15-16.5**	EPA 1633	1014955	EPA 1633	1016116
10738053002	**FP-MW14-30-31.5**	EPA 1633	1014955	EPA 1633	1016116
10738053003	**FP-MW14-40-41.5**	EPA 1633	1014955	EPA 1633	1016116
10738053004	**FP-MW15-5-6.5**	EPA 1633	1014955	EPA 1633	1016116
10738053005	**FP-MW15-20-21.5**	EPA 1633	1014955	EPA 1633	1016116
10738053006	**FP-MW15-25-26.5**	EPA 1633	1014955	EPA 1633	1016116
10738053007	**FP-MW15-30-31.5**	EPA 1633	1014955	EPA 1633	1016116
10738053008	**FP-MW16-5-6.5**	EPA 1633	1014955	EPA 1633	1016116
10738053009	**FP-MW16-10-11.5**	EPA 1633	1014955	EPA 1633	1016116
10738053010	**FP-MW16-25-26.5**	EPA 1633	1014955	EPA 1633	1016116
10738053011	**FP-MW17-5-6.5**	EPA 1633	1014955	EPA 1633	1016116
10738053012	**FP-MW17-10-11.5**	EPA 1633	1014955	EPA 1633	1016116
10738053013	**FP-MW17-25-26.5**	EPA 1633	1014955	EPA 1633	1016116
10738053014	**FP-MW18-5-6**	EPA 1633	1014955	EPA 1633	1016116
10738053015	**FP-MW18-10-11.5**	EPA 1633	1014955	EPA 1633	1016116
10738053016	**FP-MW18-20-20.5**	EPA 1633	1014955	EPA 1633	1016116
10738053017	**FP-MW19-5-6**	EPA 1633	1014955	EPA 1633	1016116
10738053018	**FP-MW19-10-11**	EPA 1633	1014955	EPA 1633	1016116
10738053019	**FP-MW19-30-30.5**	EPA 1633	1014955	EPA 1633	1016116

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738053

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10738053020	**FP-MW20-5-6.5**	EPA 1633	1014955	EPA 1633	1016116
10738053021	**FP-MW20-10-11.5**	EPA 1633	1014701	EPA 1633	1015814
10738053022	**FP-MW20-20-20.5**	EPA 1633	1014701	EPA 1633	1015814
10738053024	**FP-CB5-6.5-6.75**	EPA 1633	1014707	EPA 1633	1015582
10738053025	**FP-GEI-1-1.0**	EPA 1633	1014707	EPA 1633	1015582
10738053026	**FP-GEI-2-1.0**	EPA 1633	1014707	EPA 1633	1015582
10738053027	**FP-GEI-3-1.0**	EPA 1633	1014707	EPA 1633	1015582

Pace® Location Requested (City/State):

CHAIN-OF-CUSTODY Analytical Request Document

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

WO# : 10738053

10738053

Company Name: GeoEngineers, Inc.	Contact/Report To: Jacob Letts
Street Address: 1101 Fawcett Avenue, Suite 200 Tacoma, Washington 98402	Phone #: 253.722.2419
	E-Mail: jletts@geoengineers.com
	Cc E-Mail: mbush@geoengineers.com
Customer Project #: 005530-015-00	Invoice to:
Project Name: Paine Field FTP Supplemental Data Gaps Investigation	Invoice E-mail: ap@geoengineers.com
Site Collection Info/Facility ID (as applicable): Paine Airfield	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	County / State origin of sample(s): Snohomish County, Washington
Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [X] EQUIS [ ] Other	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other _____
	Date Results Requested:
	DW PWSID # or WW Permit # as applicable:
	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 (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 10

Identify Container Preservative Type***: 1

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: / AcctNum / Client ID: / Table #: / Profile / Template: / Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS by EPA Method 1633	% Moisture	Sample Comment
FP-MW14-15-16.5	SS	Grab			6/4/2025	0902	1			X	X	001
FP-MW14-30-31.5	SS	Grab			6/4/2025	0925	1			X	X	002
FP-MW14-40-41.5	SS	Grab			6/4/2025	0950	1			X	X	003
FP-MW15-5-6.5	SS	Grab			6/4/2025	1345	1			X	X	004
FP-MW15-20-21.5	SS	Grab			6/4/2025	1400	1			X	X	005
FP-MW15-25-26.5	SS	Grab			6/4/2025	1410	1			X	X	006
FP-MW15-30-31.5	SS	Grab			6/4/2025	1420	1			X	X	007
FP-MW16-5-6.5	SS	Grab			6/3/2025	0815	1			X	X	008
FP-MW16-10-11.5	SS	Grab			6/3/2025	0820	1			X	X	009
FP-MW16-25-26.5	SS	Grab			6/3/2025	0900	1			X	X	010

Additional Instructions from Pace® :

see email to PM for specific Equis EDD format request

Collected By:
Printed Name
Signature

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C):	Corrected Temp. (°C):	[ ] On Ice
1	TH	-.2	5.4	5.2	Y

Relinquished by/Company: (Signature) Mailed to FedEx	Date/Time: 6/9/2025 0745	Received by/Company: (Signature) Michi Pace	Date/Time: 6/10/25 0850	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

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

ENV-FRM-CORQ-0019_v02_110123 ©

Page 88 of 88

EZ 3264616

Pace® Location Requested (City/State):

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

Scan QR Code for instructions

Company Name: GeoEngineers, Inc.

Street Address: 1101 Fawcett Avenue, Suite 200 Tacoma, Washington 98402

Customer Project #: 005530-015-00

Project Name: Paine Field FTP Supplemental Data Gaps Investigation

Site Collection Info/Facility ID (as applicable): Paine Airfield

Contact/Report To: Jacob Letts

Phone #: 253.722.2419

E-Mail: jletts@geoengineers.com

Cc E-Mail: mbush@geoengineers.com

Invoice to:

Invoice E-mail: ap@geoengineers.com

Purchase Order # (if applicable):

Quote #:

Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Snohomish County, Washington

Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [X] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other

Date Results Requested:

DW PWSID # or WW Permit # as applicable:

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

Analysis:

Specify Container Size **: 10

Identify Container Preservative Type***: 1

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: / AcctNum / Client ID: / Table #: / Profile / Template: / Prelog / Bottle Ord. ID:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS by EPA Method 1633	% Moisture	Sample Comment	Preservation non-conformance identified for sample.
FP-MW17-5-6.5	SS	Grab			6/3/2025	1055	1			X	X	011	
FP-MW17-10-11.5	SS	Grab			6/3/2025	1105	1			X	X	012	
FP-MW17-25-26.5	SS	Grab			6/3/2025	1115	1			X	X	013	
FP-MW18-5-6	SS	Grab			6/2/2025	1235	1			X	X	014	
FP-MW18-10-11.5	SS	Grab			6/2/2025	1245	1			X	X	015	
FP-MW18-20-20.5	SS	Grab			6/2/2025	1310	1			X	X	016	
FP-MW19-5-6	SS	Grab			6/2/2025	0924	1			X	X	017	
FP-MW19-10-11	SS	Grab			6/2/2025	0930	1			X	X	018	
FP-MW19-30-30.5	SS	Grab			6/2/2025	1015	1			X	X	019	
FP-MW20-5-6.5	SS	Grab			6/3/2025	1455	1			X	X	020	

Additional Instructions from Pace®: see email to PM for specific Equis EDD format request

Collected By: Printed Name / Signature

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C): | Corrected Temp. (°C): | [ ] On Ice

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
[signature]	6/9/2025 0745	[signature] Pace	6/10/25 950	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

Pace® Location Requested (City/State):

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

Scan QR Code for instructions

Company Name: GeoEngineers, Inc.	Contact/Report To: Jacob Letts
Street Address: 1101 Fawcett Avenue, Suite 200 Tacoma, Washington 98402	Phone #: 253.722.2419
	E-Mail: jletts@geoengineers.com
	Cc E-Mail: mbush@geoengineers.com
Customer Project #: 005530-015-00	Invoice to:
Project Name: Paine Field FTP Supplemental Data Gaps Investigation	Invoice E-mail: ap@geoengineers.com
Site Collection Info/Facility ID (as applicable): Paine Airfield	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	County / State origin of sample(s): Snohomish County, Washington
Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [X] EQUIS [ ] Other	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other
	DW PWSID # or WW Permit # as applicable:
	Date Results Requested:
	Field Filtered (if applicable): [ ] Yes [ ] No
	Analysis:

Specify Container Size **: 10

Identify Container Preservative Type***: 1

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS by EPA Method 1633	% Moisture	Sample Comment
FP-MW20-10-11.5	SS	Grab			6/3/2025	1502	1			X	X	021
FP-MW20-20-20.5	SS	Grab			6/3/2025	1540	1			X	X	022
FP-CB4-2.0	SS	Grab			6/3/2025	1245	1			X	X	023
FP-CB5-6.5-6.75	SS	Grab			6/3/2025	0950	1			X	X	024
FP-GEI-1-1.0	SS	Grab			6/3/2025	1045	1			X	X	025
FP-GEI-2-1.0	SS	Grab			6/3/2025	1345	1			X	X	026
FP-GEI-3-1.0	SS	Grab			6/3/2025	1500	1			X	X	027

Lab Use Only: Proj. Mgr: | AcctNum / Client ID: | Table #: | Profile / Template: | Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
see email to PM for specific Equis EDD format request

Collected By:
Printed Name
Signature

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C): | Corrected Temp. (°C): | [ ] On Ice

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
[illegible] to FedEx	6/9/2025 0745	0745 [illegible] Pace	61025 850	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

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

ENV-FRM-CORQ-0019_v02_110123 ©

ENV-FRM-MIN4-0150 v19_Sample Condition Upon Receipt

Person Examining & Date: 61025 MS **PROJECT #** **WO#: 10738053**

PM: IJJ **Due Date: 07/01/25**

CLIENT: GEOENG

Client Name: Geo Engineers

Custody Seal Present: ☑ YES ☐ NO **Seals Intact:** ☑ YES ☐ NO

Tracking Number: 8818 0590 7914 ☐ See Exceptions form ENV-FRM-MIN4-0142.

Courier: ☐ Client ☐ Commercial ☑ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☐ Bubble Bags ☐ Bubble Wrap ☑ None ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☑ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☑ T4 (0402) ☐ T5 (0187) ☐ T6 (0396) ☐ T7 (0377) ☐ T8 (0775) ☐ T9 (0428) ☐ 01339252 (0710)

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

Temp Blank: ☑ YES ☐ NO

***NOTE:** Temp should be ≤ 6°C, but above freezing.*

Read Temp w/Temp Blank: 5.4 °C

Correction Factor: -.2

Corrected Temp w/Temp Blank: 5.2 °C

Did Samples Originate in West Virginia: ☐ YES ☑ NO (list temps on exception)

Were All Container Temps Taken: ☐ YES ☐ NO ☑ N/A

Average Corrected Temp (No Temp Blank Only): _____

☐ See Exceptions form ENV-FRM-MIN4-0142. ☐ 1 Container

USDA Regulated Soil: ☐ N/A – Water Sample/Other (describe): _____

Did Samples originate from one of the following states (check maps): ☐ YES ☑ NO

Circle State: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA

Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☑ NO

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

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☐	☑	☐	3.
Samples Arrived within Hold Time? If Fecal: ☐ <8 hrs ☐ >8 hr but <24 hr ☐ >24 hr	☑	☐		4.
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other: _____
Rush Turn Around Time Requested?	☐	☑		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date: _____
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8. 1x NTCU each
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☑ Soil ☐ Water ☐ Other	☑	☐	☐	11. ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐	☐	☑	12.
Sample #: ☐ HNO3 _____ ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____ **pH Paper Lot #:** ☐ Residual Chlorine _____ ☐ 0-6 Roll _____ ☐ 0-6 Strip _____ ☐ 0-14 Strip _____ **Positive for Residual Chlorine (NaOH containers only):** ☐ YES ☐ NO				
Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0142
EXCECTIONS (water only): VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☐	☐	☑	
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☑	13.
Headspace in Methyl Mercury Container?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION / RESOLUTION:

Labeled By: MS **Line:** 3

Person Contacted & Date/Time: _____ **PM Review & Date:** Isaac Johnson 6/11/25

***NOTE:** When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

July 03, 2025

Jacob Letts
Geoengineers
1101 S Fawcett Ave
Suite 200

Tacoma, WA 98402

RE: Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Dear Jacob Letts:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2025. 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,

Isaac Johnson
isaac.johnson@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10738047001	**FP-SW2-250604**	Water	06/04/25 09:55	06/10/25 08:50
10738047002	**FP-SW6-250603**	Water	06/03/25 15:30	06/10/25 08:50
10738047003	**FP-SW7-250603**	Water	06/03/25 11:00	06/10/25 08:50
10738047004	**FP-SW8-250603**	Water	06/03/25 10:30	06/10/25 08:50
10738047005	**FP-CB1-250604**	Water	06/04/25 09:45	06/10/25 08:50
10738047006	**FP-CB2-250604**	Water	06/04/25 09:00	06/10/25 08:50
10738047007	**FP-CB3-250604**	Water	06/04/25 09:20	06/10/25 08:50
10738047008	**FP-CB4-250603**	Water	06/03/25 12:40	06/10/25 08:50
10738047009	**FP-CB6-250603**	Water	06/03/25 11:50	06/10/25 08:50

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10738047001	**FP-SW2-250604**	EPA 1633	MJL	65
10738047002	**FP-SW6-250603**	EPA 1633	MJL	65
10738047003	**FP-SW7-250603**	EPA 1633	MJL	65
10738047004	**FP-SW8-250603**	EPA 1633	MJL	65
10738047005	**FP-CB1-250604**	EPA 1633	MJL	65
10738047006	**FP-CB2-250604**	EPA 1633	MJL	65
10738047007	**FP-CB3-250604**	EPA 1633	MJL	65
10738047008	**FP-CB4-250603**	EPA 1633	MJL	65
10738047009	**FP-CB6-250603**	EPA 1633	MJL	65

PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW2-250604 **Lab ID: 10738047001** Collected: 06/04/25 09:55 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	763051-92-9	
3:3 FTCA	ND	ng/L	4000	1	06/27/25 14:06	06/30/25 17:52	356-02-5	
4:2 FTS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	757124-72-4	
5:3 FTCA	ND	ng/L	20000	1	06/27/25 14:06	06/30/25 17:52	914637-49-3	
6:2 FTS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	27619-97-2	
7:3 FTCA	ND	ng/L	20000	1	06/27/25 14:06	06/30/25 17:52	812-70-4	
8:2 FTS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	39108-34-4	
9Cl-PF3ONS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	756426-58-1	
ADONA	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	919005-14-4	
HFPO-DA	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	13252-13-6	
NEtFOSAA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	2991-50-6	
NEtFOSA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	4151-50-2	
NEtFOSE	ND	ng/L	8000	1	06/27/25 14:06	06/30/25 17:52	1691-99-2	
NFDHA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 17:52	151772-58-6	
NMeFOSAA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	2355-31-9	
NMeFOSA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	31506-32-8	
NMeFOSE	ND	ng/L	8000	1	06/27/25 14:06	06/30/25 17:52	24448-09-7	
PFBS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	375-73-5	
PFDA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	335-76-2	
PFHxA	**3180**	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	307-24-4	
PFBA	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 17:52	375-22-4	
PFDS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	335-77-3	
PFDoS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	79780-39-5	
PFEESA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 17:52	113507-82-7	
PFHpS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	375-92-8	
PFMBA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 17:52	863090-89-5	
PFMPA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 17:52	377-73-1	
PFNS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	68259-12-1	
PFOSA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	754-91-6	
PFPeA	**7140**	ng/L	1600	1	06/27/25 14:06	06/30/25 17:52	2706-90-3	
PFPeS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	2706-91-4	
PFDoA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	307-55-1	
PFHpA	**883**	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	375-85-9	
PFHxS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	355-46-4	
PFNA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	375-95-1	
PFOS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	1763-23-1	
PFOA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	335-67-1	
PFTeDA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	376-06-7	
PFTrDA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	72629-94-8	
PFUnA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 17:52	2058-94-8	
Surrogates								
13C2-PFDoA (S)	77	%.	10-130	1	06/27/25 14:06	06/30/25 17:52		
13C3HFPO-DA (S)	85	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C3-PFBS (S)	86	%.	40-135	1	06/27/25 14:06	06/30/25 17:52		
13C3-PFHxS (S)	80	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C4-PFBA (S)	85	%.	5-130	1	06/27/25 14:06	06/30/25 17:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW2-250604 **Lab ID: 10738047001** Collected: 06/04/25 09:55 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C5-PFHxA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C5-PFPeA (S)	87	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C6-PFDA (S)	83	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C8-PFOA (S)	82	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C8-PFOS (S)	82	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C8-PFOSA (S)	76	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
13C9-PFNA (S)	82	%.	40-130	1	06/27/25 14:06	06/30/25 17:52		
d3-MeFOSAA (S)	77	%.	40-170	1	06/27/25 14:06	06/30/25 17:52		
d3-NMeFOSA (S)	48	%.	10-130	1	06/27/25 14:06	06/30/25 17:52		
d5-EtFOSAA (S)	77	%.	25-135	1	06/27/25 14:06	06/30/25 17:52		
d5-NEtFOSA (S)	46	%.	10-130	1	06/27/25 14:06	06/30/25 17:52		
d7-NMeFOSE (S)	58	%.	10-130	1	06/27/25 14:06	06/30/25 17:52		
d9-NEtFOSE (S)	53	%.	10-130	1	06/27/25 14:06	06/30/25 17:52		
13C2-PFTA (S)	73	%.	10-130	1	06/27/25 14:06	06/30/25 17:52		
13C7-PFUdA (S)	82	%.	30-130	1	06/27/25 14:06	06/30/25 17:52		
13C24:2FTS (S)	96	%.	40-200	1	06/27/25 14:06	06/30/25 17:52		
13C26:2FTS (S)	96	%.	40-200	1	06/27/25 14:06	06/30/25 17:52		
13C28:2FTS (S)	86	%.	40-300	1	06/27/25 14:06	06/30/25 17:52		
13C3-PFPrA (S)	91	%.	5-130	1	06/27/25 14:06	06/30/25 17:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW6-250603 **Lab ID: 10738047002** Collected: 06/03/25 15:30 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	763051-92-9	
3:3 FTCA	ND	ng/L	4000	1	06/27/25 14:06	06/30/25 18:06	356-02-5	
4:2 FTS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	757124-72-4	
5:3 FTCA	ND	ng/L	20000	1	06/27/25 14:06	06/30/25 18:06	914637-49-3	
6:2 FTS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	27619-97-2	
7:3 FTCA	ND	ng/L	20000	1	06/27/25 14:06	06/30/25 18:06	812-70-4	
8:2 FTS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	39108-34-4	
9Cl-PF3ONS	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	756426-58-1	
ADONA	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	919005-14-4	
HFPO-DA	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	13252-13-6	
NEtFOSAA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	2991-50-6	
NEtFOSA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	4151-50-2	
NEtFOSE	ND	ng/L	8000	1	06/27/25 14:06	06/30/25 18:06	1691-99-2	
NFDHA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 18:06	151772-58-6	
NMeFOSAA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	2355-31-9	
NMeFOSA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	31506-32-8	
NMeFOSE	ND	ng/L	8000	1	06/27/25 14:06	06/30/25 18:06	24448-09-7	
PFBS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	375-73-5	
PFDA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	335-76-2	
PFHxA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	307-24-4	
PFBA	ND	ng/L	3200	1	06/27/25 14:06	06/30/25 18:06	375-22-4	
PFDS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	335-77-3	
PFDoS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	79780-39-5	
PFEESA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 18:06	113507-82-7	
PFHpS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	375-92-8	
PFMBA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 18:06	863090-89-5	
PFMPA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 18:06	377-73-1	
PFNS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	68259-12-1	
PFOSA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	754-91-6	
PFPeA	ND	ng/L	1600	1	06/27/25 14:06	06/30/25 18:06	2706-90-3	
PFPeS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	2706-91-4	
PFDoA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	307-55-1	
PFHpA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	375-85-9	
PFHxS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	355-46-4	
PFNA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	375-95-1	
PFOS	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	1763-23-1	
PFOA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	335-67-1	
PFTeDA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	376-06-7	
PFTrDA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	72629-94-8	
PFUnA	ND	ng/L	800	1	06/27/25 14:06	06/30/25 18:06	2058-94-8	
Surrogates								
13C2-PFDoA (S)	102	%.	10-130	1	06/27/25 14:06	06/30/25 18:06		
13C3HFPO-DA (S)	109	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C3-PFBS (S)	116	%.	40-135	1	06/27/25 14:06	06/30/25 18:06		
13C3-PFHxS (S)	110	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C4-PFBA (S)	115	%.	5-130	1	06/27/25 14:06	06/30/25 18:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW6-250603 **Lab ID: 10738047002** Collected: 06/03/25 15:30 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	114	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C5-PFHxA (S)	115	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C5-PFPeA (S)	114	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C6-PFDA (S)	116	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C8-PFOA (S)	113	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C8-PFOS (S)	116	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C8-PFOSA (S)	97	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
13C9-PFNA (S)	113	%.	40-130	1	06/27/25 14:06	06/30/25 18:06		
d3-MeFOSAA (S)	117	%.	40-170	1	06/27/25 14:06	06/30/25 18:06		
d3-NMeFOSA (S)	58	%.	10-130	1	06/27/25 14:06	06/30/25 18:06		
d5-EtFOSAA (S)	113	%.	25-135	1	06/27/25 14:06	06/30/25 18:06		
d5-NEtFOSA (S)	59	%.	10-130	1	06/27/25 14:06	06/30/25 18:06		
d7-NMeFOSE (S)	73	%.	10-130	1	06/27/25 14:06	06/30/25 18:06		
d9-NEtFOSE (S)	66	%.	10-130	1	06/27/25 14:06	06/30/25 18:06		
13C2-PFTA (S)	96	%.	10-130	1	06/27/25 14:06	06/30/25 18:06		
13C7-PFUdA (S)	108	%.	30-130	1	06/27/25 14:06	06/30/25 18:06		
13C24:2FTS (S)	138	%.	40-200	1	06/27/25 14:06	06/30/25 18:06		
13C26:2FTS (S)	132	%.	40-200	1	06/27/25 14:06	06/30/25 18:06		
13C28:2FTS (S)	120	%.	40-300	1	06/27/25 14:06	06/30/25 18:06		
13C3-PFPrA (S)	112	%.	5-130	1	06/27/25 14:06	06/30/25 18:06		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW7-250603 **Lab ID: 10738047003** Collected: 06/03/25 11:00 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	763051-92-9	
3:3 FTCA	ND	ng/L	31.8	1	06/27/25 14:06	06/30/25 18:20	356-02-5	
4:2 FTS	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	757124-72-4	
5:3 FTCA	ND	ng/L	159	1	06/27/25 14:06	06/30/25 18:20	914637-49-3	
6:2 FTS	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	27619-97-2	
7:3 FTCA	ND	ng/L	159	1	06/27/25 14:06	06/30/25 18:20	812-70-4	
8:2 FTS	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	39108-34-4	
9Cl-PF3ONS	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	756426-58-1	
ADONA	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	919005-14-4	
HFPO-DA	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	13252-13-6	
NEtFOSAA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	2991-50-6	
NEtFOSA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	4151-50-2	
NEtFOSE	ND	ng/L	63.7	1	06/27/25 14:06	06/30/25 18:20	1691-99-2	
NFDHA	ND	ng/L	12.7	1	06/27/25 14:06	06/30/25 18:20	151772-58-6	
NMeFOSAA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	2355-31-9	
NMeFOSA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	31506-32-8	
NMeFOSE	ND	ng/L	63.7	1	06/27/25 14:06	06/30/25 18:20	24448-09-7	
PFBS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	375-73-5	
PFDA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	335-76-2	
PFHxA	**6.5**	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	307-24-4	
PFBA	ND	ng/L	25.5	1	06/27/25 14:06	06/30/25 18:20	375-22-4	
PFDS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	335-77-3	
PFDoS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	79780-39-5	
PFEESA	ND	ng/L	12.7	1	06/27/25 14:06	06/30/25 18:20	113507-82-7	
PFHpS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	375-92-8	
PFMBA	ND	ng/L	12.7	1	06/27/25 14:06	06/30/25 18:20	863090-89-5	
PFMPA	ND	ng/L	12.7	1	06/27/25 14:06	06/30/25 18:20	377-73-1	
PFNS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	68259-12-1	
PFOSA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	754-91-6	
PFPeA	ND	ng/L	12.7	1	06/27/25 14:06	06/30/25 18:20	2706-90-3	
PFPeS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	2706-91-4	
PFDoA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	307-55-1	
PFHpA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	375-85-9	
PFHxS	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	355-46-4	
PFNA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	375-95-1	
PFOS	**7.2**	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	1763-23-1	
PFOA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	335-67-1	
PFTeDA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	376-06-7	
PFTrDA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	72629-94-8	
PFUnA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 18:20	2058-94-8	
Surrogates								
13C2-PFDoA (S)	55	%.	10-130	1	06/27/25 14:06	06/30/25 18:20		
13C3HFPO-DA (S)	87	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C3-PFBS (S)	82	%.	40-135	1	06/27/25 14:06	06/30/25 18:20		
13C3-PFHxS (S)	81	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C4-PFBA (S)	87	%.	5-130	1	06/27/25 14:06	06/30/25 18:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW7-250603 **Lab ID: 10738047003** Collected: 06/03/25 11:00 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	86	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C5-PFHxA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C5-PFPeA (S)	89	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C6-PFDA (S)	69	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C8-PFOA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C8-PFOS (S)	76	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C8-PFOSA (S)	56	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
13C9-PFNA (S)	84	%.	40-130	1	06/27/25 14:06	06/30/25 18:20		
d3-MeFOSAA (S)	59	%.	40-170	1	06/27/25 14:06	06/30/25 18:20		
d3-NMeFOSA (S)	49	%.	10-130	1	06/27/25 14:06	06/30/25 18:20		
d5-EtFOSAA (S)	59	%.	25-135	1	06/27/25 14:06	06/30/25 18:20		
d5-NEtFOSA (S)	50	%.	10-130	1	06/27/25 14:06	06/30/25 18:20		
d7-NMeFOSE (S)	53	%.	10-130	1	06/27/25 14:06	06/30/25 18:20		
d9-NEtFOSE (S)	50	%.	10-130	1	06/27/25 14:06	06/30/25 18:20		
13C2-PFTA (S)	36	%.	10-130	1	06/27/25 14:06	06/30/25 18:20		
13C7-PFUdA (S)	54	%.	30-130	1	06/27/25 14:06	06/30/25 18:20		
13C24:2FTS (S)	141	%.	40-200	1	06/27/25 14:06	06/30/25 18:20		
13C26:2FTS (S)	114	%.	40-200	1	06/27/25 14:06	06/30/25 18:20		
13C28:2FTS (S)	71	%.	40-300	1	06/27/25 14:06	06/30/25 18:20		
13C3-PFPrA (S)	85	%.	5-130	1	06/27/25 14:06	06/30/25 18:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW8-250603 **Lab ID: 10738047004** Collected: 06/03/25 10:30 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	763051-92-9	
3:3 FTCA	ND	ng/L	78.4	1	06/27/25 14:06	06/30/25 18:35	356-02-5	
4:2 FTS	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	757124-72-4	
5:3 FTCA	ND	ng/L	392	1	06/27/25 14:06	06/30/25 18:35	914637-49-3	
6:2 FTS	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	27619-97-2	
7:3 FTCA	ND	ng/L	392	1	06/27/25 14:06	06/30/25 18:35	812-70-4	
8:2 FTS	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	39108-34-4	
9Cl-PF3ONS	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	756426-58-1	
ADONA	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	919005-14-4	
HFPO-DA	ND	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	13252-13-6	
NEtFOSAA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	2991-50-6	
NEtFOSA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	4151-50-2	
NEtFOSE	ND	ng/L	157	1	06/27/25 14:06	06/30/25 18:35	1691-99-2	
NFDHA	ND	ng/L	31.4	1	06/27/25 14:06	06/30/25 18:35	151772-58-6	
NMeFOSAA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	2355-31-9	
NMeFOSA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	31506-32-8	
NMeFOSE	ND	ng/L	157	1	06/27/25 14:06	06/30/25 18:35	24448-09-7	
PFBS	**33.4**	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	375-73-5	
PFDA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	335-76-2	
PFHxA	**783**	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	307-24-4	
PFBA	**349**	ng/L	62.7	1	06/27/25 14:06	06/30/25 18:35	375-22-4	
PFDS	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	335-77-3	
PFDoS	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	79780-39-5	
PFEESA	ND	ng/L	31.4	1	06/27/25 14:06	06/30/25 18:35	113507-82-7	
PFHpS	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	375-92-8	
PFMBA	ND	ng/L	31.4	1	06/27/25 14:06	06/30/25 18:35	863090-89-5	
PFMPA	ND	ng/L	31.4	1	06/27/25 14:06	06/30/25 18:35	377-73-1	
PFNS	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	68259-12-1	
PFOSA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	754-91-6	
PFPeA	**1830**	ng/L	31.4	1	06/27/25 14:06	06/30/25 18:35	2706-90-3	
PFPeS	**30.0**	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	2706-91-4	
PFDoA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	307-55-1	
PFHpA	**240**	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	375-85-9	
PFHxS	**283**	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	355-46-4	
PFNA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	375-95-1	
PFOS	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	1763-23-1	
PFOA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	335-67-1	
PFTeDA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	376-06-7	
PFTrDA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	72629-94-8	
PFUnA	ND	ng/L	15.7	1	06/27/25 14:06	06/30/25 18:35	2058-94-8	
Surrogates								
13C2-PFDoA (S)	76	%.	10-130	1	06/27/25 14:06	06/30/25 18:35		
13C3HFPO-DA (S)	87	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C3-PFBS (S)	88	%.	40-135	1	06/27/25 14:06	06/30/25 18:35		
13C3-PFHxS (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C4-PFBA (S)	90	%.	5-130	1	06/27/25 14:06	06/30/25 18:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-SW8-250603 **Lab ID: 10738047004** Collected: 06/03/25 10:30 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	90	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C5-PFHxA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C5-PFPeA (S)	87	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C6-PFDA (S)	85	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C8-PFOA (S)	86	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C8-PFOS (S)	82	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C8-PFOSA (S)	73	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
13C9-PFNA (S)	91	%.	40-130	1	06/27/25 14:06	06/30/25 18:35		
d3-MeFOSAA (S)	83	%.	40-170	1	06/27/25 14:06	06/30/25 18:35		
d3-NMeFOSA (S)	59	%.	10-130	1	06/27/25 14:06	06/30/25 18:35		
d5-EtFOSAA (S)	82	%.	25-135	1	06/27/25 14:06	06/30/25 18:35		
d5-NEtFOSA (S)	57	%.	10-130	1	06/27/25 14:06	06/30/25 18:35		
d7-NMeFOSE (S)	68	%.	10-130	1	06/27/25 14:06	06/30/25 18:35		
d9-NEtFOSE (S)	66	%.	10-130	1	06/27/25 14:06	06/30/25 18:35		
13C2-PFTA (S)	73	%.	10-130	1	06/27/25 14:06	06/30/25 18:35		
13C7-PFUdA (S)	78	%.	30-130	1	06/27/25 14:06	06/30/25 18:35		
13C24:2FTS (S)	117	%.	40-200	1	06/27/25 14:06	06/30/25 18:35		
13C26:2FTS (S)	106	%.	40-200	1	06/27/25 14:06	06/30/25 18:35		
13C28:2FTS (S)	94	%.	40-300	1	06/27/25 14:06	06/30/25 18:35		
13C3-PFPrA (S)	96	%.	5-130	1	06/27/25 14:06	06/30/25 18:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB1-250604 **Lab ID: 10738047005** Collected: 06/04/25 09:45 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	763051-92-9	
3:3 FTCA	ND	ng/L	30.7	1	06/27/25 14:06	06/30/25 18:49	356-02-5	
4:2 FTS	ND	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	757124-72-4	
5:3 FTCA	ND	ng/L	154	1	06/27/25 14:06	06/30/25 18:49	914637-49-3	
6:2 FTS	**654**	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	27619-97-2	
7:3 FTCA	ND	ng/L	154	1	06/27/25 14:06	06/30/25 18:49	812-70-4	
8:2 FTS	ND	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	39108-34-4	
9Cl-PF3ONS	ND	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	756426-58-1	
ADONA	ND	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	919005-14-4	
HFPO-DA	ND	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	13252-13-6	
NEtFOSAA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	2991-50-6	
NEtFOSA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	4151-50-2	
NEtFOSE	ND	ng/L	61.4	1	06/27/25 14:06	06/30/25 18:49	1691-99-2	
NFDHA	ND	ng/L	12.3	1	06/27/25 14:06	06/30/25 18:49	151772-58-6	
NMeFOSAA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	2355-31-9	
NMeFOSA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	31506-32-8	
NMeFOSE	ND	ng/L	61.4	1	06/27/25 14:06	06/30/25 18:49	24448-09-7	
PFBS	**89.4**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	375-73-5	
PFDA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	335-76-2	
PFHxA	**404**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	307-24-4	
PFBA	**125**	ng/L	24.6	1	06/27/25 14:06	06/30/25 18:49	375-22-4	
PFDS	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	335-77-3	
PFDoS	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	79780-39-5	
PFEESA	ND	ng/L	12.3	1	06/27/25 14:06	06/30/25 18:49	113507-82-7	
PFHpS	**40.8**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	375-92-8	
PFMBA	ND	ng/L	12.3	1	06/27/25 14:06	06/30/25 18:49	863090-89-5	
PFMPA	ND	ng/L	12.3	1	06/27/25 14:06	06/30/25 18:49	377-73-1	
PFNS	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	68259-12-1	
PFOSA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	754-91-6	
PFPeA	**713**	ng/L	12.3	1	06/27/25 14:06	06/30/25 18:49	2706-90-3	
PFPeS	**121**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	2706-91-4	
PFDoA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	307-55-1	
PFHpA	**161**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	375-85-9	
PFHxS	**947**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	355-46-4	
PFNA	**256**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	375-95-1	
PFOS	**2950**	ng/L	61.4	10	06/27/25 14:06	07/01/25 18:16	1763-23-1	
PFOA	**189**	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	335-67-1	
PFTeDA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	376-06-7	
PFTrDA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	72629-94-8	
PFUnA	ND	ng/L	6.1	1	06/27/25 14:06	06/30/25 18:49	2058-94-8	
Surrogates								
13C2-PFDoA (S)	85	%.	10-130	1	06/27/25 14:06	06/30/25 18:49		
13C3HFPO-DA (S)	93	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C3-PFBS (S)	100	%.	40-135	1	06/27/25 14:06	06/30/25 18:49		
13C3-PFHxS (S)	95	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C4-PFBA (S)	94	%.	5-130	1	06/27/25 14:06	06/30/25 18:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB1-250604 **Lab ID: 10738047005** Collected: 06/04/25 09:45 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	94	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C5-PFHxA (S)	93	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C5-PFPeA (S)	96	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C6-PFDA (S)	96	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C8-PFOA (S)	95	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C8-PFOS (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C8-PFOSA (S)	99	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
13C9-PFNA (S)	89	%.	40-130	1	06/27/25 14:06	06/30/25 18:49		
d3-MeFOSAA (S)	92	%.	40-170	1	06/27/25 14:06	06/30/25 18:49		
d3-NMeFOSA (S)	66	%.	10-130	1	06/27/25 14:06	06/30/25 18:49		
d5-EtFOSAA (S)	81	%.	25-135	1	06/27/25 14:06	06/30/25 18:49		
d5-NEtFOSA (S)	67	%.	10-130	1	06/27/25 14:06	06/30/25 18:49		
d7-NMeFOSE (S)	85	%.	10-130	1	06/27/25 14:06	06/30/25 18:49		
d9-NEtFOSE (S)	81	%.	10-130	1	06/27/25 14:06	06/30/25 18:49		
13C2-PFTA (S)	82	%.	10-130	1	06/27/25 14:06	06/30/25 18:49		
13C7-PFUdA (S)	90	%.	30-130	1	06/27/25 14:06	06/30/25 18:49		
13C24:2FTS (S)	130	%.	40-200	1	06/27/25 14:06	06/30/25 18:49		
13C26:2FTS (S)	104	%.	40-200	1	06/27/25 14:06	06/30/25 18:49		
13C28:2FTS (S)	110	%.	40-300	1	06/27/25 14:06	06/30/25 18:49		
13C3-PFPrA (S)	97	%.	5-130	1	06/27/25 14:06	06/30/25 18:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB2-250604 **Lab ID: 10738047006** Collected: 06/04/25 09:00 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	763051-92-9	
3:3 FTCA	ND	ng/L	16.0	1	06/27/25 14:06	06/30/25 19:03	356-02-5	
4:2 FTS	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	757124-72-4	
5:3 FTCA	ND	ng/L	79.9	1	06/27/25 14:06	06/30/25 19:03	914637-49-3	
6:2 FTS	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	27619-97-2	
7:3 FTCA	ND	ng/L	79.9	1	06/27/25 14:06	06/30/25 19:03	812-70-4	
8:2 FTS	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	39108-34-4	
9Cl-PF3ONS	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	756426-58-1	
ADONA	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	919005-14-4	
HFPO-DA	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	13252-13-6	
NEtFOSAA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	2991-50-6	
NEtFOSA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	4151-50-2	
NEtFOSE	ND	ng/L	32.0	1	06/27/25 14:06	06/30/25 19:03	1691-99-2	
NFDHA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 19:03	151772-58-6	
NMeFOSAA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	2355-31-9	
NMeFOSA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	31506-32-8	
NMeFOSE	ND	ng/L	32.0	1	06/27/25 14:06	06/30/25 19:03	24448-09-7	
PFBS	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	375-73-5	
PFDA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	335-76-2	
PFHxA	**9.1**	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	307-24-4	
PFBA	ND	ng/L	12.8	1	06/27/25 14:06	06/30/25 19:03	375-22-4	
PFDS	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	335-77-3	
PFDoS	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	79780-39-5	
PFEESA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 19:03	113507-82-7	
PFHpS	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	375-92-8	
PFMBA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 19:03	863090-89-5	
PFMPA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 19:03	377-73-1	
PFNS	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	68259-12-1	
PFOSA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	754-91-6	
PFPeA	ND	ng/L	6.4	1	06/27/25 14:06	06/30/25 19:03	2706-90-3	
PFPeS	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	2706-91-4	
PFDoA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	307-55-1	
PFHpA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	375-85-9	
PFHxS	**39.8**	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	355-46-4	
PFNA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	375-95-1	
PFOS	**26.5**	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	1763-23-1	
PFOA	**4.5**	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	335-67-1	
PFTeDA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	376-06-7	
PFTrDA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	72629-94-8	
PFUnA	ND	ng/L	3.2	1	06/27/25 14:06	06/30/25 19:03	2058-94-8	
Surrogates								
13C2-PFDoA (S)	90	%.	10-130	1	06/27/25 14:06	06/30/25 19:03		
13C3HFPO-DA (S)	100	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C3-PFBS (S)	98	%.	40-135	1	06/27/25 14:06	06/30/25 19:03		
13C3-PFHxS (S)	101	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C4-PFBA (S)	105	%.	5-130	1	06/27/25 14:06	06/30/25 19:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB2-250604 **Lab ID: 10738047006** Collected: 06/04/25 09:00 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	99	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C5-PFHxA (S)	99	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C5-PFPeA (S)	104	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C6-PFDA (S)	104	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C8-PFOA (S)	104	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C8-PFOS (S)	102	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C8-PFOSA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
13C9-PFNA (S)	98	%.	40-130	1	06/27/25 14:06	06/30/25 19:03		
d3-MeFOSAA (S)	99	%.	40-170	1	06/27/25 14:06	06/30/25 19:03		
d3-NMeFOSA (S)	58	%.	10-130	1	06/27/25 14:06	06/30/25 19:03		
d5-EtFOSAA (S)	95	%.	25-135	1	06/27/25 14:06	06/30/25 19:03		
d5-NEtFOSA (S)	57	%.	10-130	1	06/27/25 14:06	06/30/25 19:03		
d7-NMeFOSE (S)	77	%.	10-130	1	06/27/25 14:06	06/30/25 19:03		
d9-NEtFOSE (S)	72	%.	10-130	1	06/27/25 14:06	06/30/25 19:03		
13C2-PFTA (S)	82	%.	10-130	1	06/27/25 14:06	06/30/25 19:03		
13C7-PFUdA (S)	97	%.	30-130	1	06/27/25 14:06	06/30/25 19:03		
13C24:2FTS (S)	189	%.	40-200	1	06/27/25 14:06	06/30/25 19:03		
13C26:2FTS (S)	148	%.	40-200	1	06/27/25 14:06	06/30/25 19:03		
13C28:2FTS (S)	122	%.	40-300	1	06/27/25 14:06	06/30/25 19:03		
13C3-PFPrA (S)	108	%.	5-130	1	06/27/25 14:06	06/30/25 19:03		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB3-250604 **Lab ID: 10738047007** Collected: 06/04/25 09:20 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	763051-92-9	
3:3 FTCA	ND	ng/L	31.3	1	06/27/25 14:06	06/30/25 19:17	356-02-5	
4:2 FTS	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	757124-72-4	
5:3 FTCA	ND	ng/L	156	1	06/27/25 14:06	06/30/25 19:17	914637-49-3	
6:2 FTS	**73.3**	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	27619-97-2	
7:3 FTCA	ND	ng/L	156	1	06/27/25 14:06	06/30/25 19:17	812-70-4	
8:2 FTS	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	39108-34-4	
9Cl-PF3ONS	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	756426-58-1	
ADONA	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	919005-14-4	
HFPO-DA	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	13252-13-6	
NEtFOSAA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	2991-50-6	
NEtFOSA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	4151-50-2	
NEtFOSE	ND	ng/L	62.6	1	06/27/25 14:06	06/30/25 19:17	1691-99-2	
NFDHA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 19:17	151772-58-6	
NMeFOSAA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	2355-31-9	
NMeFOSA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	31506-32-8	
NMeFOSE	ND	ng/L	62.6	1	06/27/25 14:06	06/30/25 19:17	24448-09-7	
PFBS	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	375-73-5	
PFDA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	335-76-2	
PFHxA	**52.5**	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	307-24-4	
PFBA	ND	ng/L	25.0	1	06/27/25 14:06	06/30/25 19:17	375-22-4	
PFDS	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	335-77-3	
PFDoS	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	79780-39-5	
PFEESA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 19:17	113507-82-7	
PFHpS	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	375-92-8	
PFMBA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 19:17	863090-89-5	
PFMPA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 19:17	377-73-1	
PFNS	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	68259-12-1	
PFOSA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	754-91-6	
PFPeA	**65.8**	ng/L	12.5	1	06/27/25 14:06	06/30/25 19:17	2706-90-3	
PFPeS	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	2706-91-4	
PFDoA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	307-55-1	
PFHpA	**16.9**	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	375-85-9	
PFHxS	**46.0**	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	355-46-4	
PFNA	**6.5**	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	375-95-1	
PFOS	**54.4**	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	1763-23-1	
PFOA	**22.7**	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	335-67-1	
PFTeDA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	376-06-7	
PFTrDA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	72629-94-8	
PFUnA	ND	ng/L	6.3	1	06/27/25 14:06	06/30/25 19:17	2058-94-8	
Surrogates								
13C2-PFDoA (S)	83	%.	10-130	1	06/27/25 14:06	06/30/25 19:17		
13C3HFPO-DA (S)	90	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C3-PFBS (S)	93	%.	40-135	1	06/27/25 14:06	06/30/25 19:17		
13C3-PFHxS (S)	91	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C4-PFBA (S)	95	%.	5-130	1	06/27/25 14:06	06/30/25 19:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB3-250604 **Lab ID: 10738047007** Collected: 06/04/25 09:20 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	96	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C5-PFHxA (S)	93	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C5-PFPeA (S)	93	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C6-PFDA (S)	99	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C8-PFOA (S)	93	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C8-PFOS (S)	92	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C8-PFOSA (S)	82	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
13C9-PFNA (S)	93	%.	40-130	1	06/27/25 14:06	06/30/25 19:17		
d3-MeFOSAA (S)	82	%.	40-170	1	06/27/25 14:06	06/30/25 19:17		
d3-NMeFOSA (S)	63	%.	10-130	1	06/27/25 14:06	06/30/25 19:17		
d5-EtFOSAA (S)	83	%.	25-135	1	06/27/25 14:06	06/30/25 19:17		
d5-NEtFOSA (S)	59	%.	10-130	1	06/27/25 14:06	06/30/25 19:17		
d7-NMeFOSE (S)	71	%.	10-130	1	06/27/25 14:06	06/30/25 19:17		
d9-NEtFOSE (S)	68	%.	10-130	1	06/27/25 14:06	06/30/25 19:17		
13C2-PFTA (S)	76	%.	10-130	1	06/27/25 14:06	06/30/25 19:17		
13C7-PFUdA (S)	93	%.	30-130	1	06/27/25 14:06	06/30/25 19:17		
13C24:2FTS (S)	131	%.	40-200	1	06/27/25 14:06	06/30/25 19:17		
13C26:2FTS (S)	122	%.	40-200	1	06/27/25 14:06	06/30/25 19:17		
13C28:2FTS (S)	104	%.	40-300	1	06/27/25 14:06	06/30/25 19:17		
13C3-PFPrA (S)	97	%.	5-130	1	06/27/25 14:06	06/30/25 19:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB4-250603 **Lab ID: 10738047008** Collected: 06/03/25 12:40 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	763051-92-9	
3:3 FTCA	ND	ng/L	158	1	06/27/25 14:06	06/30/25 19:59	356-02-5	
4:2 FTS	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	757124-72-4	
5:3 FTCA	ND	ng/L	791	1	06/27/25 14:06	06/30/25 19:59	914637-49-3	
6:2 FTS	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	27619-97-2	
7:3 FTCA	ND	ng/L	791	1	06/27/25 14:06	06/30/25 19:59	812-70-4	
8:2 FTS	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	39108-34-4	
9Cl-PF3ONS	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	756426-58-1	
ADONA	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	919005-14-4	
HFPO-DA	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	13252-13-6	
NEtFOSAA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	2991-50-6	
NEtFOSA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	4151-50-2	
NEtFOSE	ND	ng/L	316	1	06/27/25 14:06	06/30/25 19:59	1691-99-2	
NFDHA	ND	ng/L	63.2	1	06/27/25 14:06	06/30/25 19:59	151772-58-6	
NMeFOSAA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	2355-31-9	
NMeFOSA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	31506-32-8	
NMeFOSE	ND	ng/L	316	1	06/27/25 14:06	06/30/25 19:59	24448-09-7	
PFBS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	375-73-5	
PFDA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	335-76-2	
PFHxA	**185**	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	307-24-4	
PFBA	ND	ng/L	126	1	06/27/25 14:06	06/30/25 19:59	375-22-4	
PFDS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	335-77-3	
PFDoS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	79780-39-5	
PFEESA	ND	ng/L	63.2	1	06/27/25 14:06	06/30/25 19:59	113507-82-7	
PFHpS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	375-92-8	
PFMBA	ND	ng/L	63.2	1	06/27/25 14:06	06/30/25 19:59	863090-89-5	
PFMPA	ND	ng/L	63.2	1	06/27/25 14:06	06/30/25 19:59	377-73-1	
PFNS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	68259-12-1	
PFOSA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	754-91-6	
PFPeA	**313**	ng/L	63.2	1	06/27/25 14:06	06/30/25 19:59	2706-90-3	
PFPeS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	2706-91-4	
PFDoA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	307-55-1	
PFHpA	**77.7**	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	375-85-9	
PFHxS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	355-46-4	
PFNA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	375-95-1	
PFOS	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	1763-23-1	
PFOA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	335-67-1	
PFTeDA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	376-06-7	
PFTrDA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	72629-94-8	
PFUnA	ND	ng/L	31.6	1	06/27/25 14:06	06/30/25 19:59	2058-94-8	
Surrogates								
13C2-PFDoA (S)	70	%.	10-130	1	06/27/25 14:06	06/30/25 19:59		
13C3HFPO-DA (S)	83	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C3-PFBS (S)	82	%.	40-135	1	06/27/25 14:06	06/30/25 19:59		
13C3-PFHxS (S)	80	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C4-PFBA (S)	84	%.	5-130	1	06/27/25 14:06	06/30/25 19:59		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB4-250603 **Lab ID: 10738047008** Collected: 06/03/25 12:40 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	84	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C5-PFHxA (S)	82	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C5-PFPeA (S)	87	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C6-PFDA (S)	87	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C8-PFOA (S)	83	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C8-PFOS (S)	78	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C8-PFOSA (S)	72	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
13C9-PFNA (S)	83	%.	40-130	1	06/27/25 14:06	06/30/25 19:59		
d3-MeFOSAA (S)	69	%.	40-170	1	06/27/25 14:06	06/30/25 19:59		
d3-NMeFOSA (S)	40	%.	10-130	1	06/27/25 14:06	06/30/25 19:59		
d5-EtFOSAA (S)	67	%.	25-135	1	06/27/25 14:06	06/30/25 19:59		
d5-NEtFOSA (S)	40	%.	10-130	1	06/27/25 14:06	06/30/25 19:59		
d7-NMeFOSE (S)	49	%.	10-130	1	06/27/25 14:06	06/30/25 19:59		
d9-NEtFOSE (S)	46	%.	10-130	1	06/27/25 14:06	06/30/25 19:59		
13C2-PFTA (S)	63	%.	10-130	1	06/27/25 14:06	06/30/25 19:59		
13C7-PFUdA (S)	78	%.	30-130	1	06/27/25 14:06	06/30/25 19:59		
13C24:2FTS (S)	92	%.	40-200	1	06/27/25 14:06	06/30/25 19:59		
13C26:2FTS (S)	90	%.	40-200	1	06/27/25 14:06	06/30/25 19:59		
13C28:2FTS (S)	79	%.	40-300	1	06/27/25 14:06	06/30/25 19:59		
13C3-PFPrA (S)	91	%.	5-130	1	06/27/25 14:06	06/30/25 19:59		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB6-250603 **Lab ID: 10738047009** Collected: 06/03/25 11:50 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	763051-92-9	
3:3 FTCA	ND	ng/L	31.1	1	06/27/25 14:06	06/30/25 20:14	356-02-5	
4:2 FTS	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	757124-72-4	
5:3 FTCA	ND	ng/L	156	1	06/27/25 14:06	06/30/25 20:14	914637-49-3	
6:2 FTS	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	27619-97-2	
7:3 FTCA	ND	ng/L	156	1	06/27/25 14:06	06/30/25 20:14	812-70-4	
8:2 FTS	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	39108-34-4	
9Cl-PF3ONS	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	756426-58-1	
ADONA	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	919005-14-4	
HFPO-DA	ND	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	13252-13-6	
NEtFOSAA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	2991-50-6	
NEtFOSA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	4151-50-2	
NEtFOSE	ND	ng/L	62.3	1	06/27/25 14:06	06/30/25 20:14	1691-99-2	
NFDHA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 20:14	151772-58-6	
NMeFOSAA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	2355-31-9	
NMeFOSA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	31506-32-8	
NMeFOSE	ND	ng/L	62.3	1	06/27/25 14:06	06/30/25 20:14	24448-09-7	
PFBS	**11.4**	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	375-73-5	
PFDA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	335-76-2	
PFHxA	**202**	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	307-24-4	
PFBA	**83.0**	ng/L	24.9	1	06/27/25 14:06	06/30/25 20:14	375-22-4	
PFDS	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	335-77-3	
PFDoS	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	79780-39-5	
PFEESA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 20:14	113507-82-7	
PFHpS	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	375-92-8	
PFMBA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 20:14	863090-89-5	
PFMPA	ND	ng/L	12.5	1	06/27/25 14:06	06/30/25 20:14	377-73-1	
PFNS	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	68259-12-1	
PFOSA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	754-91-6	
PFPeA	**458**	ng/L	12.5	1	06/27/25 14:06	06/30/25 20:14	2706-90-3	
PFPeS	**9.2**	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	2706-91-4	
PFDoA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	307-55-1	
PFHpA	**54.7**	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	375-85-9	
PFHxS	**74.0**	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	355-46-4	
PFNA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	375-95-1	
PFOS	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	1763-23-1	
PFOA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	335-67-1	
PFTeDA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	376-06-7	
PFTrDA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	72629-94-8	
PFUnA	ND	ng/L	6.2	1	06/27/25 14:06	06/30/25 20:14	2058-94-8	
Surrogates								
13C2-PFDoA (S)	89	%.	10-130	1	06/27/25 14:06	06/30/25 20:14		
13C3HFPO-DA (S)	98	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C3-PFBS (S)	94	%.	40-135	1	06/27/25 14:06	06/30/25 20:14		
13C3-PFHxS (S)	97	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C4-PFBA (S)	101	%.	5-130	1	06/27/25 14:06	06/30/25 20:14		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Sample: FP-CB6-250603 **Lab ID: 10738047009** Collected: 06/03/25 11:50 Received: 06/10/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633F Water	Analytical Method: EPA 1633 Preparation Method: EPA 1633 Pace Analytical Services - Minneapolis							
Surrogates								
13C4-PFHpA (S)	100	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C5-PFHxA (S)	97	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C5-PFPeA (S)	102	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C6-PFDA (S)	104	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C8-PFOA (S)	105	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C8-PFOS (S)	103	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C8-PFOSA (S)	88	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
13C9-PFNA (S)	100	%.	40-130	1	06/27/25 14:06	06/30/25 20:14		
d3-MeFOSAA (S)	88	%.	40-170	1	06/27/25 14:06	06/30/25 20:14		
d3-NMeFOSA (S)	68	%.	10-130	1	06/27/25 14:06	06/30/25 20:14		
d5-EtFOSAA (S)	91	%.	25-135	1	06/27/25 14:06	06/30/25 20:14		
d5-NEtFOSA (S)	67	%.	10-130	1	06/27/25 14:06	06/30/25 20:14		
d7-NMeFOSE (S)	80	%.	10-130	1	06/27/25 14:06	06/30/25 20:14		
d9-NEtFOSE (S)	80	%.	10-130	1	06/27/25 14:06	06/30/25 20:14		
13C2-PFTA (S)	83	%.	10-130	1	06/27/25 14:06	06/30/25 20:14		
13C7-PFUdA (S)	97	%.	30-130	1	06/27/25 14:06	06/30/25 20:14		
13C24:2FTS (S)	111	%.	40-200	1	06/27/25 14:06	06/30/25 20:14		
13C26:2FTS (S)	135	%.	40-200	1	06/27/25 14:06	06/30/25 20:14		
13C28:2FTS (S)	101	%.	40-300	1	06/27/25 14:06	06/30/25 20:14		
13C3-PFPrA (S)	100	%.	5-130	1	06/27/25 14:06	06/30/25 20:14		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

QC Batch: 1014975
QC Batch Method: EPA 1633
Analysis Method: EPA 1633
Analysis Description: EPA 1633F Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10738047001, 10738047002, 10738047003, 10738047004, 10738047005, 10738047006, 10738047007, 10738047008, 10738047009

METHOD BLANK: 5291312
Matrix: Water
Associated Lab Samples: 10738047001, 10738047002, 10738047003, 10738047004, 10738047005, 10738047006, 10738047007, 10738047008, 10738047009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ng/L	ND	6.4	06/30/25 16:27	
3:3 FTCA	ng/L	ND	8.0	06/30/25 16:27	
4:2 FTS	ng/L	ND	6.4	06/30/25 16:27	
5:3 FTCA	ng/L	ND	40.0	06/30/25 16:27	
6:2 FTS	ng/L	ND	6.4	06/30/25 16:27	
7:3 FTCA	ng/L	ND	40.0	06/30/25 16:27	
8:2 FTS	ng/L	ND	6.4	06/30/25 16:27	
9Cl-PF3ONS	ng/L	ND	6.4	06/30/25 16:27	
ADONA	ng/L	ND	6.4	06/30/25 16:27	
HFPO-DA	ng/L	ND	6.4	06/30/25 16:27	
NEtFOSA	ng/L	ND	1.6	06/30/25 16:27	
NEtFOSAA	ng/L	ND	1.6	06/30/25 16:27	
NEtFOSE	ng/L	ND	16.0	06/30/25 16:27	
NFDHA	ng/L	ND	3.2	06/30/25 16:27	
NMeFOSA	ng/L	ND	1.6	06/30/25 16:27	
NMeFOSAA	ng/L	ND	1.6	06/30/25 16:27	
NMeFOSE	ng/L	ND	16.0	06/30/25 16:27	
PFBA	ng/L	ND	6.4	06/30/25 16:27	
PFBS	ng/L	ND	1.6	06/30/25 16:27	
PFDA	ng/L	ND	1.6	06/30/25 16:27	
PFDoA	ng/L	ND	1.6	06/30/25 16:27	
PFDoS	ng/L	ND	1.6	06/30/25 16:27	
PFDS	ng/L	ND	1.6	06/30/25 16:27	
PFEESA	ng/L	ND	3.2	06/30/25 16:27	
PFHpA	ng/L	ND	1.6	06/30/25 16:27	
PFHpS	ng/L	ND	1.6	06/30/25 16:27	
PFHxA	ng/L	ND	1.6	06/30/25 16:27	
PFHxS	ng/L	ND	1.6	06/30/25 16:27	
PFMBA	ng/L	ND	3.2	06/30/25 16:27	
PFMPA	ng/L	ND	3.2	06/30/25 16:27	
PFNA	ng/L	ND	1.6	06/30/25 16:27	
PFNS	ng/L	ND	1.6	06/30/25 16:27	
PFOA	ng/L	ND	1.6	06/30/25 16:27	
PFOS	ng/L	ND	1.6	06/30/25 16:27	
PFOSA	ng/L	ND	1.6	06/30/25 16:27	
PFPeA	ng/L	ND	3.2	06/30/25 16:27	
PFPeS	ng/L	ND	1.6	06/30/25 16:27	
PFTeDA	ng/L	ND	1.6	06/30/25 16:27	
PFTrDA	ng/L	ND	1.6	06/30/25 16:27	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

METHOD BLANK: 5291312 Matrix: Water

Associated Lab Samples: 10738047001, 10738047002, 10738047003, 10738047004, 10738047005, 10738047006, 10738047007, 10738047008, 10738047009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PFUnA	ng/L	ND	1.6	06/30/25 16:27	
13C2-PFDoA (S)	%.	82	10-130	06/30/25 16:27	
13C2-PFTA (S)	%.	77	10-130	06/30/25 16:27	
13C24:2FTS (S)	%.	103	40-200	06/30/25 16:27	
13C26:2FTS (S)	%.	94	40-200	06/30/25 16:27	
13C28:2FTS (S)	%.	89	40-300	06/30/25 16:27	
13C3-PFBS (S)	%.	88	40-135	06/30/25 16:27	
13C3-PFHxS (S)	%.	87	40-130	06/30/25 16:27	
13C3-PFPrA (S)	%.	91	5-130	06/30/25 16:27	
13C3HFPO-DA (S)	%.	89	40-130	06/30/25 16:27	
13C4-PFBA (S)	%.	91	5-130	06/30/25 16:27	
13C4-PFHpA (S)	%.	93	40-130	06/30/25 16:27	
13C5-PFHxA (S)	%.	92	40-130	06/30/25 16:27	
13C5-PFPeA (S)	%.	92	40-130	06/30/25 16:27	
13C6-PFDA (S)	%.	84	40-130	06/30/25 16:27	
13C7-PFUdA (S)	%.	86	30-130	06/30/25 16:27	
13C8-PFOA (S)	%.	89	40-130	06/30/25 16:27	
13C8-PFOS (S)	%.	85	40-130	06/30/25 16:27	
13C8-PFOSA (S)	%.	82	40-130	06/30/25 16:27	
13C9-PFNA (S)	%.	94	40-130	06/30/25 16:27	
d3-MeFOSAA (S)	%.	85	40-170	06/30/25 16:27	
d3-NMeFOSA (S)	%.	66	10-130	06/30/25 16:27	
d5-EtFOSAA (S)	%.	86	25-135	06/30/25 16:27	
d5-NEtFOSA (S)	%.	69	10-130	06/30/25 16:27	
d7-NMeFOSE (S)	%.	77	10-130	06/30/25 16:27	
d9-NEtFOSE (S)	%.	74	10-130	06/30/25 16:27	

LABORATORY CONTROL SAMPLE: 5291313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	75.2	75.8	101	55-160	
3:3 FTCA	ng/L	99.2	102	103	65-130	
4:2 FTS	ng/L	75.2	87.8	117	70-145	
5:3 FTCA	ng/L	496	524	106	70-135	
6:2 FTS	ng/L	76.8	90.9	118	65-155	
7:3 FTCA	ng/L	496	532	107	50-145	
8:2 FTS	ng/L	76.8	89.6	117	60-150	
9Cl-PF3ONS	ng/L	75.2	83.5	111	70-155	
ADONA	ng/L	75.2	82.9	110	65-145	
HFPO-DA	ng/L	80	89.6	112	70-140	
NEtFOSA	ng/L	19.2	21.5	112	65-145	
NEtFOSAA	ng/L	19.2	19.6	102	70-145	
NEtFOSE	ng/L	192	218	114	70-135	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

LABORATORY CONTROL SAMPLE: 5291313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NFDHA	ng/L	40	44.3	111	50-150	
NMeFOSA	ng/L	19.2	22.6	118	60-150	
NMeFOSAA	ng/L	19.2	22.2	115	50-140	
NMeFOSE	ng/L	192	215	112	70-145	
PFBA	ng/L	80	86.5	108	70-140	
PFBS	ng/L	17.6	19.1	109	60-145	
PFDA	ng/L	19.2	21.0	109	70-140	
PFDoA	ng/L	19.2	20.8	108	70-140	
PFDoS	ng/L	19.2	18.5	96	50-145	
PFDS	ng/L	19.2	18.8	98	60-145	
PFEESA	ng/L	35.2	39.5	112	70-140	
PFHpA	ng/L	19.2	21.7	113	70-150	
PFHpS	ng/L	19.2	21.4	111	70-150	
PFHxA	ng/L	19.2	21.8	114	70-145	
PFHxS	ng/L	17.6	19.8	112	65-145	
PFMBA	ng/L	40	42.5	106	60-150	
PFMPA	ng/L	40	42.5	106	55-140	
PFNA	ng/L	19.2	20.9	109	70-150	
PFNS	ng/L	19.2	20.5	107	65-145	
PFOA	ng/L	19.2	20.4	106	70-150	
PFOS	ng/L	19.2	18.1	95	55-150	
PFOSA	ng/L	19.2	21.9	114	70-145	
PFPeA	ng/L	40	43.4	108	65-135	
PFPeS	ng/L	19.2	20.2	105	65-140	
PFTeDA	ng/L	19.2	22.3	116	60-140	
PFTrDA	ng/L	19.2	20.7	108	65-140	
PFUnA	ng/L	19.2	21.4	111	70-145	
13C2-PFDoA (S)	%.			83	10-130	
13C2-PFTA (S)	%.			78	10-130	
13C24:2FTS (S)	%.			96	40-200	
13C26:2FTS (S)	%.			94	40-200	
13C28:2FTS (S)	%.			94	40-300	
13C3-PFBS (S)	%.			89	40-135	
13C3-PFHxS (S)	%.			89	40-130	
13C3-PFPrA (S)	%.			94	5-130	
13C3HFPO-DA (S)	%.			93	40-130	
13C4-PFBA (S)	%.			91	5-130	
13C4-PFHpA (S)	%.			94	40-130	
13C5-PFHxA (S)	%.			92	40-130	
13C5-PFPeA (S)	%.			94	40-130	
13C6-PFDA (S)	%.			92	40-130	
13C7-PFUdA (S)	%.			89	30-130	
13C8-PFOA (S)	%.			93	40-130	
13C8-PFOS (S)	%.			91	40-130	
13C8-PFOSA (S)	%.			82	40-130	
13C9-PFNA (S)	%.			87	40-130	
d3-MeFOSAA (S)	%.			90	40-170	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

LABORATORY CONTROL SAMPLE: 5291313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
d3-NMeFOSA (S)	%.			68	10-130	
d5-EtFOSAA (S)	%.			89	25-135	
d5-NEtFOSA (S)	%.			68	10-130	
d7-NMeFOSE (S)	%.			78	10-130	
d9-NEtFOSE (S)	%.			75	10-130	

LABORATORY CONTROL SAMPLE: 5291314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	12	11.9	99	55-160	
3:3 FTCA	ng/L	15.9	15.6	98	65-130	
4:2 FTS	ng/L	12	12.7	106	70-145	
5:3 FTCA	ng/L	79.4	73.6	93	70-135	
6:2 FTS	ng/L	12.3	13.2	107	65-155	
7:3 FTCA	ng/L	79.4	76.7	97	50-145	
8:2 FTS	ng/L	12.3	12.2	99	60-150	
9Cl-PF3ONS	ng/L	12	12.8	107	70-155	
ADONA	ng/L	12	12.8	106	65-145	
HFPO-DA	ng/L	12.8	12.6	98	70-140	
NEtFOSA	ng/L	3.1	3.1	99	65-145	
NEtFOSAA	ng/L	3.1	3.0	97	70-145	
NEtFOSE	ng/L	30.7	31.3	102	70-135	
NFDHA	ng/L	6.4	6.7	104	50-150	
NMeFOSA	ng/L	3.1	3.5	114	60-150	
NMeFOSAA	ng/L	3.1	3.2	105	50-140	
NMeFOSE	ng/L	30.7	31.2	102	70-145	
PFBA	ng/L	12.8	12.5	97	70-140	
PFBS	ng/L	2.8	3.0	107	60-145	
PFDA	ng/L	3.1	3.0	99	70-140	
PFDoA	ng/L	3.1	3.2	105	70-140	
PFDoS	ng/L	3.1	2.9	93	50-145	
PFDS	ng/L	3.1	2.8	90	60-145	
PFEESA	ng/L	5.6	5.8	103	70-140	
PFHpA	ng/L	3.1	3.1	102	70-150	
PFHpS	ng/L	3.1	3.1	100	70-150	
PFHxA	ng/L	3.1	3.1	99	70-145	
PFHxS	ng/L	2.8	2.7	97	65-145	
PFMBA	ng/L	6.4	6.4	101	60-150	
PFMPA	ng/L	6.4	6.6	103	55-140	
PFNA	ng/L	3.1	2.9	93	70-150	
PFNS	ng/L	3.1	3.1	102	65-145	
PFOA	ng/L	3.1	3.2	103	70-150	
PFOS	ng/L	3.1	2.9	96	55-150	
PFOSA	ng/L	3.1	3.1	100	70-145	
PFPeA	ng/L	6.4	6.3	98	65-135	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

LABORATORY CONTROL SAMPLE: 5291314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFPeS	ng/L	3.1	2.8	91	65-140	
PFTeDA	ng/L	3.1	3.2	105	60-140	
PFTrDA	ng/L	3.1	3.1	101	65-140	
PFUnA	ng/L	3.1	3.4	109	70-145	
13C2-PFDoA (S)	%.			82	10-130	
13C2-PFTA (S)	%.			79	10-130	
13C24:2FTS (S)	%.			105	40-200	
13C26:2FTS (S)	%.			99	40-200	
13C28:2FTS (S)	%.			99	40-300	
13C3-PFBS (S)	%.			90	40-135	
13C3-PFHxS (S)	%.			93	40-130	
13C3-PFPrA (S)	%.			96	5-130	
13C3HFPO-DA (S)	%.			93	40-130	
13C4-PFBA (S)	%.			93	5-130	
13C4-PFHpA (S)	%.			93	40-130	
13C5-PFHxA (S)	%.			94	40-130	
13C5-PFPeA (S)	%.			92	40-130	
13C6-PFDA (S)	%.			93	40-130	
13C7-PFUdA (S)	%.			85	30-130	
13C8-PFOA (S)	%.			89	40-130	
13C8-PFOS (S)	%.			88	40-130	
13C8-PFOSA (S)	%.			85	40-130	
13C9-PFNA (S)	%.			93	40-130	
d3-MeFOSAA (S)	%.			90	40-170	
d3-NMeFOSA (S)	%.			72	10-130	
d5-EtFOSAA (S)	%.			86	25-135	
d5-NEtFOSA (S)	%.			74	10-130	
d7-NMeFOSE (S)	%.			83	10-130	
d9-NEtFOSE (S)	%.			78	10-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 005530-015-00 Paine Field FTP
Pace Project No.: 10738047

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10738047001	**FP-SW2-250604**	EPA 1633	1014975	EPA 1633	1016030
10738047002	**FP-SW6-250603**	EPA 1633	1014975	EPA 1633	1016030
10738047003	**FP-SW7-250603**	EPA 1633	1014975	EPA 1633	1016030
10738047004	**FP-SW8-250603**	EPA 1633	1014975	EPA 1633	1016030
10738047005	**FP-CB1-250604**	EPA 1633	1014975	EPA 1633	1016030
10738047006	**FP-CB2-250604**	EPA 1633	1014975	EPA 1633	1016030
10738047007	**FP-CB3-250604**	EPA 1633	1014975	EPA 1633	1016030
10738047008	**FP-CB4-250603**	EPA 1633	1014975	EPA 1633	1016030
10738047009	**FP-CB6-250603**	EPA 1633	1014975	EPA 1633	1016030

Pace® Location Requested (City/State):

CHAIN-OF-CUSTODY Analytical Request Document

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

WO# : 10738047

10738047

Company Name: GeoEngineers, Inc.	Contact/Report To: Jacob Letts
Street Address: 1101 Fawcett Avenue, Suite 200 Tacoma, Washington 98402	Phone #: 253.722.2419
	E-Mail: jletts@geoengineers.com
	Cc E-Mail: mbush@geoengineers.com
Customer Project #: 005530-015-00	Invoice to:
Project Name: Paine Field FTP Supplemental Data Gaps Investigation	Invoice E-mail: ap@geoengineers.com
Site Collection Info/Facility ID (as applicable): Paine Airfield	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	County / State origin of sample(s): Snohomish County, Washington
Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [X] EQUIS [ ] Other	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other _____
	Date Results Requested:
	DW PWSID # or WW Permit # as applicable:
	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 (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 10

Identify Container Preservative Type***: 1

Analysis Requested: PFAS by EPA Method 1633

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: / AcctNum / Client ID: / Table #: / Profile / Template: / Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	Sample Comment
FP-SW2-250604	SW	grab			6/4/2025	0955	2			001
FP-SW6-250603	SW	grab			6/3/2025	1530	2			002
FP-SW7-250603	SW	grab			6/3/2025	1100	2			003
FP-SW8-250603	SW	grab			6/3/2025	1030	2			004
FP-CB1-250604	SW	grab			6/4/2025	0945	2			005
FP-CB2-250604	SW	grab			6/4/2025	0900	2			006
FP-CB3-250604	SW	grab			6/4/2025	0920	2			007
FP-CB4-250603	SW	grab			6/3/2025	1240	2			008
FP-CB6-250603	SW	grab			6/3/2025	1150	2			009

Additional Instructions from Pace® :

see email to PM for specific Equis EDD format request

Collected By:
Printed Name
Signature

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C): | Corrected Temp. (°C): | [ ] On Ice

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Mitchell to FedEx	6/9/2025 0995	Mitchell Pace	6/10/25 850	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

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

ENV-FRM-CORQ-0019_v02_110123 ©

Page 30 of 31

EZ 326 4616

ENV-FRM-MIN4-0150 v19_Sample Condition Upon Receipt

Person Examining & Date: 61025 MS **PROJECT #:** **WO#: 10738047**

PM: IJJ **Due Date: 07/01/25**

CLIENT: GEOENG

Client Name: Geo Engineers

Custody Seal Present: ☑ YES ☐ NO **Seals Intact:** ☑ YES ☐ NO

Tracking Number: 8818 0590 7925 ☐ **See Exceptions form ENV-FRM-MIN4-0142.**

Courier: ☐ Client ☐ Commercial ☑ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☐ Bubble Bags ☑ Bubble Wrap ☐ None 61025 MS ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☑ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☑ T4 (0402) **Type of Ice:** ☐ Blue ☐ Dry ☑ Wet ☐ Melted ☐ None
☐ T5 (0187) ☐ T6 (0396) ☐ T7 (0377) ☐ T8 (0775)
☐ T9 (0428) ☐ 01339252 (0710) **Temp Blank:** ☑ YES ☐ NO

***NOTE:** Temp should be ≤ 6°C, but above freezing*

Read Temp w/Temp Blank: 4.5 °C

Correction Factor: -0.2

Corrected Temp w/Temp Blank: 4.3 °C

Did Samples Originate in West Virginia: ☐ YES ☑ NO **(list temps on exception)**

Were All Container Temps Taken: ☐ YES ☐ NO ☑ N/A

Average Corrected Temp (No Temp Blank Only): _____

☐ **See Exceptions form ENV-FRM-MIN4-0142.** ☐ 1 Container

USDA Regulated Soil: ☑ N/A Water Sample/Other (describe): _____

Did Samples originate from one of the following states (check maps): ☐ YES ☐ NO

Circle State: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA

Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO

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

LOCATION (check one): ☐ **DULUTH** ☑ **MINNEAPOLIS** ☐ **VIRGINIA**	**YES**	**NO**	**N/A**	**COMMENT(S)**
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☐	☑	☐	3.
Samples Arrived within Hold Time? If Fecal: ☐ <8 hrs ☐ >8 hr but <24 hr ☐ >24 hr	☑	☐		4.
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other: _____
Rush Turn Around Time Requested?	☐	☑		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date: _____
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8. 2xNT2U each
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐	☐	11. ☐ **See Exceptions form ENV-FRM-MIN4-0142**
All containers needing acid/base preservation have been checked?	☐	☐	☑	12.
Sample #: ☐ HNO3 _____ ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____ **pH Paper Lot #:** ☐ Residual Chlorine _____ ☐ 0-6 Roll _____ ☐ 0-6 Strip _____ ☐ 0-14 Strip _____ **Positive for Residual Chlorine (NaOH containers only):** ☐ YES ☐ NO				
Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☐	☐	☑	☐ **See Exceptions form ENV-FRM-MIN4-0142**
EXCECTIONS (water only): VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☐	☑	☐	
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☑	13.
Headspace in Methyl Mercury Container?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ **See Exceptions form ENV-FRM-MIN4-0140**
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION / RESOLUTION: **Labeled By:** MS **Line:** 4

Person Contacted & Date/Time: _____ **PM Review & Date:** Isaac Johnson 6/11/25

***NOTE:** When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

Appendix D
Field Procedures

Appendix D
Field Procedures

UNDERGROUND UTILITY LOCATE

Prior to drilling activities, an underground utility locate was conducted in the area of the proposed boring locations to identify subsurface utilities and/or potential underground physical hazards. The underground utility check consisted of contacting a local utility alert service (One Call) and hiring a private utility locating service to locate utilities by conductible technology.

SOIL SAMPLING

Subsurface soil and groundwater conditions were evaluated at the FTP Study Area by drilling seven sub-surface borings (FP-MW14 through FP-MW20), completing three shallow sub-surface borings using a hand auger (FP-GEI-1, FP-GEI-2, and FP-GEI-3), and collecting two catch basin solids samples (FP-CB4 and FP-CB5). Approximate boring locations are shown in Figure 2.

Seven borings (FP-MW14 through FP-MW20) were completed with drilling equipment subcontracted to GeoEngineers, using continuous-flight hollow-stem auger (HSA) drill rig. Discrete soil samples from selected depths were collected during HSA drilling using a 2-inch-diameter 18-inch-long stainless-steel split spoon sampler driven with a 300-pound auto hammer dropped from a distance of 30-inches. Soil samples obtained during the exploration activities were collected from the sampler with a stainless-steel knife or new gloves. Shallow sub-surface soil samples (FP-GEI-1, FP-GEI-2 and FP-GEI-3) and catch basin solids samples (FP-CB4 and FP-CB5) were collected by GeoEngineers staff using hand tools (hand auger, shovel) and sampled directly into laboratory-provided jars.

A representative from GeoEngineers observed and classified the soil encountered in general accordance with ASTM International (ASTM) D 2488-94 and maintained a detailed log of each exploration. The sampling equipment was decontaminated before each sampling attempt with an Alconox® solution wash and a laboratory-certified PFAS-free distilled water rinse. Soil samples were obtained from the split spoon sampler for field screening and possible chemical analysis. Undisturbed portions of selected samples were placed in laboratory-prepared vials/jars for chemical analytical testing for PFAS by U.S. Environmental Protection Agency (EPA) Method 1633 at Pace Analytical. The soil samples were placed in a cooler with ice for transport to the laboratory within proper hold-times under standard chain-of-custody procedures.

Drill cuttings and decontamination/purge water generated during the Supplemental Data Gaps Investigation were tested for characterization purposes and were removed from the Site by a licensed waste removal company for off-site disposal. Borings not completed as monitoring wells were backfilled with bentonite and the surface restored to match the surrounding area.

FIELD SCREENING OF SOIL SAMPLES

Soil samples obtained from the borings were screened in the field for evidence of contamination using: (1) visual examination; (2) sheen screening; and (3) vapor headspace screening with a photoionization detector (PID). The results of headspace and sheen screening were included in the tables and on the boring logs.

Visual screening consisted of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

- **No Sheen (NS)** No visible sheen on the water surface;
- **Slight Sheen (SS)** Light, colorless, dull sheen; spread is irregular, not rapid, sheen dissipates rapidly. Natural organic matter in the soil might produce a slight sheen;
- **Moderate Sheen (MS)** Light to heavy sheen; might have some color/iridescence; spread is irregular to flowing, maybe rapid; few remaining areas of no sheen on water surface; and
- **Heavy Sheen (HS)** Heavy sheen with color/iridescence; spread is rapid; entire water surface might be covered with sheen.

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag, and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted in the bag and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in parts per million (ppm) and is calibrated to 100 ppm isobutylene gas. The PID is designed to quantify combustible gas and organic vapor concentrations up to 5,000 ppm. A lower threshold of significance of 1 ppm was used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature, and type of contaminant.

GROUNDWATER MONITORING WELL DEVELOPMENT AND SAMPLING

Following construction of the Supplemental Data Gaps Investigation monitoring wells, the wells were developed using surge and purge development methods until the groundwater was relatively clear of suspended solids. Monitoring wells were left to sit undisturbed for at least 24 hours following development prior to groundwater sampling. Groundwater samples were obtained from monitoring wells FP-MW14 through FP-MW20 as well as the previously installed monitoring wells FP-MW5, FP-MW7, FP-MW8, FP-MW10, FP-MW11 and FP-MW12. Groundwater samples were collected by low-flow methods using dedicated disposable PFAS-free tubing and a peristaltic pump. Groundwater samples were placed in laboratory-prepared vials/jars for chemical analytical testing at Pace Analytical of Minneapolis, Minnesota. The samples were placed in a cooler with ice for transport to the laboratory within proper hold-times under standard chain-of-custody procedures. Purge water from groundwater sampling was placed into drums and left on site pending receipt of analytical data for characterization and disposal at a permitted off-site facility.

SAMPLE IDENTIFICATION SCHEME

Each environmental sample obtained during the investigation was identified by a unique sample designation. The sample designation was documented in the field report on the boring log included on the sample container label and on the laboratory chain-of-custody. The soil sample designation scheme is as follows:

- Soil samples from borings: Boring number FP-MW14- etc. followed by the depth from which the soil sample was collected to the nearest 0.5 foot. For example, FP-MW14-30-31.5 is from boring number FP-MW7 sampled between 30 and 31.5 feet bgs.
- Groundwater samples from monitoring wells: Boring number FP-MW14- etc. followed by the date. For example, FP-MW14-250610 is the groundwater sample collected from boring/monitoring well FP-MW14 sampled on June 10, 2025.
- Surface water samples: Numbered sequentially FP-SW5- etc. followed by the date. For example, FP SW6-250603 is the surface water sample collected from the sixth location and sampled on June 3, 2025. Note that numbering continues from the 2024 Data Gaps Investigation with numbering maintained for repeated samples from an earlier location (i.e. FP-SW2-250604 was sampled from the 2024 location FP-SW2.)

INVESTIGATION-DERIVED WASTE MANAGEMENT

IDW includes drill cuttings, well development water, sampling equipment decontamination water, pre-sampling purge water from monitoring wells, and incidental waste. Drill cuttings, well development water, decontamination water, and pre-sampling purge water was stored in sealed drums. The drums were temporarily stored on the Site pending waste designation and off-site disposal. The drums were labeled with the following information:

- Material contained in the drum (e.g., drill cuttings, decontamination water, etc.).
- Source of the material (e.g., investigation locations and depths where applicable).
- Date material was generated.
- Name and telephone number of the appropriate contact person.

Incidental waste to be generated during sampling activities includes items such as disposable gloves, plastic sheeting, sample bags, paper towels, and similar expended and discarded field supplies. These materials are considered *de minimis* and were disposed of in a trash receptacle or county disposal facility.

Field Procedures – Standard Operating Procedure PFAS Sampling Objective

The objective of this technical standard operating procedure (SOP) is to define the techniques and requirements for PFAS sampling. Techniques discussed in this SOP include field sampling and preservation methods using the protocols intended to be analyzed for per- and polyfluoroalkyl substances (PFAS) by EPA Method 1633.

Background

DISCUSSION

Specialized techniques and procedures are used for collecting and analyzing samples for PFAS. The field procedures are outlined in the following sections showing restricted equipment and materials that can be used when sampling for PFAS. EPA Method 1633 provides PFAS results with reporting limits of approximately 2 nanograms per liter (ng/L). Acceptable materials for sampling include stainless steel, high density polyethylene (HDPE), and polypropylene.

Additional materials may be acceptable if proven not to contain PFAS. NOTE: Grundfos pumps and bladder pumps are known to contain PFC materials (e.g., Teflon™ washers for Grundfos pumps and low-density polyethylene (LDPE) bladders for bladder pumps). Selection of sampling devices must be carefully researched. All sampling equipment components and sample containers should not come in contact with aluminum foil, LDPE, glass or polytetrafluoroethylene (PTFE, Teflon™) materials, including sample bottle cap liners with a PTFE layer. Standard two step decontamination using detergent and clean water rinse should be considered for equipment that does come in contact with polyfluorinated materials. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with polyfluorinated materials must be avoided. Many food and drink packaging materials and "plumbers thread seal tape" contain PFAS. All clothing worn by sampling personnel must have been laundered multiple times and dried without using dryer sheets of any type. The sampler must wear nitrile gloves while filling and sealing the sample bottles.

Pre-cleaned sample bottles with closures, coolers, ice, sample labels, and a chain-of-custody form will be provided by the laboratory.

There are special laboratory requirements and sample coolers are clearly identified for PFAS sampling. This SOP outlines the sampling procedure typically used to collect PFAS samples for analysis.

General Responsibilities

Study Area Manager – The study area manager is responsible for ensuring that field personnel are trained in the use of this procedure and the required equipment and for ensuring that PFAS samples are collected in accordance with this procedure and any other SOPs pertaining to specific media sampling. The study area manager must also ensure that the quantity and location of PFAS samples collected meet the requirements of the study area specific sampling and/or work plans.

Field Team Leader – The field team leader is responsible for ensuring that field personnel collect PFAS samples in accordance with this SOP and other relevant procedures.

Note: All field team member responsibilities are defined in the project-specific QAPP.

Recommended and Prohibited Field Equipment

RECOMMENDED

- Study area -specific plans (e.g., sampling, work, health and safety)
- HDPE and Silicon materials including tubing, bailers, tape, plumbing paste
- Loose paper
- Masonite or Aluminum Clipboard
- Pens
- Insulated cooler(s) provided by lab with sample containers
- Cotton construction is recommended for field clothing and should be laundered a minimum of six times from time of purchase due to possible PFAS related treatments. Fabric softener and dryer sheets must be avoided. Rain gear should be made from polyurethane and wax-coated materials
- Plastic zip-top bags
- Decontamination supplies – Alconox®/Liquinox®
- Sample chain-of-custody forms
- Custody seals
- Nitrile or appropriate gloves
- Lab supplied and verified "PFAS Free" water to be used for trip and decontamination blanks and decontamination procedures
- Bags of ice
- Labels and appropriate forms/documentation for sample shipment provided by Laboratory

PROHIBITED

- Teflon®-containing materials, when possible, should be avoided (e.g., tubing, bailers, tape, and plumbing paste). In cases where Teflon® -containing materials are unavoidable, ensure adequate purging is performed prior to sampling (e.g., in-well pumps) and/or rinse blanks are collected prior to sampling
- Paper products such as waterproof field books, plastic clipboards, binders, spiral hard cover notebooks, sticky notes or glue materials
- Water resistant, waterproof, stain-treated clothing or shoes including Gore-Tex™ and Tyvek® materials
- LDPE or polypropylene containing materials (e.g., bags or containers used to transport samples)
- Markers
- Chemical (blue) ice packs
- Decontamination soaps containing fluorosurfactants such as Decon 90
- Water that is not verified to be "PFAS-free" to be used for trip and decontamination blanks and decontamination processes
- Aluminum foil

SOIL SAMPLING EQUIPMENT

Acceptable materials for sampling include stainless steel, HDPE, and polypropylene. Additional materials may be acceptable if proven not to contain PFAS. All sampling equipment components and sample containers **should not** come in contact with aluminum foil, LDPE, glass or PTFE and Teflon™ materials including sample bottle cap liners with a PTFE layer. A list of acceptable equipment is provided below, but other equipment may be considered appropriate at a later date.

- Stainless steel spoon
- Stainless steel bowl

Procedures

PREPARATION

1. Review study area -specific health and safety plan and project plans before initiating sampling activity.
2. Don the appropriate personal protective clothing as indicated in the study area specific health and safety plan.
3. Locate sampling location(s) in accordance with project documents (e.g., work plan) and document pertinent information in the appropriate field logbook. When possible, reference locations back to existing study area features such as buildings, roads, intersections, monitoring wells, etc.
4. Verify sampling depths as specified in project documents.
5. If decontamination of equipment and/or personnel is required, set up a decontamination zone.
6. Prepare an area near the sampling location to perform sample collection activities.

GROUNDWATER SAMPLE COLLECTION

The following steps must be followed when collecting PFAS samples for environmental purposes.

- Wear clean Nitrile gloves during handling of all sample containers and sampling devices.
- All clothing worn by sampling personnel must have been laundered multiple times and dried without using dryer sheets of any type. The sampler must wear nitrile gloves while filling and sealing the sample bottles.
- Acceptable materials for sampling include stainless steel, HDPE, and polypropylene. Sampling with a water pump and tubing with check valve is the preferred method.
- Purge the well.
- Pre-cleaned sample bottles with closures, coolers, sample labels, and a chain-of-custody form will be provided by the laboratory.
- Fill the laboratory-supplied bottle(s) with the sample.
- Cap the bottles with an acceptable cap and liner closure system.
- Label the sample bottles.

- Fill out the chain-of-custody.
- Place in a cooler maintained at 4 ± 2° Celsius.
- Before proceeding to other sampling location, decontaminate reusable sampling equipment using PFAS-free water provided by lab and Alconox/Liquinox.
- Complete the field sampling form, being sure to record all relevant information before leaving the study area. All sampling information, including well ID, sample depth, sample volume, and requisite analyses should be recorded in the field form as specified in the study area specific sampling/work plans. Field Logbooks shall not be used.
- Properly package all samples for shipment to laboratories and complete all necessary sample shipment documentation. Remand custody of the samples to appropriate personnel.

SOIL SAMPLE COLLECTION

- The sampler must wear nitrile gloves while conducting field work and handling sample containers.
- Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a clean stainless- steel spoon should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g., 0 to 6 inches below surface) shall then be collected using a pre-cleaned stainless steel spoon.
- Shallow subsurface soil samples (e.g., 6 to ~36 inches below surface) may be collected by digging a hole using a stainless-steel hand auger.
- When the desired subsurface depth is reached, a pre-cleaned hand auger shall be used to obtain the sample.

SAMPLE SHIPMENT

Place the samples in a cooler with wet ice. The ice should be double bagged. The samples should be shipped for next day delivery. Always include enough ice to keep samples around 4°C, especially during summer months. The cooler drain spout should be closed and taped so that water does not flow out of the cooler.

- Always package samples securely to prevent breakage/spillage.
- Check with laboratory if Saturday delivery of samples is required.
- Be sure to include a completed chain-of-custody (COC) form in each shipment with all necessary information for both reporting and invoicing.
- Double check to make sure all samples are labeled correctly and correspond with the COC form.

Restrictions/Limitations

Acceptable materials for sampling include stainless steel, HDPE, and polypropylene. Additional materials may be acceptable if proven not to contain PFAS. NOTE: Grundfos pumps and bladder pumps are known to contain PFC materials (e.g., Teflon™ washers for Grundfos pumps and LDPE bladders for bladder pumps). Selection of sampling devices must be carefully researched. All sampling equipment components and sample containers should not come in contact with aluminum foil, LDPE, and glass or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer. Standard two step decontamination using detergent and clean water rinse should be considered for equipment that does come in contact with polyfluorinated materials. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with polyfluorinated materials must be avoided. Many food and drink packaging materials and "plumbers thread seal tape" contain PFAS.

All clothing worn by sampling personnel must have been laundered multiple times and dried without using dryer sheets of any type. The sampler must wear nitrile gloves while filling and sealing the sample bottles.

Appendix E
Waste Transport Manifest

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAVSQG | 2. Page 1 of 1 | 3. Emergency Response Phone: 888-785-7225 | 4. Waste Tracking Number: 602426/D749048

5. Generator's Name and Mailing Address
Paine Field/Snohomish County Airports
9901 24th Pl W, Suite A
Everett, WA 98204
Generator's Phone: 206-228-4375

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: ADVANCED CHEMICAL TRANSPORT LLC | U.S. EPA ID Number: CAR000070540

7. Transporter 2 Company Name: Chemical Waste Management | U.S. EPA ID Number: ORD089452353

8. Designated Facility Name and Site Address
Chemical Waste Management of the Northwest
17629 Cedar Springs Lane
Arlington, OR 97812
Facility's Phone: 541-454-2030 | U.S. EPA ID Number: ORD089452353

	9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non-RCRA/Non-DOT Regulated Material Solid (SOIL)	11	DM	6600	P
2.	Non-RCRA/Non-DOT Regulated Material Liquid (GROUNDWATER)	5	DM	2000	P
3.					
4.					

13. Special Handling Instructions and Additional Information
Project Number 602426 Document #: D749048
1) OR361058 PAC 11 X DM55
2) OR361057 PAC 05 X DM55

14. GENERATOR'S CERTIFICATION: I certify the materials described above on the manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Michael Ysaguirre | Signature | Month 08 | Day 21 | Year 25

INTERNATIONAL SHIPMENTS
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Christo plus Johnson | Signature | Month 08 | Day 21 | Year 25
Transporter 2 Printed/Typed Name: | Signature | Month | Day | Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Signature Month Day Year

Printed in USA by GC Labels 1-800-997-6966

DESIGNATED FACILITY TO GENERATOR

Reorder Part# MANIFEST-GEN 913-897-5966

M Ysaguirre 8/21/25

Appendix F
Project-Specific PCULs Workbook

Appendix Table F-1. PCUL Workbook - Soil Summary for Freshwater Sites (PFAS)

Chemical (all concentrations in mg/kg)	Most Stringent Soil PCUL Vadose Zone Potable GW SL #s 1-4, 8-10	Most Stringent Soil PCUL Saturated Zone Potable GW SL #s 1, 5-10	SL-1 Direct Contact SL-Det	SL-2 Protect Drinking Water Vadose Zone LeachFW	SL-3 Protect Surface Water via Ground Water Vadose Zone LeachFW	SL-4 Protect Sediment via Ground Water Vadose Zone LeachFW	SL-5 Protect Drinking Water Saturated Zone LeachFW	SL-6 Protect Surface Water via Ground Water Saturated Zone LeachFW	SL-7 Protect Sediment via Ground Water Saturated Zone LeachFW	SL-8 Protect Sediment via Erosion SMS Lower Tier SedFW	SL-9 Site-Specific TEE Unrest. Land Use SL-Det	SL-10 Natural Background Ecology (1994)
PFAS												
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	7.39E-02	3.97E-03	1.60E+01	7.39E-02	7.39E-02	na	3.97E-03	3.97E-03	na	na	na	na
GenX (HFPO-DA)	1.2E-04	6.9E-06	2.4E-01	1.2E-04	1.2E-04	na	6.9E-06	6.9E-06	na	na	na	na
Perfluorobutanoic acid (PFBA)	4.4E-02	2.9E-03	8.0E+01	4.4E-02	4.4E-02	na	2.9E-03	2.9E-03	na	na	na	na
Perfluorobutanesulfonic acid (PFBS)	2.5E-02	1.7E-03	2.4E+01	2.5E-02	2.5E-02	na	1.7E-03	1.7E-03	na	na	2.0E+01	na
Perfluorodecanoic acid (PFDA)	3.8E-07	2.2E-08	1.6E-04	3.8E-07	3.8E-07	na	2.2E-08	2.2E-08	na	na	1.4E-01	na
Perfluorohexanoic acid (PFHxA)	3.5E-02	2.5E-03	4.0E+01	3.5E-02	3.5E-02	na	2.5E-03	2.5E-03	na	na	5.9E+01	na
Perfluorohexanesulfonic acid (PFHxS)	4.0E-08	2.6E-09	3.2E-05	4.0E-08	4.0E-08	na	2.6E-09	2.6E-09	na	na	3.5E-02	na
Perfluorononanoic acid (PFNA)	8.9E-05	5.3E-06	2.0E-01	8.9E-05	8.9E-05	na	5.3E-06	5.3E-06	na	na	2.1E-01	na
Perfluorooctanesulfonic acid (PFOS)	4.6E-05	2.6E-06	8.0E-03	4.6E-05	4.6E-05	5.9E-02	2.6E-06	2.6E-06	3.4E-03	1.1E-02	7.8E-02	na
Perfluorooctanoic acid (PFOA)	2.5E-05	1.6E-06	3.4E-05	2.5E-05	2.5E-05	na	1.6E-06	1.6E-06	na	na	4.6E-01	na

Basis - Vadose, Potable GW							Basis - Saturated, Potable GW						
Direct Contact	Drinking Water	Surface Water via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background	Direct Contact	Drinking Water	Surface Water via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background
PFAS													
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				
	X	X						X	X				

Appendix Table F-2. PCUL Workbook - Groundwater Summary for Freshwater Sites (PFAS)

Chemical (all concentrations in ug/L)	Most Stringent PCUL Potable Water GW #s 1-5	GW-1 Protect Drinking Water PW	GW-2 Protect Surface Water SW-FW	GW-3 Protect Sediment PartitFW	GW-4 Screening Level Protect Indoor Air Industrial VI	TCE Short-Term Action Level for Cardiac Birth Defects Unrestricted VI Guidance	GW-5 Natural Background
PFAS							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	3.20E+00	3.20E+00	3.20E+00	na	na	na	na
GenX (HFPO-DA)	1.0E-02	1.0E-02	1.0E-02	na	na	na	na
Perfluorobutanoic acid (PFBA)	8.0E+00	8.0E+00	8.0E+00	na	na	na	na
Perfluorobutanesulfonic acid (PFBS)	4.8E+00	4.8E+00	4.8E+00	na	na	na	na
Perfluorodecanoic acid (PFDA)	3.2E-05	3.2E-05	3.2E-05	na	na	na	na
Perfluorohexanoic acid (PFHxA)	8.0E+00	8.0E+00	8.0E+00	na	na	na	na
Perfluorohexanesulfonic acid (PFHxS)	6.4E-06	6.4E-06	6.4E-06	na	na	na	na
Perfluorononanoic acid (PFNA)	1.0E-02	1.0E-02	1.0E-02	na	na	na	na
Perfluorooctanesulfonic acid (PFOS)	4.0E-03	4.0E-03	4.0E-03	5.2E+00	na	na	na
Perfluorooctanoic acid (PFOA)	4.0E-03	4.0E-03	4.0E-03	na	na	na	na

Basis - Potable GW				
Drinking Water	Surface Water	Sediment	Indoor Air	Nat. Background
PFAS				
X	X			
X	X			
X	X			
X	X			
X	X			
X	X			
X	X			
X	X			
X	X			
X	X			

Appendix Table F-3. PCUL Workbook - Groundwater Summary for Protection of Fresh Surface Water (PFAS)

Chemical (all concentrations in ug/L)	WA State WQC Aquatic Life Fresh-Chronic WAC 173-201A-240, Table 240	NRWQC Aquatic Life Fresh - Chronic CWA Section 304	WA State WQC Human Health Consumption of Orgs + Water WAC 173-201A-240, Table 240	WA Toxics Rule (WTR) Human Health Consumption of Orgs + Water 40 CFR 131.45	NRWQC Human Health Consumption of Orgs + Water CWA Section 304	Aquatic Life: Literature Values Sources in Comments Attached to Cells	Most Stringent ARAR Minimum	MTCA-B Surface Water Fish Consumption Noncancer Eq. 730-1 GW-Eq	ARAR Evaluation Column I / Column J	Does ARAR need adjustment for noncancer health effects?	Protection of Surface Water Noncancer	MTCA-B Surface Water Fish Consumption Cancer Eq. 730-2 GW-Eq	ARAR Evaluation Column I / Column N	Does ARAR need adjustment for cancer health effects?	Protection of Surface Water Cancer	GW-1 Groundwater PCUL for Drinking Water PW	GW-2 Ground Water PCUL Protect Surface Water minimum cols M,Q,R
PFAS																	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	3.20E+00	3.20E+00
GenX (HFPO-DA)	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.00E-02	1.00E-02
Perfluorobutanoic acid (PFBA)	na	na	na	na	na	8.30E+02	8.30E+02	na	na	na	8.30E+02	na	na	na	na	8.00E+00	8.00E+00
Perfluorobutanesulfonic acid (PFBS)	na	na	na	na	na	5.02E+05	5.02E+05	na	na	na	5.02E+05	na	na	na	na	4.80E+00	4.80E+00
Perfluorodecanoic acid (PFDA)	na	na	na	na	na	7.80E+01	7.80E+01	na	na	na	7.80E+01	na	na	na	na	3.20E-05	3.20E-05
Perfluorohexanoic acid (PFHxA)	na	na	na	na	na	6.38E+03	6.38E+03	na	na	na	6.38E+03	na	na	na	na	8.00E+00	8.00E+00
Perfluorohexanesulfonic acid (PFHxS)	na	na	na	na	na	1.00E+01	1.00E+01	na	na	na	1.00E+01	na	na	na	na	6.40E-06	6.40E-06
Perfluorononanoic acid (PFNA)	na	na	na	na	na	8.00E+00	8.00E+00	na	na	na	8.00E+00	na	na	na	na	1.00E-02	1.00E-02
Perfluorooctanesulfonic acid (PFOS)	8.40E+00	2.50E-01	na	na	na	2.30E+00	2.50E-01	na	na	na	2.50E-01	na	na	na	na	4.00E-03	4.00E-03
Perfluorooctanoic acid (PFOA)	9.40E+01	1.00E+02	na	na	na	8.28E+00	8.28E+00	na	na	na	8.28E+00	na	na	na	na	4.00E-03	4.00E-03

Appendix G
Report Limitations and Guidelines for Use

Appendix G
Report Limitations and Guidelines for Use[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

READ THESE PROVISIONS CLOSELY

Some clients, design professionals and contractors may not recognize that the geosciences practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.

ENVIRONMENTAL SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES, PERSONS AND PROJECTS

This report has been prepared for the exclusive use of Snohomish County Airport, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment or remedial action study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except the Snohomish County Airport should rely on this report without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

THIS ENVIRONMENTAL REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

This report applies to the former Fire Training Pit Site, located at 3220 100th Street SW in Everett, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- Not prepared for you,
- Not prepared for your project,
- Not prepared for the specific site explored, or
- Completed before important project changes were made.

[1] Developed based on material provided by GBA, GeoProfessional Business Association; www.geoprofessional.org.

If important changes are made after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

RELIANCE CONDITIONS FOR THIRD PARTIES

No third party may rely on the product of our services unless GeoEngineers agrees in advance, and in writing to such reliance. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions.

ENVIRONMENTAL REGULATIONS ARE ALWAYS EVOLVING

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

SUBSURFACE CONDITIONS CAN CHANGE

This report is based on conditions that existed at the time our site studies were performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes and slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

BIOLOGICAL POLLUTANTS

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants and no conclusions or inferences should be drawn regarding Biological Pollutants, as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

If Client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

DO NOT REDRAW THE EXPLORATION LOGS

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable but recognize that separating logs from the report can elevate risk.

GEOTECHNICAL, GEOLOGIC AND ENVIRONMENTAL REPORTS SHOULD NOT BE INTERCHANGED

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations, e.g., about the likelihood of encountering underground storage tanks (USTs) or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

SOIL AND GROUNDWATER END USE

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other sites or for other on-site uses of the affected media (soil and/or groundwater). Note that hazardous substances may be present in some of the site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject site or reuse of the affected media on Site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject Site to another location or its reuse on site in instances that we were not aware of or could not control.

ENVIRONMENTAL FINDINGS ARE PROFESSIONAL OPINIONS

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.