

P-0534
March 8, 2022

Mr. Timothy Maus
Massachusetts Department of Environmental Protection
8 New Bond Street
Worcester, MA 01606

**Re: IRA Status Report No. 5
6 Town Hall Drive, Princeton
RTN 2-21072**

Dear Mr. Maus:

On behalf of the Town of Princeton (the "Town"), Tighe & Bond has prepared this Immediate Response Action (IRA) Status Report for the response actions that commenced after the Massachusetts Department of Environmental Protection (MassDEP) sent a Notice of Responsibility (NOR) to the Town dated November 25, 2019, in response to the reported detection of per- and polyfluoroalkyl substances (collectively known as PFAS) in the drinking water well that serves the Princeton Town Hall campus at 6 Town Hall Drive in Princeton ("the Site").

The Site previously was identified as a disposal site for a release of fuel oil from underground storage tanks (UST) removed in 1987 that has been the subject of response actions conducted under Release Tracking Number (RTN) 2-11327. In May 2019, the Town and MassDEP entered into Administrative Consent Order ACO-CE-19-5D00006872 (ACO) to address the Town's obligations for the Public Water Supply (PWS) being operated at the Site. In accordance with Section 8(C)(vii) of the ACO, drinking water samples from the PWS well were collected by the Town's PWS operator on September 5, 2019 and September 27, 2019. These sample results identified PFAS6 concentrations of 127 and 102 nanograms/liter (ng/L), respectively. At that time, MassDEP's drinking water guideline was 70 ng/L, and MassDEP's proposed Maximum Contaminant Level (MCL) for PFAS in public water supply wells was proposed to be 20 ng/L for PFAS6.

The PWS sampling results were reported by the Town's PWS operator to MassDEP's Division of Water Supply, which reportedly informed MassDEP's Bureau of Waste Site Cleanup (BWSC) staff of the results. Subsequently, MassDEP's BWSC staff contacted Jeffrey Arps of Tighe & Bond, as the LSP of record for RTN 2-11327, to suggest that action should be taken to address the results under the Massachusetts Contingency Plan (MCP). On November 4, 2019, on behalf of the Town of Princeton, Tighe & Bond verbally notified MassDEP of these drinking water sample results as a 2-hour reporting condition, although the MCP at 310 CMR 40.0317(11) states that releases of oil and/or hazardous material in groundwater detected by sampling conducted by PWS owners or operators under 310 CMR 22.00: Drinking Water, as indicated by the presence of oil and/or hazardous material in a PWS source, are exempt from the notification requirements in the MCP.

On November 4, 2019, MassDEP assigned RTN 2-21072 to the notification and modified the release to a 72-hour Substantial Release Migration (SRM) condition under 310 CMR 40.0313(4)(d). Under the MCP, the requirement to provide notification for an SRM condition is triggered when a release to groundwater is detected in a PWS well, where that condition is associated with a release for which notification otherwise is or has at any time in the past been required under the MCP. Although the presence of PFAS in the PWS well at the Site was not identified as a condition associated with a release for which notification is or has at any



time in the past been required under the MCP, the NOR sent to the Town by MassDEP states: "The detection of PFAS in the public drinking water supply well from a release at the Site constitutes a condition of SRM."

Under 310 CMR 40.0414(3), IRAs are presumed to require elimination and/or mitigation of a Critical Exposure Pathway (CEP), which in this instance would include routes by which PFAS may be transported to human receptors by ingestion of "measurable concentrations" of PFAS from drinking water supply wells located at and servicing a pre-school, daycare, school or occupied residential dwelling. Given the proximity of residences served by private wells in the vicinity of the Site, the IRA plan included steps to investigate the presence of PFAS in private wells and, if measurable concentrations were detected, to mitigate the potential for ingestion of PFAS.

The activities described herein include immediate response actions completed since the submittal of the IRA Status Report No. 4 on September 7, 2021 and the Quarterly Status Report submitted on December 13, 2021.

A Site Plan (Figure 1) showing private well locations and their respective PFAS6 results is included in Appendix A for reference. A complete summary of all potable well results collected to date is presented in Table 1, included in Appendix B.

Status of Immediate Response Actions

Potable Well Sampling

All potable wells within the current disposal site boundary have been sampled, with the exception of 27 and 31 Prospect Street. There has been no contact with the respective owners of 27 and 31 Prospect Street. The property at 27 Prospect Street does appear to be occupied but 31 Prospect is a vacant and condemned property. Numerous attempts have been made to contact the owners of these properties. Notification letters were sent again on April 29, 2021 by certified mail, which was returned as undeliverable, and multiple attempts were made to contact the residents by leaving flyers on the door; however, no responses have been received to date.

The laboratory data for all potable well results received to date are summarized in Table 1, in Appendix B. The laboratory reports for the October 2021 semi-annual sampling event were partially submitted with the December 13, 2021 Quarterly Status Report in the individual notification letters included in Appendix C of that report. The remaining notification letters and laboratory reports are included in Appendix C of this IRA status report. Table C-1, included at the beginning of Appendix C, provides a summary of the dates that samples were collected, the notification letter due dates and the MassDEP submittal status.

Point-of-Entry Treatment System Status

POET systems are required for all locations with PFAS6 concentrations exceeding 20 ng/L. To date, 31 locations have been identified as requiring treatment. POET systems have been installed at 29 of these locations. The POET system for 14 Mountain Road requires MassDEP approval due to its status as a public water supply. During the October 2021 semi-annual sampling event, PFAS6 concentrations exceeding 20 ng/L were detected at 14 Gregory Hill Road, 7 Hubbardston Road, and 35 Hubbardston Road at concentrations of 24.8, 20.1, and 37.9 ng/L, respectively. POET systems were installed at 7 Hubbardston Road and 14 Gregory Hill Road on December 21, 2021. The POET system for 35 Hubbardston Road is pending installation. Bottled water is being provided by the town until the POET system is installed

and sampling of the treated water is shown to be non-detect for PFAS. A summary table of the POET systems installed to date is provided in Table 2 of Appendix B, for reference.

14 Mountain Road

The Princeton First Congregational Church is located at 14 Mountain Road and the water supply well for the church is registered as a transient non-community public water supply. As such, MassDEP approval is required prior to the installation of a POET system. A permit application for system modification was submitted to MassDEP on April 22, 2021. Approval for the designed system was received on July 2, 2021 and specifies the installation of two 6-cubic foot capacity granular activated carbon vessels for the treatment of PFAS6. The installation of the treatment system was scheduled for installation in late January 2022; however, the church and the Town are developing written arrangements to confirm the operational and testing responsibilities for the system. The installation of the POET will be scheduled after these arrangements are finalized.

POET Performance

POET system monitoring to date has not detected breakthrough of the primary carbon vessel in any of the installed systems. The results for the midfluent and effluent samples collected at 7 Hubbardston Road are pending receipt from the laboratory. These homes will continue to receive bottled water until the results of the mid and effluent samples are received and PFAS is below the laboratory reporting limits. Tighe and Bond will continue to monitor the effectiveness of the POET systems in accordance with the IRA Plan Modification No. 4 conditional approval.

Town Hall Campus Potable Well Quarterly Sampling

White Water is the licensed operator for the Town Hall well. All of the sinks in the four municipal buildings on the Town Hall campus have been labeled as "not for potable use" and bottled water is available in all of the buildings served by the well. The treatment system was recently installed and is awaiting MassDEP final inspection.

Quarterly PFAS sample results collected by White Water are shown in Table 1, included in Appendix B. White Water collected a potable well water sample from the town campus well on January 11, 2022. The PFAS6 result on that date was 435.6 ng/L. A copy of the laboratory report is included in Appendix D.

Quarterly Stormwater Sampling

In accordance with the IRA Plan Modification No. 3 Conditional Approval dated February 2, 2021, seasonal stormwater sampling is required near 41 Prospect Street and 30 Mountain Road. As reported in the December 13, 2021 Quarterly Status Report, seasonal stormwater sampling was completed near 30 Mountain Road on October 27, 2021. A stormwater sample was not collected from the 41 Prospect Street drainage area as no flow was observed on October 27, 2021.

Quarterly stormwater samples have not been collected since October 27, 2021 as no flow was observed at these locations during the monitoring period. For reference, the runoff sample locations are shown on Figure 2, included in Appendix A.

Remediation Waste

No remediation waste has been generated to date under RTN 2-21072.

Permits

The only permits involved with this project are the permits needed to install POET systems on the public water systems at the Town Hall and the church at 14 Mountain Road. No other permits are required for the IRA activities completed to date or the proposed IRA activities planned under the modifications for RTN 2-21072.

Notification of Environmental Sampling Results

In accordance with the MCP at 310 CMR 40.1403(10) a Notice of Environmental Sampling is required any time environmental samples are taken at a property in the course of investigating a release for which a notification to the Department has been made on behalf of someone other than the owner of the property, within 30 days of the date the sample results are issued by the laboratory. Table C-1, in Appendix C provides a summary of the dates that laboratory reports were received, the dates when public notifications are due, and the dates when the notification letters were sent. Copies of the public notification letters sent since the submittal of the December 2021 Quarterly Status Report are also included in Appendix C. The BWSC123 forms and laboratory reports for the potable well sampling are included with the individual letters.

Verbal notifications of sample results were made within 24 hours to all residents, along with the notifications to MassDEP, and Town of Princeton.

Status of Phase II Assessment Activities

On October 27, 28, 29, and November 13, 2021, Tighe & Bond collected soil samples at 18, 19, 21, 22, 30, and 54 Mountain Road in Princeton to evaluate the distribution of PFAS in soil in areas at and downhill from 30 Mountain Road that were reportedly subject to runoff from the firefighting efforts at that property in May 2017. For discussion purposes, the 30 Mountain Road structure damaged by the 2017 fire is referred to as the "former inn" to differentiate it from the other site structure on the property where the property owners currently reside.

Surface soil samples were previously collected from the surface to a depth of 6 inches below surface grade (BSG) at 30 Mountain Road in May 2021, 22 Mountain Road in July 2021, and 54 Mountain Road in August 2021. These results were previously presented in the IRA Status Report submitted on December 20, 2021. Based on those data, additional soil sampling was recommended to evaluate the presence of PFAS vertically.

On November 17, 2021, surface soil samples were collected at 18, 19 and 21 Mountain Road, and in the landscaped area north of the Town Library. These analytical results and our findings are summarized herein.

Soil samples were identified with an address prefix to denote the property from which the samples were collected. For reference, Site Plans depicting the soil sample locations are included in Appendix A as Figures 2A and 2B. Analytical summary tables are included in Table 2, included in Appendix B.

30 Mountain Road

On October 28 and 29, 2021, Tighe & Bond collected 24 soil samples from 15 individual boring locations using a GeoProbe® operated by Technical Drilling Services (TDS) of Sterling Massachusetts at 30 Mountain Road. In addition, composite samples were collected from two soil piles comprised of soil excavated from around the former inn during renovation activities. Two additional soil samples were collected from the dirt floor of the building's basement.

Soil borings 30MTN S-1 through 30MTN S-16, were advanced by TDS using the direct push sampling method. By this method a soil core is obtained in dedicated non-Teflon PVC liners to prevent cross contamination between samples. The soil borings were advanced to a depth of at least 48 inches below surface grade (BSG) or until probe refusal was encountered (bedrock in the area is quite shallow). The two basement soil samples and soil sample 30MTN S-6A were collected using hand tools as these areas were not accessible to the GeoProbe.

At soil sample locations 30MTN S-2 through 30MTN S-5, samples were retained from 6-12 inches BSG and every 12 inches thereafter until refusal, as the 0-6-inch sample interval was previously obtained in May 2021 at the same locations. At all other boring locations, samples were retained every 12 inches until probe refusal. The maximum explored depth at the 30 Mountain Road property was approximately 36 inches BSG at 30MTN S-5, S-11 and S-13. Refusal was considered to be bedrock at all locations by the observation of rock in the tip of the probe.

On October 29, 2021, Tighe & Bond used hand tools to collect two soil samples from the previously sampled locations in the basement of the former inn to evaluate the vertical extent of PFAS contamination in those areas. The basement samples are identified as 30MTN Basement-1 and 30MTN Basement-2. Bedrock was encountered at depths of 8 inches and 12 inches BSG (measured from the surface of the basement floor), respectively. Since the 0-6-inch sample interval was previously sampled at these locations in May 2021, the 6-8 and 8-12-inch samples were retained on October 29, 2021 for PFAS analysis.

Two soil piles are present at the 30 Mountain Road property that were reportedly generated during renovation activities at the former inn after the fire in 2017. The piles are located northwest of the existing garage building, each containing approximately 75 to 100 cubic yards of soil and large boulders. On October 29, 2021, Tighe & Bond collected composite samples from the soil piles which are identified as Soil Pile-1 and Soil Pile-2 and are shown on the attached Site Plan.

As a result of the activities completed at 30 Mountain Road, 24 soil samples collected during the soil boring program, two basement samples, and two composite soil pile samples were submitted for PFAS analysis by the isotope dilution method.

22 Mountain Road

On October 27 and 29, 2021, Tighe & Bond collected 16 soil samples from 11 individual boring locations using the same methods as described for 30 Mountain Road. Two soil samples were also collected from the basement of the residence located at 22 Mountain Road. As a result of these activities, 16 soil samples and two basement samples were submitted for PFAS analysis by the isotope dilution method.

54 Mountain Road

On October 28, 2021, Tighe & Bond collected 14 soil samples from 10 individual boring locations using the same methods previously described.

18, 19, 21 Mountain Road

On November 13, 2021, surface soil samples (0-6 inches) were collected from 18, 19, and 21 Mountain Road as these properties were reportedly impacted by firefighting runoff from 30 Mountain Road in May 2017. The soil samples were collected from 0-6 inches BSG using hand tools. The samples were submitted for PFAS laboratory analysis using the isotope dilution method. A summary of these samples is provided below:

18 Mountain Road – Six samples identified as 18MTN S-1 through 18MTN S-6

19 Mountain Road – Five samples identified as 19MTN S-1 through 19MTN S-5

21 Mountain Road – Seven samples identified as 21MTN S-1 through 21MTN S-7

From these three properties, 18 soil samples and one duplicate sample were submitted for PFAS analysis by the isotope dilution method.

Town Campus Library

On October 29, 2021, two surface soil samples were collected from the landscaped area west of the Library building located in the Town campus. These locations are near monitoring well MW-102, where elevated PFAS concentrations have been detected in shallow bedrock groundwater. These samples are identified as Library-1 and Library-2 and were submitted to Pace for PFAS analysis by isotope dilution.

The soil sample locations at these properties are shown on the attached Site Plan, as Figure 1, and the laboratory results are summarized in Tables 1. Analytical results are compared to the applicable Method 1 S-1/GW-1 soil standards as well as the Method 2, S-1 Direct Contact standards for PFAS6.

General Soil and Bedrock Depth Observations

In general, soils observed at all of the properties where soil samples were collected, consist of organic material and loam from the surface to 12 to 18 inches BSG, beyond which soils are comprised of fine silt and sand with some areas containing coarser sand and gravel. Bedrock was encountered at most boring locations as observed by rock fragments in the tip of the sample probe. At 30 Mountain Road, bedrock was encountered at all boring locations as shallow as 12 inches BSG. The deepest borings were 30MTN S-5 and 30MTN S-13 at 36 inches BSG. At 22 Mountain Road, bedrock ranges from 12 inches BSG to 60 inches BSG. Refusal depths at 54 Mountain Road ranged from 6 inches BSG to 48 inches BSG. Bedrock in the area of the Library samples was encountered at approximately 6 inches BSG at both sample locations.

Summary of Soil Results

30 Mountain Road

Based on a review of the soil data obtained at 30 Mountain Road, the six PFAS compounds regulated by MassDEP were detected in all soil sample locations and sample depths above MCP Method 1 S-1/GW-1 Soil Standards with the exception of 30MTN S-11, S-14, and S-16. The dominant compound detected in these samples is PFOS with the highest PFOS concentrations detected at 30MTN Basement-1 (6-8) and 30MTN S-2 (6-12) at 170 and 130 µg/kg, respectively. No PFAS compounds were detected in the soil samples collected at 30 Mountain Road above the Method 2 direct contact S-1 soil standards

22 Mountain Road

PFAS6 was detected above MCP Method 1 S-1/GW-1 Soil Standards in nine of the 16 soil samples collected. The highest concentrations detected are observed in the soil samples collected from 22MTN S-1, S-2, S-6, S-7, and S-13. These locations are consistent with the expected flow pattern for runoff originating from 30 Mountain Road, based on topography of the Site. No PFAS compounds were detected in the soil samples collected at 22 Mountain Road above the Method 2 direct contact S-1 soil standards.

54 Mountain Road

PFAS6 compounds were detected above laboratory reporting limits at all soil sample locations at 54 Mountain Road, except 54MTN S-7 (12-24) 54MTN S-11 (12-24). Of the remaining soil samples, five had PFAS6 compounds above the Method 1 S-1/GW-1 Soil Standards, but none exceeded the Method 2 direct contact S-1 soil standards.

18, 19, 21 Mountain Road

In general, the PFAS concentrations in shallow soil at 18, 19 and 21 Mountain Road were lower than the concentrations in shallow soil at the other properties sampled. A review of these results compared to the Method 1 S-1/GW-1 standards indicates the following:

- PFHpA was not detected above laboratory reporting limits in the surface soil samples collected at 18, 19, or 21 Mountain Road.
- PFHxS was detected in two samples above the Method 1 S-1/GW-1 Soil Standard at 21 Mountain Road and in one sample at 19 Mountain Road.
- PFDA was detected above the Method 1 S-1/GW-1 Soil Standard at one sample from 18 Mountain Road and one sample from 19 Mountain Road.
- PFOA was detected in two soil samples at 18 Mountain Road and one sample at 21 Mountain Road above the S-1 Soil Standard.
- PFNA was detected at 18, 19 and 21 Mountain Road at four locations above the Method 1 Soil Standard.
- PFOS was detected at six sample locations above the Method 1 Soil Standard for PFOS, four at 18 mountain Road, one at 19 Mountain and one at 21 Mountain Road.

All other sample locations either had PFAS6 compounds below the applicable S-1 Soil Standards or were not detected above laboratory reporting limits. These results are summarized in Table 2, included in Appendix B. The laboratory reports for the soil samples collected to date are included in Appendix E.

Soil Leachability Analyses

PFAS analysis by Synthetic Precipitation Leaching Procedure (SPLP) was completed for soil samples 30MTN S-3 (12-24), S-4 (6-12), S-5 (6-12), S-5 (12-24), S-8 (0-12), S-9 (0-12); 54MTN S-6 (6-12), S-10 (12-24); 22MTN S-1 (6-12), S-1 (12-24) and 22MTN S-7 (6-12). The SPLP concentration represents the amount of PFAS available to leach from soil and is evaluated to better understand the potential mobility of PFAS in soil and what levels could potentially reach groundwater.

The samples were selected based on their range of concentrations and soil type to determine PFAS retention in those soils. In the attached tables, we compared the PFAS results from the isotope dilution analysis, which reports the total concentration of each compound detected in the sample, to the SPLP concentration detected (the soil results are in solid units ($\mu\text{g}/\text{kg}$) while the SPLP results are in liquid units (ng/L), both presented in parts per trillion, ppt, in the tables). Our results indicate that the amount of PFAS leaching from soil is 89 to 99 percent less than the total PFAS concentration in the soil, regardless of soil type. For example, the total PFOS concentration in the soil sample collected at 30MTN S-3 is 24,000 ppt. In contrast, the SPLP result for the same soil sample is 330 ppt. This indicates that approximately 99 percent of PFOS is being retained in the soil at this location. Despite the significant retention of PFAS in the soil matrix, the summed SPLP PFAS6 concentrations all exceed the GW-1 standard of 20 ng/L for PFAS6. When compared to the Method 2 Direct Contact Standards

for S-1 soils, none of the concentrations detected in those samples exceed the Method 2 Standard. For reference, the SPLP soil results and the calculated percent retained are summarized in Table 3 in Appendix B.

An overall review of the soil analytical data indicates that the distribution of PFAS6 compounds vertically through the soil column is relatively uniform, regardless of soil stratigraphy. In some instances, concentrations increase with depth and in others they are either consistent or slightly lower. PFAS6 compounds are likely retained in the denser fine sand and silt layers and less so in the loose loamy sand and gravel layers. This is observable in the sample collected at 30MTN S-4 where soils at this location consist of sandy loam and organics to approximately 6 inches BSG and fine sand and silt from 6 to 12 inches BSG. At this location PFOS (and to a lesser extent, PFHxS) is higher in the 6-12-inch sample than the 0-6-inch sample (see Table 1).

Bedrock was encountered at shallow depths at most boring locations. At 22 Mountain Road, bedrock was encountered at 12-18 inches BSG on the western portion of the property along the slope that rises towards 30 Mountain Road. This is also the area with the most elevated PFAS6 concentrations, with the dominant concentrations being PFOS. The deepest boring at 22 Mountain Road was 22MTN S-13 where bedrock was encountered at approximately 60 inches BSG.

Bedrock at 30 Mountain Road is shallow with the deepest encounter at 36 inches BSG at 30MTN S-5, S-11 and S-13. Bedrock in the areas with the highest PFAS concentrations is on the eastern portion of the property where bedrock is shallow at approximately 12 inches BSG. The eastern portion of the 30 Mountain Road property slopes toward 22 Mountain Road and the concentrations detected in this area are consistent with the elevated concentrations detected on the same slope on the 22 Mountain Road property.

Conceptual Site Model

While all potential sources of PFAS in the area have not been identified, three potential sources of PFAS have been reported in the vicinity of upper and lower Mountain Road: the use of AFFF during the firefighting efforts at 30 Mountain Road in May 2017, the reported major fire at 54 Mountain Road in 1967 where it is possible AFFF was used to fight the fire, and the reported use of AFFF in a small area at the Town Campus property several decades ago, during fire training. The surface impacts from use of AFFF would subsequently have percolated vertically through the overburden soils with precipitation, into the groundwater.

To investigate the reported potential use of AFFF at the Town Campus, several soil samples were collected from the area of the former electrical building on the west side of the property, which was reportedly the target structure for fire training. The samples did not indicate the presence of PFAS. Therefore, this reported potential source is no longer considered a likely source of the PFAS detected in the deep bedrock groundwater supplying drinking water and has been eliminated from the CSM.

Groundwater in deep bedrock with PFAS detections extends from the other potential source areas radially, but has migrated primarily to the south-southwest, as evidenced by PFAS detections in deep bedrock private water supply wells on properties extending in that direction. The apparent northern boundary of the PFAS impact in deep bedrock groundwater appears to be limited by 33 Allen Hill Road, as PFAS was not detected at 7 Thompson Road. Merriam Road and East Princeton Road appear to be the current easterly limit of PFAS impact in deep bedrock groundwater as PFAS6 has not been detected northeast of Merriam Road or

beyond 18 and 26 Prospect Street. The southerly limits of the PFAS impact in deep bedrock groundwater appear to be limited to 10 Worcester Road, 17 Boylston Ave, and 18 Connor Lane. The western limit appears to be the properties identified as 18 and 28 Radford Road.

Sampling of potable wells to the southwest suggests the extent of PFAS impact in deep bedrock groundwater in this direction is limited to the vicinity of lower Radford Road and its intersection with Connor Lane and Brooks Station Road.

During the most recent sampling effort, PFAS impact in deep bedrock groundwater was most notably observed at 14 Gregory Hill Road to the southeast, 7 Hubbardston Road to the south and 35 Hubbardston Road to the southwest. These three locations have historically had PFAS6 concentrations below the GW-1 Groundwater Standard but now exceed 20 ng/L. POET systems were installed at 14 Gregory Hill Road and 7 Hubbardston Road on December 21, 2021. The POET for 35 Hubbardston Road is pending installation. It is also noted that PFAS6 concentrations at 44 Hubbardston Road show an increasing trend and are approaching 20 ng/L.

PFAS impact in deep bedrock groundwater to the southeast was further observed at 11 and 13 Gregory Hill Road. These locations have historically been non-detect for PFAS. However, PFAS6 was detected at these locations during the most recent sampling effort and are located north of 14 Gregory Hill Road.

As reported in previous IRA Status Reports, it appears that two distinct PFAS signatures are present. Potable wells north and west-northwest of 30 Mountain Road ("northern area" - 51, 54, 58, 64 Mountain Road, 43 Hubbardston Road and 28 Radford Road) generally have higher concentrations of PFOA (37 percent average) and little to no PFHxS (4 percent average), while potable wells at and to the south of 30 Mountain Road ("southern area"- 14, 18, 19, 21, 29 and 30 Mountain, 15 Hubbardston, 12 Boylston and now 11, 13, and 14 Gregory Hill Road) have elevated PFHxS concentrations (54 percent average) and little PFOA (6 percent average). PFOS concentrations appear to be similar between the northern and southern signatures with a 30 to 35 percent average.

The method of PFAS manufacture provides information that allows differentiation of potential source materials. The PFAS detected within the southern area is noted to consist almost exclusively of even-numbered compounds, suggesting telomerization manufacturing. The PFAS detected in the northern area are dominated by PFOA and PFOS and have detectable concentrations of PFHpA and PFNA (odd-numbered compounds), suggesting electrochemical fluorination (ECF) manufacturing. Based on these data, it appears that there may be two distinct source materials for the PFAS detected in the northern and southern areas of the Site.

According to a 1967 newspaper report, there was a major fire at 54 Mountain Road in April 1967. Although specific details of the firefighting method utilized on that property (i.e., whether AFFF was used) are not available, the soil sampling data from 54 Mountain Road show PFAS detections around the perimeter of the building, as would be expected from firefighting. Further, the soil data generally agree with the well water data, with PFHxS and PFBS notably absent from both media, where these compounds have been detected in the southern site area.

A review of the groundwater data from samples collected in the monitoring wells on the Town Hall campus indicate a high percentage of PFHxS and PFOS, consistent with the concentrations identified in potable wells located within the southern portion of the disposal site and the runoff samples collected from the runoff location at 30 Mountain Road.

PFAS6 concentration detections and fluctuations observed in the potable well data suggest a vertical difference in concentrations rather than simply horizontal separation. This data variability among the residential wells may be due to the varying depths of these wells tapping into different bedrock fractures, as well as seasonal changes in the bedrock aquifer. Furthermore, with the proximity of the two currently presumed source areas to each other, it is likely that some degree of mixing has occurred as the impacted groundwater moves in bedrock fractures.

In summary, based on the activities completed to date, the current conceptual site model is that there are three possible sources of PFAS at the Site:; (1) the firefighting at 30 Mountain Road in 2017, (2) the firefighting at 54 Mountain Road in 1967, and (3) discharges to septic systems of water from potable supply wells impacted by PFAS and wastewater impacted by common domestic, household sources of PFAS (i.e., washing of cookware and clothing that contain PFAS). However, there are subcategories for each of the first three potential sources: (a) the impact to soil from the initial surface discharge of AFFF at the location, (b) runoff of water with AFFF to adjacent locations, (c) infiltration of rainfall through impacted soil to groundwater, and (d) surface runoff of stormwater that is in contact with impacted soil, reaching roadway drainage systems and surface water bodies. Evaluation of the three potential sources and their subcategories will be ongoing as investigations proceed.

Conclusions

As discussed above, a substantial sampling effort has been performed to identify the extent of PFAS in private and public wells based upon the directive from MassDEP to evaluate a condition of SRM in the area surrounding the Town Hall Campus. To date, 99 properties have been either sampled or are proposed for sampling based on currently available data.

In addition, POETs have been installed at 27 locations. The April quarterly sampling round identified one new location (7 Prospect Street) that requires a POET. The POET at 14 Mountain Road, which is a public water supply, has received final permit approval, and is anticipated to be installed prior to submittal of the June 2022 Quarterly Status Report. Permitting and design for the treatment system at the Town Hall public water supply is also ongoing. In the interim, White Water is sampling the Town well quarterly. We will notify MassDEP when a schedule has been determined for these installations.

An Imminent Hazard evaluation completed by Sovereign Consulting, Inc. indicates that the raw water PFAS6 concentrations in excess of 100 ng/L do pose an IH condition, but that condition has been mitigated through the installation of POET systems (or provision of bottled water pending POET installation) at locations with PFAS6 concentrations of 20 ng/L or greater, resulting in no ongoing exposure to the residents at the homes with PFAS6 concentrations in excess of IH levels.

Evaluation of PFAS6 in two surface water bodies (Schoolhouse Pond and Airport Pond) to the south indicate no PFAS compounds above MassDEP Surface Water Quality Benchmark values. However, the PFAS6 results for Schoolhouse Pond exceed the GW-1 standard for PFAS6 of 20 ng/L. Airport Pond results were below the GW-1 standard. The Princeton Fire Department has been advised of these results and will no longer use Schoolhouse Pond as a source for firefighting water. The results of the Pond samples were previously reported in the December 2021 Quarterly Status Report.

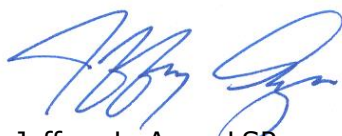
Recommendations

Potable well sampling to date has generally defined the extent of PFAS in groundwater at this Site. The next comprehensive sampling round of potable wells is scheduled for April 2022.

Additional POET systems will be installed if PFAS6 concentrations exceed 20 ng/L at any locations. Those POETS requiring sampling in accordance with IRA Plan Modification No. 4 conditional approval, will be sampled during the comprehensive sampling round in April 2022. An update on these activities will be reported to MassDEP in the June 2022 Quarterly Status Report. If you have any questions or require additional information, please contact me at 413.572.3227.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Vice President

cc: Sherry Patch, Town of Princeton

Appendices

Appendix A – Figure 1 – Potable Well Radius Map
Figure 2A – Soil Sample Location Plan (Lower Mountain Road)
Figure 2B – Soil sample Location Plan (54 Mountain Road)

Appendix B – Table 1 - Summary of Private Well Data
Table 2 - Summary of Soil Analytical Results
Table 3 - Summary of SPLP Soil Analytical Results

Appendix C – Public Notification Letter and Laboratory Reports

Appendix D – Town Campus Well Laboratory Report

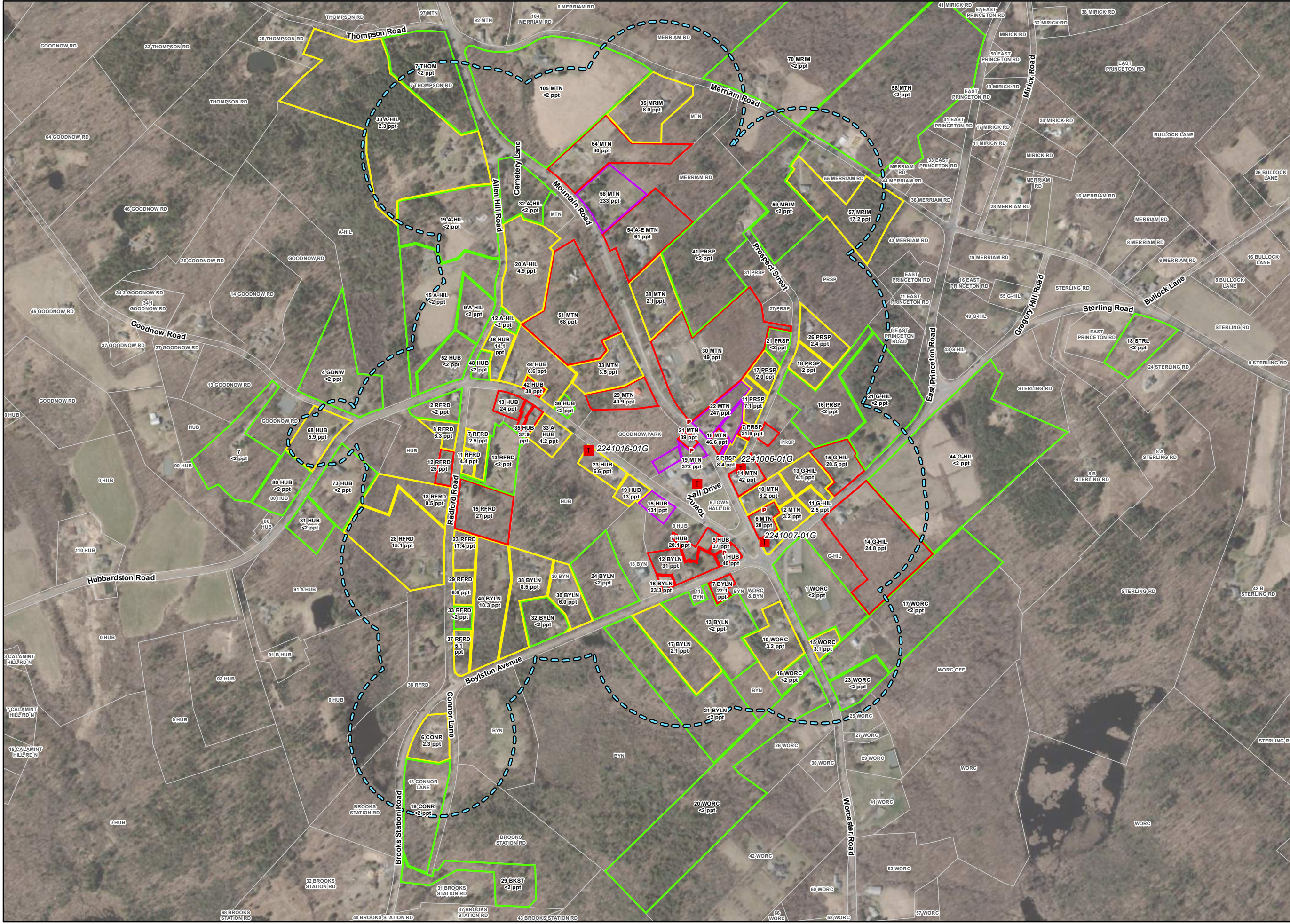
Appendix E – Soil Laboratory Analytical Reports

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Tighe&Bond

APPENDIX A

FIGURE 1 ORTHOPHOTOGRAPH SITE PLAN



LEGEND

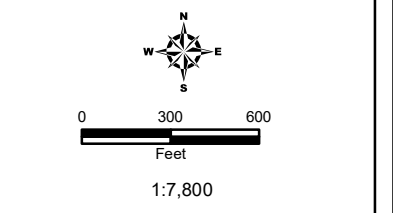
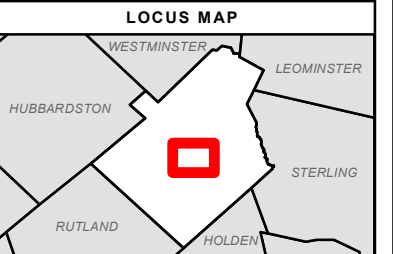
Total Regulated PFAS Concentrations in Parts-Per-Trillion (ppt)

- Greater Than 100
- Greater Than 20 But Less Than 100
- Greater Than 2 But Less Than 20
- Non Detect (<2)
- Non-Community Transient Public Water Supply

500' Radius (2022/01/18)

Affected Property Labels:

- (Point of Entry Treatment, if present)
- Address
- PFAS 6-Compound Total



NOTES





1. Based on MassGIS Orthoimagery (2019)
2. 500' Buffer based on a 50' buffer of building structures. Well locations are assumed to be within 50' of each home.
3. Abbreviation Dictionary:

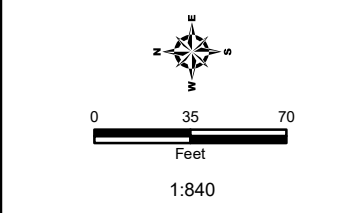
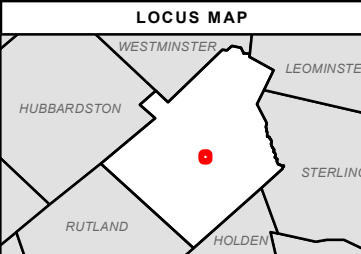
"ALLEN HILL RD": "A-HIL"
 "BOYLSTON AVE": "BYLN"
 "GREGORY HILL RD": "G-HIL"
 "HUBBARDSTON RD": "HUB"
 "MOUNTAIN RD": "MTN"
 "PROSPECT ST": "PRSP"
 "RADFORD RD": "RFRD"
 "WORCESTER RD": "WORC"
 "MERRIAM RD": "MRIM"
 "GOODNOW RD": "GDNW"
 "CONOR LN": "CONR"
 "GREGORY RD": "GRGY"
 "STERLING RD": "STRL"
 "RALPH RD": "RLPH"

Princeton, Massachusetts
 March 2022



FIGURE 2B
SOIL SAMPLE LOCATION PLAN

- LEGEND**
-  Surface Water Sample
 -  Soil Boring Locations
 -  Non-Community Transient Public Water Supply
 -  Princeton Parcels








- NOTES**
1. Based on MassGIS Orthoimagery (2019)
 2. Soil Borings collected by Tighe & Bond (October 2021)
 3. Parcels by the Town of Princeton (FY2020)

Princeton, Massachusetts
January 2022



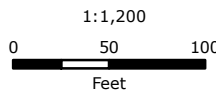


Legend

-  Soil Boring Locations
-  Non-Community Transient Public Water Supply
-  Site Parcel
-  Approximate Parcel Boundary
-  Municipal Boundary

Tighe & Bond

Based on MassGIS Color Orthophotography (2019) and Approximate Parcels from MassGIS, by the town of Princeton (FY2020)



**FIGURE 2B
SOIL SAMPLE LOCATION PLAN**

54 Mountain Road
Princeton, Massachusetts

February 2022

Tighe&Bond

APPENDIX B

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts	Old Town Hall Well
Well Depth (feet)	Contingency Plan GW-1 Standard & MMCL	UNKNOWN
Sampling Date		1/19/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		38
Perfluorohexanoic acid (PFHxA)		11
Perfluorohexanesulfonic acid (PFHxS)		250
Perfluoroheptanoic acid (PFHpA)		4.8
Perfluorooctanoic acid (PFOA)		17
Perfluorooctanesulfonic acid (PFOS)		150
Perfluorononanoic acid (PFNA)		ND(1.82)
Perfluorodecanoic acid (PFDA)		ND(1.82)
N-EtFOSAA		ND(1.82)
Perfluoroundecanoic acid (PFUnA)		ND(1.82)
N-MeFOSAA		ND(1.82)
Perfluorododecanoic acid (PFDoA)		ND(1.82)
Perfluorotridecanoic acid (PFTrDA)		ND(1.82)
Perfluorotetradecanoic acid (PFTA)		ND(1.82)
Total (All Compounds)		470.8
Regulated Total	20	421.8

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	Town Well (WELL-01G)											
		UNKNOWN											
		9/5/2019	9/27/2019	1/8/2020	6/23/2020	9/29/2020	9/29/2020	12/22/2020	2/17/2021	6/15/2021	8/10/2021	10/18/2021	1/11/2022
							RERUN						
<i>EPA 537.1 (ng/L)</i>													
Perfluorobutanesulfonic acid (PFBS)		26.9	17	31.9	16.1	39.5	42.9	48.6	41.6	34.5	14.0	40.1	38.3
Perfluorohexanoic acid (PFHxA)		ND (1.82)	ND (1.87)	2.86	1.48 (J)	2.92	4.51	5.1	5.45	4.14	1.72 (J)	4.62	6.78
Perfluorohexanesulfonic acid (PFHxS)		94.4	78.1	168	81.7	234	225	329	305	224	90.9	249	301
Perfluoroheptanoic acid (PFHpA)		ND (1.82)	ND (1.87)	2.47	1.25 (J)	1.30 (J)	1.9	4.27	4.67	2.09	1.15 (J)	3.56	5.14
Perfluorooctanoic acid (PFOA)		3.92	3.18	9.52	4.48	8.4	12.3	15.9	14.6	10.8	5.32	13.1	16
Perfluorooctanesulfonic acid (PFOS)		26.4	18.9	52.6	23.5	56.4	67.4	94.2	86.2	71	30	99.9	113
Perfluorononanoic acid (PFNA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	0.555 (J)	0.985 (J)	0.904 (J)	1.17 (J)	0.769 (J)	ND (1.80)	0.91 (J)	0.98 (J)
Perfluorodecanoic acid (PFDA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
N-EtFOSAA		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
N-MeFOSAA		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
Perfluorotridecanoic acid (PFTTrDA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
Perfluorotetradecanoic acid (PFTTA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)	ND (1.83)	ND (1.80)	ND (1.80)	ND (2.0)
Total (All Compounds)		151.6	117.2	264.9	127.1	341.9	354.5	497.5	458.1	346.9	141.7	410.7	480.7
Regulated Total	20	124.7	100.2	230.1	110.3	299.5	307.1	443.8	411.1	308.3	126.8	366.0	435.6

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Containment Level

Values reported with a (J) qualifier are estimated values. If the reported J value is greater than or equal to 1/3 the MRL and < MRL one-half the MRL is used for the concentration of that compound in the summation

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	9 Allen Hill Rd					
		UNKNOWN					
Well Depth (feet)		2/12/2020	7/23/2020	1/19/2021	4/27/2021	4/27/2021	12/2/2021
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Allen Hill Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		2/14/2020	7/27/2020	1/19/2021	10/14/2021
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		2.2	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.8	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.2	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		12.2	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	12.2	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Allen Hill Road				
		4/28/2020	10/1/2020	1/19/2021	4/23/2021	10/14/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	19 Allen Hill Road				
		4/28/2020	10/1/2020	1/19/2021	4/21/2021	10/29/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	20 Allen Hill Road				
		400				
Well Depth (feet)		5/8/2020	10/2/2020	1/18/2021	4/20/2021	10/19/2021
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		3	ND (2.0)	2.5	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		2.3	ND (2.0)	2.5	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		3	ND (2.0)	2.4	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		8.3	ND (2.0)	7.4	ND (2.0)	ND (1.9)
Regulated Total	20	5.3	ND (2.0)	4.9	ND (2.0)	ND (1.9)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	32 Allen Hill Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/2/2020	7/22/2020	1/22/2021	4/20/2021	11/4/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	33 Allen Hill Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		10/30/2020	12/16/2020	4/20/2021	10/18/2021	
			DUPLICATE			
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8
Perfluorooctanesulfonic acid (PFOS)		47	8	2.3	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		47	8	2.3	ND (2.0)	2.8
Regulated Total	20	47	8	2.3	ND (2.0)	2.8

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Boylston Ave																	
		-			-			NOT RECORDED			14,911			23,425			32,192		
		1/27/2020			3/1/2020			3/17/2020			5/1/2020			6/18/2020			7/29/2020		
Flow Meter Reading (gallons)																			
Sampling Date																			
		DUPLICATE	FIELD BLANK	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF			
EPA 537.1 (ng/L)																			
Perfluorobutanesulfonic acid (PFBS)		3.6	3.7	ND (2.0)	4.1	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)			
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorohexanesulfonic acid (PFHxS)		16	17	ND (2.0)	20	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	23	ND (2.0)	ND (2.0)			
Perfluorheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorooctanoic acid (PFOA)		2.7	ND (2.0)	14	2.8	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorooctanesulfonic acid (PFOS)		4.5	6.2	4.7	6.2	ND (2.0)	ND (2.0)	3.3	ND (2.0)	ND (2.0)	4.9	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)			
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Total (All Compounds)		26.8	26.9	18.7	33.1	ND (2.0)	ND (2.0)	20.0	ND (2.0)	ND (2.0)	33.9	ND (2.0)	ND (2.0)	31.2	ND (2.0)	ND (2.0)			
Regulated Total	20	23.2	23.2	18.7	29.0	ND (2.0)	ND (2.0)	17.8	ND (2.0)	ND (2.0)	29.6	ND (2.0)	ND (2.0)	27.1	ND (2.0)	ND (2.0)			

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Boylston Ave (continued)								
		30,276			65,073			79,651		
		11/6/2020			2/22/2021			4/20/2021		
Flow Meter Reading (gallons)										
Sampling Date										
		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)		3.4	ND (2.0)	ND (2.0)	4.4	ND (2.0)	ND (2.0)	3.5	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		19	ND (2.0)	ND (2.0)	26	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)
Perfluorheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	3.1*	2.1*	ND (2.0)	ND (2.0)	2.1*	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.9	ND (2.0)	ND (2.0)	3	ND (2.0)	ND (2.0)	3.8	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.6	ND (2.0)	ND (2.0)	6.9	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		32.9	ND (2.0)	ND (2.0)	40.3	ND (2.0)	ND (2.0)	35.7	ND (2.0)	ND (2.0)
Regulated Total	20	29.5	ND (2.0)	ND (2.0)	35.9	ND (2.0)	ND (2.0)	32.2	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level
 * PFHpA also detected in both the field blank and trip blank, therefore the reported result is considered invalid. Confirmed as laboratory contaminant. Result is not included in total.

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Boylston Ave													
		4,939			9,900			13,469			24,535				
		1/10/2020	3/20/2020	5/1/2020	6/23/2020	7/31/2020	11/6/2020								
		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)		9.1		7.5	ND (2.0)	ND (2.0)	8.9	ND (2.0)	ND (2.0)	7.7	ND (2.0)	ND (2.0)	7.5	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		14		14	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.7		5.9	ND (2.0)	ND (2.0)	6.8	ND (2.0)	ND (2.0)	4.7	ND (2.0)	ND (2.0)	6	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.4		5.7	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)	5.9	ND (2.0)	ND (2.0)	6.6	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		35.2		33.1	ND (2.0)	ND (2.0)	42.2	ND (2.0)	ND (2.0)	35.3	ND (2.0)	ND (2.0)	38.1	ND (2.0)	ND (2.0)
Regulated Total	20	26.1		25.6	ND (2.0)	ND (2.0)	31.2	ND (2.0)	ND (2.0)	27.6	ND (2.0)	ND (2.0)	30.6	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Boylston Ave (Continued)					
		33,116			50,561		
		1/29/2021			7/22/2021		
		INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		8.7	ND (2.0)	ND (2.0)	9.9	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	3.6	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		18	ND (2.0)	ND (2.0)	27	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.5	ND (2.0)	ND (2.0)	7.6	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.2	ND (2.0)	ND (2.0)	8.7	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		38.4	ND (2.0)	ND (2.0)	56.8	ND (2.0)	ND (2.0)
Regulated Total	20	29.7	ND (2.0)	ND (2.0)	43.3	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	13 Boylston Ave						
		~100'						
		1/8/2020	5/28/2020	10/7/2020	1/22/2021	4/26/2021	5/18/2021	11/11/2021
Well Depth (feet)								
Sampling Date							Sample to confirm detection	
EPA 537.1 (ng/L)								
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8	ND (2.0)	2.4
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8	ND (2.0)	2.4
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8	ND (2.0)	2.4

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	16 Boylston Ave							
		NA				0	260		
		1/9/2020	5/28/2020	10/7/2020	1/20/2021	3/23/2021	5/27/2021		
Flow Meter Reading (gallons)									
Sampling Date									
						POET INSTALLED	INF	MID	EFF
EPA 537.1 (ng/L)									
Perfluorobutanesulfonic acid (PFBS)		5.3	6.2	5	6.6		5.5	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		3.7	3.9	3.3	3.6		6.2	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		4.7	5.2	6	9.4		9.4	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		2.6	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		8	8.9	8.2	8.9		11	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		7.2	5.5	4.2	5		4.6	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		28.9	29.7	26.7	33.5		39.3	ND (2.0)	ND (2.0)
Regulated Total	20	19.9	19.6	18.4	23.3		27.6	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	17 Boylston Ave					
		UNKNOWN					
		1/8/2020	5/28/2020	10/7/2020	1/18/2021	4/27/2021	11/11/2021
Well Depth (feet)							
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	2.1	2.3	4.7
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	2.1	2.3	4.7
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	2.1	2.3	4.7

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Boylston Ave				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/19/2020	7/22/2020	1/19/2021	4/26/2021	10/14/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	24 Boylston Ave					
		~200'					
		1/9/2020	5/29/2020	10/2/2020	1/19/2021	4/27/2021	10/18/2021
Well Depth (feet)							
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	30 Boylston Ave		
		UNKOWN		
Well Depth (feet)				
Sampling Date		5/6/2021	10/14/2021	11/3/2021
EPA 537.1 (ng/L)				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		2.1	2.7	2.8
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	3.1	3.2
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		2.1	5.8	6.0
Regulated Total	20	2.1	5.8	6.0

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	32 Boylston Ave				
		UNKOWN				
Well Depth (feet)						
Sampling Date		5/28/2020	10/7/2020	1/21/2021	4/27/2021	11/3/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		3.7	3.3	ND (2.0)	ND (2.0)	2.5
Perfluorooctanesulfonic acid (PFOS)		2.9	2.3	ND (2.0)	ND (2.0)	2.2
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		6.6	5.6	ND (2.0)	ND (2.0)	4.7
Regulated Total	20	6.6	5.6	ND (2.0)	ND (2.0)	4.7

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	38 Boylston Ave
Well Depth (feet)		UNKNOWN
Sampling Date		8/31/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		4.7
Perfluorooctanesulfonic acid (PFOS)		3.8
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		8.5
Regulated Total	20	8.5

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	40 Boylston Ave				
		4/28/2020	10/1/2020	1/20/2021	4/20/2021	10/14/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.3	4.6	6	7.5	6.5
Perfluorooctanesulfonic acid (PFOS)		3.9	3.8	4.3	5.3	5.6
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		9.2	8.4	10.3	14.9	12.1
Regulated Total	20	9.2	8.4	10.3	14.9	12.1

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	29 Brooks Station
Well Depth (feet)		UNKNOWN
Sampling Date		7/29/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	6 Connor Lane			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		8/31/2020	1/21/2021	4/20/2021	10/14/2021
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	3.3	2.9	5
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	2.3	2.9	3.7
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	5.6	5.8	8.7
Regulated Total	20	ND (2.0)	2.3	2.9	3.7

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	18 Connor
Well Depth (feet)		UNKNOWN
Sampling Date		9/23/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	4 Goodnow Road				
		4/28/2020	10/1/2020	1/21/2021	4/20/2021	10/14/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Goodnow Road
Well Depth (feet)		UNKNOWN
Sampling Date		1/18/2022
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (1.8)
Perfluorononanoic acid (PFNA)		ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (1.8)
N-EtFOSAA		ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (1.8)
N-MeFOSAA		ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (1.8)
Total (All Compounds)		ND (1.8)
Regulated Total	20	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	11 Gregory Hill Rd						
		UNKNOWN						
		1/22/2020	5/29/2020	10/1/2020	1/19/2021	4/21/2021	10/14/2021	11/11/2021
Well Depth (feet)								
Sampling Date								sample to confirm detection
EPA 537.1 (ng/L)								
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.9	2.5
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.9	2.5
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.9	2.5

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	13 Gregory Hill Road						
		UNKNOWN						
		1/22/2020	5/29/2020		10/1/2020	1/19/2021	4/21/2021	10/14/2021
				DUPLICATE				
EPA 537.1 (ng/L)								
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.9
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.2
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	4.1
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	4.1

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	14 Gregory Hill Rd								
		UNKNOWN								
		1/9/2020	5/29/2020	10/1/2020	1/20/2021	4/20/2021	10/14/2021	12/21/2022	2/4/2022	
Well Depth (feet)								POET INSTALLED	MID	EFF
Sampling Date										
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)		2.6	2.9	3.6	2.7	3.9	3.7		ND (1.8)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	2.7	2.7	2.2	3.4		ND (1.8)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		3.7	5.2	11	4.4	7.6	14		ND (1.8)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Perfluorooctanoic acid (PFOA)		3.2	3.4	3.6	2.2	3.4	6		ND (1.8)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		2.5	2.7	3.7	ND (2.0)	2.7	4.8		ND (1.8)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (1.8)	ND (1.8)
Total (All Compounds)		12	14.2	21.9	9.3	17.6	31.9		ND (1.8)	ND (1.8)
Regulated Total	20	9.4	11.3	18.3	6.6	13.7	24.8		ND (1.8)	ND (1.8)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Flow Meter Reading (gallons)	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Gregory Hill Rd													
		5,368			68,471			104,009			189,140				
		1/13/2020	2/26/2020	3/11/2020	6/23/2020	7/31/2020	11/3/2020								
Sampling Date		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)		2.7	3.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		2.9	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		5.2	6.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		4.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.1	2.2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		5.4	5.4	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	6.5	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		26	17.8	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	26.0	ND (2.0)	ND (2.0)
Regulated Total	20	20.4	14.2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	20.9	ND (2.0)	ND (2.0)

Flow Meter Reading (gallons)	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Gregory Hill Rd (Continued)					
		199,350			200,005		
		1/29/2021	4/21/2021	INF	MID	EFF	INF
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		5	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		11	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.4	ND (2.0)	ND (2.0)	3.0	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.1	ND (2.0)	ND (2.0)	6.5	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		25.5	ND (2.0)	ND (2.0)	26.1	ND (2.0)	ND (2.0)
Regulated Total	20	20.5	ND (2.0)	ND (2.0)	21.5	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Gregory Hill Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/28/2020	9/18/2020	1/21/2021	4/26/2021	11/11/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	44 Gregory Hill Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/5/2020	7/22/2020	1/20/2021	4/26/2021	10/19/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	Gregory Spring
Well Depth (feet)		NA
Sampling Date		10/18/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	1 Hubbardston Rd												
		865			1,311			3,896			6,577			
		1/8/2020		2/26/2020		3/11/2020		5/1/2020		6/18/2020		7/29/2020		
		POET INSTALLED												
		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)														
Perfluorobutanesulfonic acid (PFBS)	7		5.7	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)	6.5	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	22		19	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	23	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)	3.4		3	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)	6.1		5.6	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	6.2	ND (2.0)	ND (2.0)	5.6	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)	38.5		33.3	ND (2.0)	ND (2.0)	36.2	ND (2.0)	ND (2.0)	39.6	ND (2.0)	ND (2.0)	37.9	ND (2.0)	ND (2.0)
Regulated Total	20		31.5	ND (2.0)	ND (2.0)	29.8	ND (2.0)	ND (2.0)	33.1	ND (2.0)	ND (2.0)	31.5	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	1 Hubbardston Rd								
		13,221			14,674			15,179		
		11/13/2020			1/29/2021			4/23/2021		
		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)	8.5	ND (2.0)	ND (2.0)	9.5	ND (2.0)	ND (2.0)	7.5	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)	ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)	31	ND (2.0)	ND (2.0)	37	ND (2.0)	ND (2.0)	36	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)	3	ND (2.0)	ND (2.0)	3.7	ND (2.0)	ND (2.0)	5.3	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)	5.7	ND (2.0)	ND (2.0)	8.2	ND (2.0)	ND (2.0)	9.5	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)	48.2	ND (2.0)	ND (2.0)	60.5	ND (2.0)	ND (2.0)	60.4	ND (2.0)	ND (2.0)	
Regulated Total	20		39.7	ND (2.0)	ND (2.0)	48.9	ND (2.0)	ND (2.0)	50.8	

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	5 Hubbardston Road												
		1,131			5,143			11,960			22,710			
		12/5/2019	1/28/2020	2/5/2020	3/5/2020	3/5/2020	5/1/2020	5/1/2020	5/1/2020	6/30/2020	6/30/2020	6/30/2020		
Notes	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)														
Perfluorobutanesulfonic acid (PFBS)		8.4	6.3	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		29	25	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.9	2.5	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		7.3	6.9	ND (2.0)	ND (2.0)	4.9	ND (2.0)	ND (2.0)	4.8	ND (2.0)	ND (2.0)	5.5	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		47.6	40.7	ND (2.0)	ND (2.0)	22.9	ND (2.0)	ND (2.0)	27.3	ND (2.0)	ND (2.0)	29.7	ND (2.0)	ND (2.0)
Regulated Total	20	39.2	34.4	ND (2.0)	ND (2.0)	18.6	ND (2.0)	ND (2.0)	22.7	ND (2.0)	ND (2.0)	25.1	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	5 Hubbardston Road											
		27,069			39,213			47,979			58,197		
		8/5/2020	8/5/2020	11/18/2020	11/18/2020	2/5/2021	2/5/2021	4/27/2021	4/27/2021	4/27/2021	4/27/2021	4/27/2021	
Notes	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)													
Perfluorobutanesulfonic acid (PFBS)		7	ND (2.0)	ND (2.0)	7	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		27	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	30	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.5	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	3.3	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.7	ND (2.0)	ND (2.0)	6.3	ND (2.0)	ND (2.0)	3.9	ND (2.0)	ND (2.0)	7.3	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		43.2	ND (2.0)	ND (2.0)	44.0	ND (2.0)	ND (2.0)	24.0	ND (2.0)	ND (2.0)	47.0	ND (2.0)	ND (2.0)
Regulated Total	20	36.2	ND (2.0)	ND (2.0)	37.0	ND (2.0)	ND (2.0)	19.9	ND (2.0)	ND (2.0)	40.6	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Hubbardston Rd					
		400'					
		12/5/2019	6/5/2020	10/1/2020	1/29/2021	4/21/2021	10/14/2021
Well Depth (feet)							
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		2.3	3.1	3.4	4.9	4.2	4.3
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		3.5	5.8	7.1	8.7	8.6	12
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.9	2.4	2.1	3.4	3.1	3.6
Perfluorooctanesulfonic acid (PFOS)		3.3	3.5	3.2	3.6	3.7	4.5
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		12	14.8	15.8	20.6	19.6	24.4
Regulated Total	20	9.7	11.7	12.4	15.7	15.4	20.1

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Hubbardston Road													
		Not Recorded				3,771			6,855			8,913			
		12/5/2019	2/11/2020	2/26/2020		5/1/2020			6/18/2020			7/30/2020			
Notes		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)		27		17	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	20	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		110		73	ND (2.0)	ND (2.0)	95	ND (2.0)	ND (2.0)	90	ND (2.0)	ND (2.0)	92	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		4.6		3.5	ND (2.0)	ND (2.0)	4.2	ND (2.0)	ND (2.0)	3	ND (2.0)	ND (2.0)	3.9	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		18		14	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	19	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		159.6		107.5	ND (2.0)	ND (2.0)	141.2	ND (2.0)	ND (2.0)	132.0	ND (2.0)	ND (2.0)	134.9	ND (2.0)	ND (2.0)
Regulated Total	20	132.6		90.5	ND (2.0)	ND (2.0)	120.2	ND (2.0)	ND (2.0)	111.0	ND (2.0)	ND (2.0)	114.9	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Hubbardston Road															
		13,958				18,399				22,074				32,037			
		11/6/2020				1/29/2021				4/26/2021				10/18/2021			
Notes	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF		
EPA 537.1 (ng/L)																	
Perfluorobutanesulfonic acid (PFBS)		21	ND (2.0)	ND (2.0)	27	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorohexanesulfonic acid (PFHxS)		110	ND (2.0)	ND (2.0)	120	ND (2.0)	ND (2.0)	85	ND (2.0)	ND (2.0)	120	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorooctanoic acid (PFOA)		4	ND (2.0)	ND (2.0)	5	ND (2.0)	ND (2.0)	3.8	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorooctanesulfonic acid (PFOS)		17	ND (2.0)	ND (2.0)	25	ND (2.0)	ND (2.0)	19	ND (2.0)	ND (2.0)	29	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Total (All Compounds)		152.0	ND (2.0)	ND (2.0)	177.0	ND (2.0)	ND (2.0)	123.8	ND (2.0)	ND (2.0)	169.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Regulated Total	20	131.0	ND (2.0)	ND (2.0)	150.0	ND (2.0)	ND (2.0)	107.8	ND (2.0)	ND (2.0)	153.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	19 Hubbardston Rd									
		-	-	-	-			-	-	-	-
		12/5/2019	2/26/2020	6/5/2020	11/21/2020	1/23/2021	4/30/2021	11/6/2021			
		POET INSTALLED BY HOMEOWNER	EFFLUENT ONLY	INF	MID	EFF	INF	INF	INF	INF	
EPA 537.1 (ng/L)											
Perfluorobutanesulfonic acid (PFBS)		2.9	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	3.1	2.7	2.2	2.7	
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)		9.7	ND (2.0)	5.8	ND (2.0)	ND (2.0)	13	9.3	6.7	11.0	
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		12.6	ND (2.0)	5.8	ND (2.0)	ND (2.0)	16.1	12	8.9	13.7	
Regulated Total	20	9.7	ND (2.0)	5.8	ND (2.0)	ND (2.0)	13	9.3	6.7	11.0	

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	23 Hubbardston Rd						
		UNKNOWN						
Well Depth (feet)								
Sampling Date		1/10/2020	1/27/2020	5/29/2020	10/2/2020	1/18/2021	4/22/2021	10/14/2021
EPA 537.1 (ng/L)								
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		4.9	5.0	4.1	2.6	3.9	4.7	5.5
Perfluorooctanesulfonic acid (PFOS)		4.1	3.7	3.3	2.3	2.7	3.2	4.5
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		9.0	8.7	7.4	4.9	6.6	7.9	10
Regulated Total	20	9.0	8.7	7.4	4.9	6.6	7.9	10

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	33 Hubbardston Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/5/2020	7/23/2020	1/21/2021	4/26/2021	10/18/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	2.1	ND (2.0)	2.1	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.5	2.1	ND (2.0)	2.4	2.8
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		2.5	4.2	ND (2.0)	4.5	2.8
Regulated Total	20	2.5	4.2	ND (2.0)	4.5	2.8

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	35 Hubbardston Rd		
		11/11/2020	4/26/2021	10/18/2021
Well Depth (feet)		UNKNOWN		
Sampling Date		11/11/2020	4/26/2021	10/18/2021
EPA 537.1 (ng/L)				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	2.6
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	4.9
Perfluorooctanoic acid (PFOA)		7.5	8.9	17
Perfluorooctanesulfonic acid (PFOS)		8.4	8.2	16
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		15.9	17.1	40.5
Regulated Total	20	15.9	17.1	37.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	36 Hubbardston Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/6/2020	7/22/2020	1/21/2021	4/27/2021	10/18/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	5.4	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	5.0	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	10.4	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	10.4	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	39 Hubbardston Rd											
		UNKNOWN			540			1,566			2,417		
		1/22/2021	3/12/2021	3/25/2021			5/3/2021			5/27/2021			
			POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
<i>EPA 537.1 (ng/L)</i>													
Perfluorobutanesulfonic acid (PFBS)		3.1		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)		2.4		2.2	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)		9.6	ND (2.0)	ND (2.0)	9.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)		3.4		8.3	ND (2.0)	ND (2.0)	7.6	ND (2.0)	ND (2.0)	3.4	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)		10.4		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)		11		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	9.4	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTTrDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		30.3		20.1	ND (2.0)	ND (2.0)	18.8	ND (2.0)	ND (2.0)	28.9	ND (2.0)	ND (2.0)	
Regulated Total	20	24.8		17.9	ND (2.0)	ND (2.0)	16.7	ND (2.0)	ND (2.0)	26.8	ND (2.0)	ND (2.0)	

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	42 Hubbardston Rd													
		-				3.096			7.975			Not Recorded			
		2/10/2020	7/23/2020		1/19/2021	3/2/2021	3/25/2021			4/26/2021			6/3/2021		
Well Depth (feet)			DUPLICATE		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/l)															
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	2.1		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	4.1		2.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.3	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	6		3.1	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	7.8	7.2	20		14	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	7.9	8.5	12		13	ND (2.0)	ND (2.0)	9.2	ND (2.0)	ND (2.0)	10	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	15.7	15.7	44.2		32.4	ND (2.0)	ND (2.0)	22.9	ND (2.0)	ND (2.0)	27.2	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	15.7	15.7	38.0		30.1	ND (2.0)	ND (2.0)	22.9	ND (2.0)	ND (2.0)	24.9	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	43 Hubbardston													
		-		2,655			4,953			7,349			11,146		
		12/12/2019	3/20/2020	5/8/2020			6/23/2020			7/31/2020			11/11/2020		
Sampling Date		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		3.5		3.1	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.8	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		4.4		4.4	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)	4.5	ND (2.0)	ND (2.0)	3.4	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		15		15	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		10		10	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	9.9	ND (2.0)	ND (2.0)	9.3	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		33		32.5	ND (2.0)	ND (2.0)	34.7	ND (2.0)	ND (2.0)	31.3	ND (2.0)	ND (2.0)	26.5	ND (2.0)	ND (2.0)
Regulated Total	20	29		29.4	ND (2.0)	ND (2.0)	31.6	ND (2.0)	ND (2.0)	28.4	ND (2.0)	ND (2.0)	23.7	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	43 Hubbardston					
		15,057			18,056		
		2/5/2021			4/27/2021		
Sampling Date	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		3.2	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		5.3	ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		15	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		13	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		36.5	ND (2.0)	ND (2.0)	37.2	ND (2.0)	ND (2.0)
Regulated Total	20	33.3	ND (2.0)	ND (2.0)	34.1	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	44 Hubbardston Rd				
		2/10/2020	7/23/2020	1/19/2021	4/26/2021	10/18/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (4.0)	2.2	ND (2.0)	ND (2.0)	1.8
Perfluorohexanesulfonic acid (PFHxS)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (4.0)	2.1	ND (2.0)	ND (2.0)	2.4
Perfluorooctanoic acid (PFOA)		ND (4.0)	7.1	3.3	2.8	9.1
Perfluorooctanesulfonic acid (PFOS)		ND (4.0)	5.6	3.3	2.7	7.9
Perfluorononanoic acid (PFNA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (4.0)	17	6.6	5.5	21.2
Regulated Total	20	ND (4.0)	14.8	6.6	5.5	19.4

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	46 Hubbardston Rd				
		2/12/2020	7/23/2020	1/22/2021	4/26/2021	12/2/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	2.6	ND (2.0)	2.2
Perfluorohexanoic acid (PFHxA)		ND (2.0)	2.2	2.4	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	2.4	2.4	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		6.2	8.8	6	6.1	5.1
Perfluorooctanesulfonic acid (PFOS)		6	6.2	5.7	4.9	4.3
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		12.2	19.6	19.1	11	11.6
Regulated Total	20	12.2	17.4	14.1	11	9.4

NOTES:

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Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	48 Hubbardston Rd					
		2/12/2020	7/23/2020	1/22/2021	3/3/2021	4/19/2021	10/18/2021
<i>EPA 537.1 (ng/L)</i>							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	3.0
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.0
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	5.0
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.0

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	52 Hubbardston Rd				
		15'				
Well Depth (feet)						
Sampling Date		2/12/2020	9/18/2020	1/29/2021	4/26/2021	11/8/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	68 Hubbardston Rd
Well Depth (feet)		UNKNOWN
Sampling Date		11/17/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		2.6
Perfluorohexanoic acid (PFHxA)		2.2
Perfluorohexanesulfonic acid (PFHxS)		2.1
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		3.8
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		10.7
Regulated Total	20	5.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

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Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	73 Hubbardston Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		6/11/2020	10/2/2020	5/3/2021	10/19/2021
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	80 Hubbardston Rd
Well Depth (feet)		UNKNOWN
Sampling Date		12/16/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		ND (1.9)
Perfluorononanoic acid (PFNA)		ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (1.9)
N-EtFOSAA		ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (1.9)
N-MeFOSAA		ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (1.9)
Total (All Compounds)		ND (1.9)
Regulated Total	20	ND (1.9)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	81 Hubbardston Rd			
		500			
Well Depth (feet)		4/28/2020	10/2/2020	5/3/2021	10/19/2021
Sampling Date					
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	55 Merriam Road		
		2/5/2021	4/26/2021	11/11/2021
Well Depth (feet)		UNKNOWN		
Sampling Date		2/5/2021	4/26/2021	11/11/2021
EPA 537.1 (ng/L)				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	57 Merriam Road									
		UNKNOWN									
		4/28/2020	4/28/2020	10/1/2020		1/21/2021		2/24/2021		4/26/2021	10/18/2021
Well Depth (feet)											
Sampling Date			EFF	INF	EFF	INF	EFF	INF	EFF	INF	INF
EPA 537.1 (ng/l)											
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	-	2.3	-	3.4*	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.5	ND (2.0)	ND (2.0)	-	6.7	-	5.1	ND (2.0)	4.6	5.5
Perfluorooctanesulfonic acid (PFOS)		4.3	ND (2.0)	ND (2.0)	-	8.7	-	7.2	ND (2.0)	6.6	8.5
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	-	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		6.8	ND (2.0)	ND (2.0)	-	17.7	-	12.3	ND (2.0)	11.2	14.0
Regulated Total	20	6.8	ND (2.0)	ND (2.0)	-	17.7	-	12.3	ND (2.0)	11.2	14.0

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

* PFHpA also detected in both the field blank and trip blank, therefore the reported result is considered invalid. Confirmed as laboratory contaminate. Result is not included in total. Reference lab reports 21B0096_2 and 21B0997_2

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	58 Merriam Rd	
		UNKNOWN	
Well Depth (feet)			
Sampling Date		10/6/2020	1/21/2021
EPA 537.1 (ng/L)			
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	59 Merriam Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		4/28/2020	10/1/2020	4/26/2021	10/19/2021
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	70 Merriam Rd				
		167				
Well Depth (feet)		4/28/2020	10/8/2020	1/22/2021	4/30/2021	11/4/2021
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	85 Merriam Rd				
		2/26/2020	7/22/2020	1/21/2021	4/19/2021	10/19/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.1
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	2	2	2.4
Perfluorooctanoic acid (PFOA)		4.1	5.1	4.8	5.9	7.3
Perfluorooctanesulfonic acid (PFOS)		2.7	2.9	3	3.2	5.1
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		6.8	8.0	9.8	11.1	16.9
Regulated Total	20	6.8	8.0	9.8	11.1	14.8

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	105 Merriam Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/28/2020	7/21/2020	1/20/2021	4/26/2021	10/18/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	2 Mountain Rd					
		UNKNOWN					
		1/7/2020	6/5/2020	10/7/2020	1/22/2021	4/26/2021	10/18/2021
Well Depth (feet)							
Sampling Date							
<i>EPA 537.1 (ng/L)</i>							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	2	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	2.1	ND (2.0)	3.2	3.8	3.2
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	2.1	ND (2.0)	5.2	3.8	5.2
Regulated Total	20	ND (2.0)	2.1	ND (2.0)	3.2	3.8	5.2

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	6 Mountain Road														
		1,557			Not Recorded			20,718			25,830					
		12/5/2019	1/28/2020	2/5/2020	3/5/2020	5/8/2020	6/23/2020									
Flow Meter Reading (gallons)	-	-	1,557	Not Recorded			20,718			25,830						
Sampling Date			2/5/2020	3/5/2020			5/8/2020			6/23/2020						
Notes		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF		
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)	8.4		3.7	ND (2.0)	ND (2.0)	5.8	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)		
Perfluorohexanoic acid (PFHxA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)		
Perfluorohexanesulfonic acid (PFHxS)	23		12	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)		
Perfluoroheptanoic acid (PFHpA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorooctanoic acid (PFOA)	2.4		2.1	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	8.2	ND (2.0)	ND (2.0)		
Perfluorooctanesulfonic acid (PFOS)	4.7		4.1	ND (2.0)	ND (2.0)	5	ND (2.0)	ND (2.0)	4	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)		
Perfluorononanoic acid (PFNA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)		
Perfluorodecanoic acid (PFDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
N-EtFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluoroundecanoic acid (PFUnA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
N-MeFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorododecanoic acid (PFDoA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorotridecanoic acid (PFTDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorotetradecanoic acid (PFTA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Total (All Compounds)			38.5	21.9	ND (2.0)	ND (2.0)	30.3	ND (2.0)	ND (2.0)	24.8	ND (2.0)	ND (2.0)	45.0	ND (2.0)		
Regulated Total	20		30.1	18.2	ND (2.0)	ND (2.0)	24.5	ND (2.0)	ND (2.0)	20.5	ND (2.0)	ND (2.0)	38.4	ND (2.0)		

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	6 Mountain Road											
		31,079			Not Recorded			71,731			84,195		
		7/29/2020	11/6/2020	2/5/2021	4/19/2021								
Flow Meter Reading (gallons)													
Sampling Date													
Notes		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)													
Perfluorobutanesulfonic acid (PFBS)	3.7		ND (2.0)	ND (2.0)	5.5	ND (2.0)	ND (2.0)	6.6	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	13		ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	29	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)	ND (2.0)		ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)	3.5		ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	5.8	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)			20.2	ND (2.0)	ND (2.0)	33.8	ND (2.0)	ND (2.0)	43.0	ND (2.0)	ND (2.0)	43.8	ND (2.0)
Regulated Total	20		16.5	ND (2.0)	ND (2.0)	28.3	ND (2.0)	ND (2.0)	36.4	ND (2.0)	ND (2.0)	37.4	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	10 Mountain Rd						
		UNKNOWN						
		12/5/2019	6/11/2020	10/7/2020	1/21/2021	2/15/2021	4/19/2021	10/19/2021
Well Depth (feet)								
Sampling Date								
		RAW	RAW	RAW	RAW	TREATED	RAW	RAW
EPA 537.1 (ng/L)								
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	2.5	ND (2.0)	2.2	ND (2.0)	2.6	2.3
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	4.5	3.2	3.8	ND (2.0)	5.5	7.8
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	3.4	ND (2.0)	2.3	ND (2.0)	2.7	2.8
Perfluorooctanesulfonic acid (PFOS)		2.0	3.0	ND (2.0)	2.1	ND (2.0)	3.3	3.0
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		2.0	13.4	3.2	10.4	ND (2.0)	14.1	15.9
Regulated Total	20	2.0	10.9	3.2	8.2	ND (2.0)	11.5	13.6

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	14 Mountain Rd						
		500'						
		1/9/2020	1/22/2020	5/29/2020	11/11/2020	1/22/2021	4/20/2021	10/19/2021
<i>EPA 537.1 (ng/L)</i>								
Perfluorobutanesulfonic acid (PFBS)		7.4	8.7	7.8	7.7	10	8.5	7.9
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		30	35	33	34	46	42	58
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.6	2.3	3.3	2.5	3.6	3.3	3.1
Perfluorooctanesulfonic acid (PFOS)		6.1	7.8	7	5.1	9.3	8	11.0
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		46.1	53.8	51.1	49.3	68.9	61.8	80.0
Regulated Total	20	38.7	45.1	43.3	41.6	58.9	53.3	72.1

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	18 Mountain Road													
		229			1,237			5,737			11,780				
		1/10/2020	2/11/2020	2/14/2020	3/11/2020	5/1/2020	6/18/2020								
Flow Meter Reading (gallons)		-	-												
Notes			POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)		25		20	ND (2.0)	ND (2.0)	27	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	7.9	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		3.4		2.8	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		150		110	ND (2.0)	ND (2.0)	160	ND (2.0)	ND (2.0)	88	ND (2.0)	ND (2.0)	44	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.4		5.6	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)	4.9	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		61.0		50	ND (2.0)	ND (2.0)	61	ND (2.0)	ND (2.0)	36	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		245.8		188.4	ND (2.0)	ND (2.0)	257.5	ND (2.0)	ND (2.0)	143.9	ND (2.0)	ND (2.0)	79.0	ND (2.0)	ND (2.0)
Regulated Total	20	217.4		165.6	ND (2.0)	ND (2.0)	227.4	ND (2.0)	ND (2.0)	128.9	ND (2.0)	ND (2.0)	71.1	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	18 Mountain Rd											
		20,025			27,827			34,958			39,421		
		7/29/2020	11/3/2020	1/29/2021	4/20/2021								
Flow Meter Reading (gallons)													
Notes		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)													
Perfluorobutanesulfonic acid (PFBS)		6.8	ND (2.0)	ND (2.0)	4.8	ND (2.0)	ND (2.0)	10	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		42	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	55	ND (2.0)	ND (2.0)	160	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.4	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	6.3	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		21	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	32	ND (2.0)	ND (2.0)	58	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		72.2	ND (2.0)	ND (2.0)	51.4	ND (2.0)	ND (2.0)	101.1	ND (2.0)	ND (2.0)	250.5	ND (2.0)	ND (2.0)
Regulated Total	20	65.4	ND (2.0)	ND (2.0)	46.6	ND (2.0)	ND (2.0)	91.1	ND (2.0)	ND (2.0)	224.3	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	18 Mountain Rd		
		10/19/2021		
		INF	MID	EFF
Flow Meter Reading (gallons)				
Notes				
EPA 537.1 (ng/L)				
Perfluorobutanesulfonic acid (PFBS)		24	ND (1.9)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		3.8	ND (1.9)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		180	ND (1.9)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (1.9)	ND (1.9)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		8.1	ND (1.9)	ND (1.9)
Perfluorononanoic acid (PFNA)		84	ND (1.9)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (1.9)	ND (1.9)	ND (1.9)
N-EtFOSAA		ND (1.9)	ND (1.9)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (1.9)	ND (1.9)	ND (1.9)
N-MeFOSAA		ND (1.9)	ND (1.9)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (1.9)	ND (1.9)	ND (1.9)
Perfluorotridecanoic acid (PFTDA)		ND (1.9)	ND (1.9)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (1.9)	ND (1.9)	ND (1.9)
Total (All Compounds)		299.9	ND (1.9)	ND (1.9)
Regulated Total	20	272.1	ND (1.9)	ND (1.9)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	19 Mountain Rd														
		NA			-			400			6,533			12,367		
		12/4/2019	1/10/2020	1/10/2020	1/10/2020	1/17/2020	1/17/2020	1/17/2020	1/31/2020	1/31/2020	1/31/2020	3/3/2020	3/3/2020	3/3/2020		
Notes	POET INSTALLED															
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)		32		9.2	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	6.3	ND (2.0)	ND (2.0)	7.1	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)		5.1	ND (2.0)	ND (2.0)	ND (2.0)	4.4	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)		220		58	ND (2.0)	ND (2.0)	190	ND (2.0)	ND (2.0)	38	ND (2.0)	ND (2.0)	39	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)		2.5	ND (2.0)	ND (2.0)	ND (2.0)	2.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)		11		3.5	ND (2.0)	ND (2.0)	8.9	ND (2.0)	ND (2.0)	3	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)		190		48	ND (2.0)	ND (2.0)	140	ND (2.0)	ND (2.0)	32	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		460.6		118.7	ND (2.0)	ND (2.0)	373.6	ND (2.0)	ND (2.0)	79.3	ND (2.0)	ND (2.0)	77.2	ND (2.0)	ND (2.0)	
Regulated Total	20	421		109.5	ND (2.0)	ND (2.0)	341.2	ND (2.0)	ND (2.0)	73	ND (2.0)	ND (2.0)	70.1	ND (2.0)	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	19 Mountain Rd														
		25,926			32,780			40,864			58,721			77,051		
		5/8/2020	5/8/2020	5/8/2020	6/18/2020	6/18/2020	6/18/2020	7/29/2020	7/29/2020	7/29/2020	11/3/2020	11/3/2020	11/3/2020	1/29/2021	1/29/2021	1/29/2021
Notes	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)		11	ND (2.0)	ND (2.0)	42	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		2.6	ND (2.0)	ND (2.0)	8	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	5.5	ND (2.0)	ND (2.0)	3.3	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		71	ND (2.0)	ND (2.0)	350	ND (2.0)	ND (2.0)	80	ND (2.0)	ND (2.0)	210	ND (2.0)	ND (2.0)	81	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	3.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		4.2	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	4	ND (2.0)	ND (2.0)	9.9	ND (2.0)	ND (2.0)	6.2	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		44	ND (2.0)	ND (2.0)	230	ND (2.0)	ND (2.0)	55	ND (2.0)	ND (2.0)	150	ND (2.0)	ND (2.0)	71	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		132.8	ND (2.0)	ND (2.0)	645.7	ND (2.0)	ND (2.0)	151.0	ND (2.0)	ND (2.0)	405.9	ND (2.0)	ND (2.0)	176.6	ND (2.0)	ND (2.0)
Regulated Total	20	119.2	ND (2.0)	ND (2.0)	595.7	ND (2.0)	ND (2.0)	139.0	ND (2.0)	ND (2.0)	372.4	ND (2.0)	ND (2.0)	160.3	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	19 Mountain Rd					
		92,089			134,104		
		4/22/2021	4/22/2021	4/22/2021	11/3/2021	11/3/2021	11/3/2021
Notes	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		21	ND (2.0)	ND (2.0)	12	ND (1.9)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		6.1	ND (2.0)	ND (2.0)	2.8	ND (1.9)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		170	ND (2.0)	ND (2.0)	96	ND (1.9)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		2.3	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Perfluorooctanoic acid (PFOA)		9.2	ND (2.0)	ND (2.0)	6.8	ND (1.9)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		130	ND (2.0)	ND (2.0)	110	ND (1.9)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Perfluoroundecanoic acid (PFUNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)
Total (All Compounds)		338.6	ND (2.0)	ND (2.0)	227.6	ND (1.9)	ND (1.8)
Regulated Total	20	311.5	ND (2.0)	ND (2.0)	212.8	ND (1.9)	ND (1.8)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	20 Mountain Road												
		295			-			13,640			16,740			
		1/10/2020	2/11/2020	2/14/2020	3/17/2020	3/17/2020	3/17/2020	6/18/2020	6/18/2020	6/18/2020	7/29/2020	7/29/2020	7/29/2020	
Notes	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)														
Perfluorobutanesulfonic acid (PFBS)		12	14	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	19	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	2.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		60	74	ND (2.0)	ND (2.0)	78	ND (2.0)	ND (2.0)	120	ND (2.0)	ND (2.0)	110	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.5	4.1	ND (2.0)	ND (2.0)	4.2	ND (2.0)	ND (2.0)	5.2	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		22	28	ND (2.0)	ND (2.0)	30	ND (2.0)	ND (2.0)	44	ND (2.0)	ND (2.0)	44	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		97.5	122.2	ND (2.0)	ND (2.0)	127.2	ND (2.0)	ND (2.0)	190.9	ND (2.0)	ND (2.0)	176.3	ND (2.0)	ND (2.0)
Regulated Total	20	86	106.1	ND (2.0)	ND (2.0)	112.2	ND (2.0)	ND (2.0)	169.2	ND (2.0)	ND (2.0)	158.3	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	20 Mountain Road								
		25,895			31,955			39,074		
		11/18/2020	11/18/2020	11/18/2020	1/29/2021	1/29/2021	1/29/2021	4/26/2021	4/26/2021	4/26/2021
Notes	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)		18	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		2.9	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		110	ND (2.0)	ND (2.0)	130	ND (2.0)	ND (2.0)	97	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		6.1	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)	4.9	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		43	ND (2.0)	ND (2.0)	51	ND (2.0)	ND (2.0)	38	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		180.0	ND (2.0)	ND (2.0)	212.5	ND (2.0)	ND (2.0)	160.0	ND (2.0)	ND (2.0)
Regulated Total	20	159.1	ND (2.0)	ND (2.0)	187.4	ND (2.0)	ND (2.0)	139.9	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Mountain Rd														
		NA			161			3,726			5,410			14,256		
		12/5/2020	1/21/2020	1/24/2020	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
Flow Meter Reading (gallons)																
Sampling Date		1/24/2020			1/31/2020			2/7/2020			3/17/2020					
Notes		POET INSTALLED														
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)		8.2		7.5	ND (2.0)	ND (2.0)	5.5	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)	7.4	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)		2.4		2.0	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)	3	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)		53		47	ND (2.0)	ND (2.0)	37	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	46	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFHxA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFDA)		5.4		4.6	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	5.4	ND (2.0)	ND (2.0)	4.7	ND (2.0)	ND (2.0)	
Perfluorodecane sulfonic acid (PFOS)		44		37	ND (2.0)	ND (2.0)	35	ND (2.0)	ND (2.0)	26	ND (2.0)	ND (2.0)	35	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		113		98.1	ND (2.0)	ND (2.0)	85.4	ND (2.0)	ND (2.0)	69.0	ND (2.0)	ND (2.0)	99.3	ND (2.0)	ND (2.0)	
Regulated Total	20	102.4		88.6	ND (2.0)	ND (2.0)	77.7	ND (2.0)	ND (2.0)	61.5	ND (2.0)	ND (2.0)	88.9	ND (2.0)	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Mountain Rd														
		28,173			63,830			78,724			112,079			135,525		
		5/8/2020	6/30/2020	7/31/2020	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
Flow Meter Reading (gallons)																
Sampling Date		6/30/2020			7/31/2020			11/6/2020			2/5/2021					
Notes																
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)		4	ND (2.0)	ND (2.0)	4.5	ND (2.0)	ND (2.0)	5.6	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		2.4	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)		25	ND (2.0)	ND (2.0)	29	ND (2.0)	ND (2.0)	37	ND (2.0)	ND (2.0)	19	ND (2.0)	ND (2.0)	27	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	7	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFDA)		5.4	ND (2.0)	ND (2.0)	5.0	ND (2.0)	ND (2.0)	4.5	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	5.4	ND (2.0)	ND (2.0)
Perfluorodecane sulfonic acid (PFOS)		21	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	25	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		57.8	ND (2.0)	ND (2.0)	64.7	ND (2.0)	ND (2.0)	72.1	ND (2.0)	ND (2.0)	42.2	ND (2.0)	ND (2.0)	62.7	ND (2.0)	
Regulated Total	20	51.4	ND (2.0)	ND (2.0)	58	ND (2.0)	ND (2.0)	66.5	ND (2.0)	ND (2.0)	39.1	ND (2.0)	ND (2.0)	55.4	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Mountain Rd					
		156,974			230,318		
		4/19/2021	11/3/2021	INF	MID	EFF	INF
Flow Meter Reading (gallons)							
Sampling Date		11/3/2021					
Notes							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		3.2	ND (2.0)	ND (2.0)	3.4	ND (1.8)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		23	ND (2.0)	ND (2.0)	26	ND (1.8)	ND (1.9)
Perfluorooctanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluorooctanoic acid (PFDA)		4.5	ND (2.0)	ND (2.0)	3.9	ND (1.8)	ND (1.9)
Perfluorodecane sulfonic acid (PFOS)		18	ND (2.0)	ND (2.0)	25	ND (1.8)	ND (1.9)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (1.8)	ND (1.9)
Total (All Compounds)		48.7	ND (2.0)	ND (2.0)	58.3	ND (1.8)	ND (1.9)
Regulated Total	20	45.5	ND (2.0)	ND (2.0)	54.9	ND (1.8)	ND (1.9)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Tota
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	22 Mountain Rd												
		544			1,009			1,131			1,156			
		7/31/2020	9/3/2020	9/10/2020	9/3/2020	11/18/2020	9/3/2020	11/18/2020	2/5/2021	9/3/2020	11/18/2020	4/19/2021		
	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
<i>EPA 537.1 (ng/l)</i>														
Perfluorobutanesulfonic acid (PFBS)		86	85	ND (2.0)	ND (2.0)	29	ND (2.0)	ND (2.0)	85	ND (2.0)	ND (2.0)	85	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		8.7	15	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		490	570	ND (2.0)	ND (2.0)	160	ND (2.0)	ND (2.0)	570	ND (2.0)	ND (2.0)	530	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		3.7	5.8	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	5.8	ND (2.0)	ND (2.0)	5.6	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		16	18	ND (2.0)	ND (2.0)	7.9	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	23	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		180	170	ND (2.0)	ND (2.0)	79	ND (2.0)	ND (2.0)	170	ND (2.0)	ND (2.0)	220	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		784.4	863.8	ND (2.0)	ND (2.0)	280	ND (2.0)	ND (2.0)	863.8	ND (2.0)	ND (2.0)	876.6	ND (2.0)	ND (2.0)
Regulated Total	20	689.7	763.8	ND (2.0)	ND (2.0)	246.9	ND (2.0)	ND (2.0)	763.8	ND (2.0)	ND (2.0)	778.6	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	29 Mountain Rd														
		-			-			-			-			3,090		
		1/8/2020	2/24/2020	3/11/2020	5/8/2020	6/3/2020	6/30/2020	7/14/2020								
Sampling Date	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	EFF DUPLICATE	EFF	INF	MID	EFF	EFF			
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)	9.6	6.7	ND (2.0)	ND (2.0)	4	ND (2.0)	2.9	2	ND (2.0)	4.9	ND (2.0)	4.2	ND (2.0)			
Perfluorohexanoic acid (PFHxA)	2.5	2	ND (2.0)	ND (2.0)	2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)			
Perfluorohexanesulfonic acid (PFHxS)	59	41	ND (2.0)	ND (2.0)	21	ND (2.0)	16	10	ND (2.0)	25	ND (2.0)	23	ND (2.0)			
Perfluoroheptanoic acid (PFHpA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorooctanoic acid (PFOA)	5.3	5.1	ND (2.0)	ND (2.0)	4.4	ND (2.0)	3.5	2.2	ND (2.0)	4.7	ND (2.0)	4.5	ND (2.0)			
Perfluorooctanesulfonic acid (PFOS)	53	38	ND (2.0)	ND (2.0)	27	ND (2.0)	21	13	ND (2.0)	21	ND (2.0)	22	ND (2.0)			
Perfluorononanoic acid (PFNA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
N-EFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorododecanoic acid (PFDoA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorotridecanoic acid (PFTDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
Total (All Compounds)	129.4	92.8	ND (2.0)	ND (2.0)	58.4	ND (2.0)	43.4	27.2	ND (2.0)	55.6	ND (2.0)	55.8	ND (2.0)			
Regulated Total	20	117.3	84.1	ND (2.0)	52.4	ND (2.0)	40.5	25.2	ND (2.0)	50.7	ND (2.0)	49.5	ND (2.0)			

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	29 Mountain Rd								
		5,301			25,532			32,996		
		7/29/2020			1/29/2021			4/20/2021		
Sampling Date	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)	5.2	ND (2.0)	ND (2.0)	3.8	ND (2.0)	ND (2.0)	4	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)	ND (2.0)	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)	30	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)	3.8	ND (2.0)	ND (2.0)	3.9	ND (2.0)	ND (2.0)	4.7	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)	22	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)	61.0	ND (2.0)	ND (2.0)	44.7	ND (2.0)	ND (2.0)	48.7	ND (2.0)	ND (2.0)	
Regulated Total	20	55.8	ND (2.0)	40.9	ND (2.0)	ND (2.0)	44.7	ND (2.0)	ND (2.0)	

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	30 Mountain Rd									
		-				37			170		
		1/27/2020	6/5/2020	10/13/2020	2/15/2021	2/22/2021			4/26/2021		
				POET INSTALLED	INF	MID	EFF	INF	MID	EFF	
<i>EPA 537.1 (ng/L)</i>											
Perfluorobutanesulfonic acid (PFBS)		<2.0	<2.0	3.2		2.2	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		<2.0	<2.0	2.9		2.1	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		4.4	3.9	22		16	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	2.3		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		6.1	4.6	8.6		8.1	ND (2.0)	ND (2.0)	6.9	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		5.4	4.1	16		13	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		15.9	12.6	52.7		41.4	ND (2.0)	ND (2.0)	36.2	ND (2.0)	ND (2.0)
Regulated Total	20	15.9	12.6	46.6		37.1	ND (2.0)	ND (2.0)	31.9	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	30 Mountain Rd (Inn Well)
Well Depth		1,000+
Sampling Date		5/25/2021
SOP-454 PFAS (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		<2.0
Perfluorohexanoic acid (PFHxA)		<2.0
Perfluorohexanesulfonic acid (PFHxS)		3.9
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		13
Perfluorooctanesulfonic acid (PFOS)		110
Perfluorononanoic acid (PFNA)		7.5
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Perfluorobutanoic acid (PFBA)		3.9
Perfluoropentanoic acid (PFPeA)		3.4
4,8-dioxo-3H-perfluorononanoic acid (ADONA)		ND (2.0)
Hexafluoropropylene oxide dimer acid (HFPO-DA)		ND (2.0)
8:2 Fluorotelomersulfonic acid (8:2FTS A)		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)		ND (2.0)
Perfluoroheptanesulfonic acid (PFHpS)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
4:2 Fluorotelomersulfonic acid (4:2FTS A)		ND (2.0)
Perfluorodecanesulfonic acid (PFDS)		ND (2.0)
Perfluorooctanesulfonamide (FOSA)		ND (2.0)
Perfluorononanesulfonic acid (PFNS)		ND (2.0)
Perfluoro-1-hexanesulfonamide (FHxSA)		ND (2.0)
Perfluoro-1-butanesulfonamide (FBSA)		ND (2.0)
Perfluoro-5-oxahexanoic acid (PFMBA)		ND (2.0)
6:2 Fluorotelomersulfonic acid (6:2FTS A)		ND (2.0)
Perfluoropentanesulfonic acid (PFPeS)		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)		ND (2.0)
Total (All Compounds)		141.7
Regulated Total	20	134.4

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	33 Mountain Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/7/2020	7/22/2020	1/21/2021	4/16/2021	10/18/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	2.5	2.2	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	2.5	2.2	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	2.5	2.2	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	38 Mountain Rd				
		2/14/2020	7/21/2020	1/20/2021	4/27/2021	11/11/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	3	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		2.2	2.4	2.1	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		2.2	5.4	2.1	ND (2.0)	ND (1.8)
Regulated Total	20	2.2	5.4	2.1	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	51 Mountain Rd														
		211			1,080			3,312			11,491					
		2/12/2020	5/1/2020	5/28/2020			6/23/2020			7/31/2020			11/11/2020			
Flow Meter Reading (gallons)	POET INSTALLED	INF	MID	EFF	EFF DUPLICATE	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF		
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)	6.9		6.1	ND (2.0)	ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)	6.8	ND (2.0)	ND (2.0)	6.6	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)	9.5		9.4	ND (2.0)	ND (2.0)	ND (2.0)	9.0	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	9.2	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)	29		29	ND (2.0)	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	30	ND (2.0)	ND (2.0)	30	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)	24		23	ND (2.0)	2.9	ND (2.0)	21	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	26	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)	ND (4.0)		3	ND (2.0)	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDA)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTriDA)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)	ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)	69.4		70.5	ND (2.0)	2.9	ND (2.0)	65.7	ND (2.0)	ND (2.0)	75.0	ND (2.0)	ND (2.0)	74.9	ND (2.0)	ND (2.0)	
Regulated Total	20		64.4	ND (2.0)	2.9	ND (2.0)	60.6	ND (2.0)	ND (2.0)	68.2	ND (2.0)	ND (2.0)	68.3	ND (2.0)	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	51 Mountain Rd		
		18,344		
		2/5/2021		
Flow Meter Reading (gallons)	INF	MID	EFF	
EPA 537.1 (ng/L)				
Perfluorobutanesulfonic acid (PFBS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	4.1	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)	7.8	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)	25	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)	18	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)	2.2	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTriDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)	57.1	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	53.0	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	54 Mountain Rd														
		15,502			42,195			59,957			108,792					
		2/26/2020	6/2/2020	6/22/2020	8/5/2020	9/2/2020	11/18/2020									
		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF		
Flow Meter Reading (gallons)		-	-	15,502			42,195			59,957			108,792			
Sampling Date				6/22/2020			8/5/2020			9/2/2020			11/18/2020			
EPA 537.1 (ng/l)																
Perfluorobutanesulfonic acid (PFBS)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)		5.2	5.0	ND (2.0)	ND (2.0)	4.2	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)		7.6	7.9	ND (2.0)	ND (2.0)	6.7	ND (2.0)	ND (2.0)	7.4	ND (2.0)	ND (2.0)	9.6	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)		20	24	ND (2.0)	ND (2.0)	23	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	27	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)		18	24	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)		ND (4.0)	2.5	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTDA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)		ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		50.8	63.4	ND (2.0)	ND (2.0)	58.1	ND (2.0)	ND (2.0)	59.6	ND (2.0)	ND (2.0)	66.9	ND (2.0)	ND (2.0)	ND (2.0)	
Regulated Total	20	45.6	58.4	ND (2.0)	ND (2.0)	53.9	ND (2.0)	ND (2.0)	55.3	ND (2.0)	ND (2.0)	61.2	ND (2.0)	ND (2.0)	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	54 Mountain Rd								
		159,296			191,908			300,348		
		2/15/2021			4/23/2021			10/28/2021		
		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
Flow Meter Reading (gallons)		159,296			191,908			300,348		
Sampling Date		2/15/2021			4/23/2021			10/28/2021		
EPA 537.1 (ng/l)										
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		4.7	ND (2.0)	ND (2.0)	6.8	ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		8	ND (2.0)	ND (2.0)	10	ND (2.0)	ND (2.0)	8.6	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		23	ND (2.0)	ND (2.0)	32	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		23	ND (2.0)	ND (2.0)	30	ND (2.0)	ND (2.0)	25	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		2.5	ND (2.0)	ND (2.0)	3.3	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		61.2	ND (2.0)	ND (2.0)	82.1	ND (2.0)	ND (2.0)	65.6	ND (2.0)	ND (2.0)
Regulated Total	20	56.5	ND (2.0)	ND (2.0)	75.3	ND (2.0)	ND (2.0)	60.5	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	58 Mountain Rd													
		2,131			8,428			22,138			50,278				
		2/26/2020	7/7/2020	7/14/2020	7/31/2020	7/31/2020	7/31/2020	8/31/2020	8/31/2020	8/31/2020	11/6/2020	11/6/2020	11/6/2020		
		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	19	19	ND (2.0)	ND (2.0)	ND (2.0)	3.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)	29	31	ND (2.0)	ND (2.0)	ND (2.0)	6	ND (2.0)	ND (2.0)	94	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)	89	95	ND (2.0)	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	270	ND (2.0)	ND (2.0)	67	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)	210	230	ND (2.0)	ND (2.0)	ND (2.0)	35	ND (2.0)	ND (2.0)	19	ND (2.0)	ND (2.0)	130	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)	20	20	ND (2.0)	ND (2.0)	ND (2.0)	3.5	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)	6.2	6.9	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	4.2	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (4.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)	373.2		401.9	ND (2.0)	ND (2.0)	66.1	ND (2.0)	ND (2.0)	431.7	ND (2.0)	ND (2.0)	244.2	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	354.2	382.9	ND (2.0)	ND (2.0)	62.5	ND (2.0)	ND (2.0)	416.7	ND (2.0)	ND (2.0)	233.2	ND (2.0)	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	58 Mountain Rd								
		66,979			81,707			133,473		
		2/5/2021	4/21/2021	10/18/2021	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	5	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)	9	ND (2.0)	ND (2.0)	26	ND (2.0)	ND (2.0)	36	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)	23	ND (2.0)	ND (2.0)	83	ND (2.0)	ND (2.0)	120	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)	44	ND (2.0)	ND (2.0)	180	ND (2.0)	ND (2.0)	290	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)	6.3	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)	25	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	4.4	ND (2.0)	ND (2.0)	8.2	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)	87.7	ND (2.0)	ND (2.0)	324.4	ND (2.0)	ND (2.0)	501.2	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	82.7	ND (2.0)	309.4	ND (2.0)	ND (2.0)	479.2	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	64 Mountain Rd															
		-			Not Recorded			11,667			27,440			38,902			
		1/30/2020			2/18/2020			3/3/2020			5/8/2020			6/18/2020			7/29/2020
Flow Meter Reading (gallons)																	
Sampling Date		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)																	
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		14	20	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		19	23	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		34	44	ND (2.0)	ND (2.0)	34	ND (2.0)	ND (2.0)	43	ND (2.0)	ND (2.0)	5.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		22	20	ND (2.0)	ND (2.0)	15	ND (2.0)	ND (2.0)	20	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	2.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		89	109.5	ND (2.0)	ND (2.0)	84.2	ND (2.0)	ND (2.0)	105.3	ND (2.0)	ND (2.0)	12.4	ND (2.0)	ND (2.0)	10.3	ND (2.0)	ND (2.0)
Regulated Total	20	75	89.5	ND (2.0)	ND (2.0)	69.2	ND (2.0)	ND (2.0)	87.3	ND (2.0)	ND (2.0)	10.3	ND (2.0)	ND (2.0)	10.3	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	64 Mountain Rd														
		75,168			86,631			97,368			-					
		11/6/2020			1/29/2021			4/21/2021			10/19/2021					
Flow Meter Reading (gallons)																
Sampling Date		INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	28.0	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorohexanoic acid (PFHxA)		14	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	25	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluoroheptanoic acid (PFHpA)		18	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	25	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorooctanoic acid (PFOA)		43	ND (2.0)	ND (2.0)	53	ND (2.0)	ND (2.0)	19	ND (2.0)	ND (2.0)	44	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorooctanesulfonic acid (PFOS)		16	ND (2.0)	ND (2.0)	22	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	21	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorononanoic acid (PFNA)		3.1	ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	3.4	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
N-EFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.1)	ND (2.0)	ND (1.9)	ND (2.1)
Total (All Compounds)		94.1	ND (2.0)	ND (2.0)	124.5	ND (2.0)	ND (2.0)	54.0	ND (2.0)	ND (2.0)	146.4	ND (1.9)	ND (2.1)	146.4	ND (1.9)	ND (2.1)
Regulated Total	20	80.1	ND (2.0)	ND (2.0)	104.1	ND (2.0)	ND (2.0)	43.0	ND (2.0)	ND (2.0)	93.4	ND (1.9)	ND (2.1)	93.4	ND (1.9)	ND (2.1)

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	5 Prospect Street															
		NA			127			182			188			47,737			
		1/13/2020	1/21/2020	1/24/2020	1/31/2020	2/7/2020	2/7/2020	2/7/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020		
Notes	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/l)																	
Perfluorobutanesulfonic acid (PFBS)		9.4		2.4	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		32		6.6	ND (2.0)	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	7	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.2		3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.8	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		47.6		12.0	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	ND (2.0)	12.2	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	38.2		9.6	ND (2.0)	ND (2.0)	2.5	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	ND (2.0)	9.8	ND (2.0)	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	5 Prospect Street																
		47,737			70,000			156,306			174,265			188,495				
		6/18/2020			7/27/2020			11/6/2020			1/29/2021			4/19/2021				
Notes	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/l)																		
Perfluorobutanesulfonic acid (PFBS)		2.4	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	2.3	ND (2.0)	ND (2.0)	4.6	ND (2.0)	ND (2.0)	4.2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		7	ND (2.0)	ND (2.0)	5.6	ND (2.0)	ND (2.0)	6	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.8	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		12.2	ND (2.0)	ND (2.0)	10.4	ND (2.0)	ND (2.0)	10.7	ND (2.0)	ND (2.0)	24.9	ND (2.0)	ND (2.0)	27.5	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	9.8	ND (2.0)	ND (2.0)	8.2	ND (2.0)	ND (2.0)	8.4	ND (2.0)	ND (2.0)	20.3	ND (2.0)	ND (2.0)	23.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Prospect St								
		-						6,662		
		12/9/2019	6/5/2020	10/16/2020	1/19/2021	4/23/2021	6/23/2021	7/22/2021		
Flow Meter Reading (gallons)										
Sampling Date										
							POET INSTALLED	INF	MID	EFF
EPA 537.1 (ng/L)										
Perfluorobutanesulfonic acid (PFBS)		3.1	2.7	2.9	3.4	3.7		3.6	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		13	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		8.8	11	11	11	15		16	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.5	6	5.2	5	6.9		7.8	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		16.4	19.7	19.1	19.4	25.6		40.4	ND (2.0)	ND (2.0)
Regulated Total	20	13.3	17.0	16.2	16.0	21.9		23.8	ND (2.0)	ND (2.0)

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	11 Prospect St							
		~137'							
		1/8/2020	2/20/2020			9/10/2020	1/28/2021	4/21/2021	11/3/2021
Well Depth (feet)			INF	MID	EFF	INF	INF	INF	INF
Sampling Date									
EPA 537.1 (ng/L)									
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.3
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		2.1	3.3	ND (2.0)	ND (2.0)	3.4	4.7	5.8	9.0
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		2.3	2.5	ND (2.0)	ND (2.0)	3.7	3.5	4.1	5.1
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		4.4	5.8	ND (2.0)	ND (2.0)	7.1	8.2	9.9	16.4
Regulated Total	20	4.4	5.8	ND (2.0)	ND (2.0)	7.1	8.2	9.9	14.1

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	16 Prospect St					
		255'					
		1/22/2020	6/5/2020	10/8/2020	1/20/2021	4/22/2021	11/5/2021
Well Depth (feet)							
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	17 Prospect St					
		UNKNOWN					
		1/8/2020	6/5/2020	10/8/2020	1/19/2021	4/20/2021	11/9/2021
Well Depth (feet)							
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	3.2
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		2.8	ND (2.0)	2.0	2.0	2.4	9.5
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		2.8	ND (2.0)	2.0	2.0	2.4	12.7
Regulated Total	20	2.8	ND (2.0)	2.0	2.0	2.4	12.7

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	18 Prospect St					
		UNKNOWN					
		1/8/2020	6/5/2020	10/8/2020	1/22/2021	4/19/2021	11/5/2021
Well Depth (feet)							
Sampling Date							
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.5
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	2.0	ND (2.0)	2.4
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	2.0	ND (2.0)	4.9
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	2.0	ND (2.0)	4.9

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Prospect St				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/5/2020	7/22/2020	1/29/2021	4/19/2021	2/4/2022
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	26 Prospect St			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		2/6/2020	7/23/2020	3/3/2021	12/2/2021
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	2.4	2.3
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	2.4	2.3
Regulated Total	20	ND (2.0)	ND (2.0)	2.4	2.3

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	41 Prospect Street											
		-		12/22/2020	164,724			Not Recorded			167,619		
		5/15/2020	10/13/2020	12/30/2020	12/30/2020			2/15/2021			3/25/2021		
			EXISTING POET ACTIVE	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)													
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	2.6		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	4.6		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	14		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	9.9		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	31.1		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	28.5		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	41 Prospect Street					
		169,007			178,621		
		4/21/2021			11/4/2021		
		INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:
Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
ND = Not detected above the lab reporting limits shown in parentheses.
Bolded values exceed the proposed Method 1 Standard
MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	41 Prospect Street Runoff
Flow Meter Reading (gallons)		-
Sampling Date		4/22/2021
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	2 Radford Rd				
		2/19/2020	11/30/2021	1/21/2021	4/21/2021	11/5/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Radford Rd				
		2/28/2020	7/21/2020	1/21/2021	4/21/2021	11/3/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	2.7	2.2
Perfluorooctanesulfonic acid (PFOS)		2.3	3.2	2.5	3.2	3.7
Perfluorononanoic acid (PFNA)		ND (2.0)	2.7	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		2.3	5.9	2.5	5.9	5.9
Regulated Total	20	2.3	5.9	2.5	5.9	5.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	8 Radford Rd				
		2/28/2020	7/21/2020	1/21/2021	4/21/2021	11/3/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.8
Perfluorooctanoic acid (PFOA)		3.9	4.1	3.9	5.4	5.1
Perfluorooctanesulfonic acid (PFOS)		2.5	3.1	2.4	3.6	3.5
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		6.4	7.2	6.3	9.0	10.4
Regulated Total	20	6.4	7.2	6.3	9.0	10.4

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	11 Radford Rd				
		2/14/2020	7/22/2021	1/21/2021	4/22/2021	11/5/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.7	3.1	2.3	3.7	3.6
Perfluorooctanesulfonic acid (PFOS)		2.3	3.1	2.1	2.9	3.3
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		5.0	6.2	4.4	6.6	6.9
Regulated Total	20	5.0	6.2	4.4	6.6	6.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Radford Rd														
		879			1,943			3,465			6,539					
		5/1/2020	6/16/2020	6/30/2020	7/31/2020	8/31/2020	11/3/2020									
		POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF		
<i>EPA 537.1 (ng/L)</i>																
Perfluorobutanesulfonic acid (PFBS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)	2.4	2.7	ND (2.0)	ND (2.0)	ND (2.0)	2.3	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)	3.2	3.2	ND (2.0)	ND (2.0)	ND (2.0)	3.3	ND (2.0)	ND (2.0)	4.2	ND (2.0)	ND (2.0)	3.7	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)	11	9.8	ND (2.0)	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)	8.3	7.5	ND (2.0)	ND (2.0)	ND (2.0)	8.9	ND (2.0)	ND (2.0)	8.5	ND (2.0)	ND (2.0)	8.7	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		24.9	23.2	ND (2.0)	ND (2.0)	25.5	ND (2.0)	ND (2.0)	28.6	ND (2.0)	ND (2.0)	28.1	ND (2.0)	ND (2.0)	ND (2.0)	
Regulated Total	20	22.5	20.5	ND (2.0)	ND (2.0)	23.2	ND (2.0)	ND (2.0)	25.7	ND (2.0)	ND (2.0)	25.4	ND (2.0)	ND (2.0)	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Radford Rd					
		9,916			15,126		
		1/29/2021			4/23/2021		
	INF	MID	EFF	INF	MID	EFF	
<i>EPA 537.1 (ng/L)</i>							
Perfluorobutanesulfonic acid (PFBS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)	3.4	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)	5.1	ND (2.0)	ND (2.0)	4.1	ND (2.0)	ND (2.0)	
Perfluorooctanoic acid (PFOA)	14	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)	10	ND (2.0)	ND (2.0)	9.9	ND (2.0)	ND (2.0)	
Perfluorononanoic acid (PFNA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorodecanoic acid (PFDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTDA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)		32.5	ND (2.0)	ND (2.0)	30.9	ND (2.0)	
Regulated Total	20	29.1	ND (2.0)	ND (2.0)	28.0	ND (2.0)	

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	13 Radford Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		3/4/2020	7/21/2020	1/22/2021	4/21/2021	11/4/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Radford Rd												
		381			1,947			4,504			7,391			
		9/18/2020	10/21/2020	10/30/2020	12/4/2020	12/4/2020	2/5/2021	2/5/2021	4/21/2021	4/21/2021	4/21/2021	4/21/2021		
	POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/l)														
Perfluorobutanesulfonic acid (PFBS)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	3		2.2	ND (2.0)	ND (2.0)	2.4	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)	4.3		3.4	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)	3.8	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)	15		12	ND (2.0)	ND (2.0)	14	ND (2.0)	ND (2.0)	12	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)	11		8.8	ND (2.0)	ND (2.0)	8.9	ND (2.0)	ND (2.0)	9	ND (2.0)	ND (2.0)	8.2	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)	33.3		26.4	ND (2.0)	ND (2.0)	28.5	ND (2.0)	ND (2.0)	28.2	ND (2.0)	ND (2.0)	27.7	ND (2.0)	ND (2.0)
Regulated Total	20		30.3		24.2		26.1		25.3		25.0		25.0	

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	18 Radford			
		9/18/2020	1/29/2021	4/26/2021	11/5/2021
Well Depth (feet)					
Sampling Date					
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	2.0	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	2.7	2.2	2
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	2.3	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.2	6.5	6	5.9
Perfluorooctanesulfonic acid (PFOS)		4.3	5.0	3.7	5.1
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		9.5	18.5	11.9	13.0
Regulated Total	20	9.5	13.8	9.7	11.0

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	23 Radford Rd			
		7/22/2020	1/22/2021	4/26/2021	11/5/2021
Well Depth (feet)					
Sampling Date					
EPA 537.1 (ng/L)					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	2.8	ND (2.0)	2
Perfluorohexanoic acid (PFHxA)		2.2	2.4	ND (2.0)	2
Perfluorohexanesulfonic acid (PFHxS)		2.8	3	ND (2.0)	2.6
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	2.3	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		6.5	6.4	5.2	6.6
Perfluorooctanesulfonic acid (PFOS)		5.5	5.7	4.1	6.3
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		17.0	22.6	9.3	19.5
Regulated Total	20	14.8	17.4	9.3	15.5

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	28 Radford Rd				
		1/30/2020	7/21/2020	1/21/2021	4/26/2021	10/25/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		2.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		2.7	ND (2.0)	ND (2.0)	2.2	2.5
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		5.4	4.6	4.8	6.2	5.7
Perfluorooctanesulfonic acid (PFOS)		7	4.0	3.8	5.5	5.2
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		17.2	8.6	8.6	13.9	13.4
Regulated Total	20	15.1	8.6	8.6	13.9	13.4

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	29 Radford Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		3/17/2020	7/21/2020	1/21/2021	4/22/2021	10/25/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		3.2	2.4	3.3	3.3	4.2
Perfluorooctanesulfonic acid (PFOS)		3.5	2.8	3.3	3.4	3.7
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		6.7	5.2	6.6	6.7	7.9
Regulated Total	20	6.7	5.2	6.6	6.7	7.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	33 Radford Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		5/29/2020	10/8/2020	1/29/2021	4/19/2021	11/8/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	2.2	ND (2.0)	2.3
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	2.2	ND (2.0)	2.3
Regulated Total	20	ND (2.0)	ND (2.0)	2.2	ND (2.0)	2.3

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	37 Radford Rd				
		70'				
Well Depth (feet)		4/28/2020	10/8/2020	1/20/2021	4/20/2021	11/5/2021
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.0
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	2.6	2.8	1.9
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorooctanesulfonic acid (PFOS)		2.1	2.5	2.5	2.2	2.3
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.9)
Total (All Compounds)		2.1	2.5	5.1	5.0	6.2
Regulated Total	20	2.1	2.5	5.1	5.0	4.2

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Thompson Road	
		5/6/2021	11/4/2021
Well Depth (feet)			
Sampling Date			
EPA 537.1 (ng/L)			
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	1 Worcester Rd				
		1/7/2020	6/11/2020	12/16/2020	4/26/2021	11/4/2021
Well Depth (feet)		UNKNOWN				
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	2.5	ND (2.0)	2	2.5
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	2.5	ND (2.0)	2.0	2.5
Regulated Total	20	ND (2.0)	2.5	ND (2.0)	2.0	2.5

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	10 Worcester Rd					
		UNKNOWN					
Well Depth (feet)							
Sampling Date		1/9/2020	6/11/2020	10/16/2020	1/21/2021	4/19/2021	11/5/2021
EPA 537.1 (ng/L)							
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		3.8	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		8	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.6	3.0	ND (2.0)	3.2	3.1	2.9
Perfluorooctanesulfonic acid (PFOS)		2.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		2.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		20.4	3.0	ND (2.0)	3.2	3.1	2.9
Regulated Total	20	16.6	3.0	ND (2.0)	3.2	3.1	2.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	15 Worcester Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		3/6/2020	7/21/2020	1/29/2021	4/26/2021	11/17/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.1	3.1	4	4.1	4
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		3.1	3.1	8.3	4.1	4.0
Regulated Total	20	3.1	3.1	6.2	4.1	4.0

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	16 Worcester Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/5/2020	7/29/2020	1/19/2021	4/23/2021	11/4/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.2	2.6	ND (2.0)	4.2	2.9
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		2.2	2.6	ND (2.0)	4.2	2.9
Regulated Total	20	2.2	2.6	ND (2.0)	4.2	2.9

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	17 Worcester Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/10/2020	7/21/2020	1/22/2021	4/22/2021	11/11/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	20 Worcester Rd				
		3/17/2020	7/21/2020	1/20/2021	4/27/2021	11/4/2021
Well Depth (feet)						
Sampling Date						
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.8
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (1.8)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.8
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	1.8

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	23 Worcester Rd				
		UNKNOWN				
Well Depth (feet)						
Sampling Date		2/5/2020	7/21/2020	1/29/2021	4/27/2021	11/3/2021
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	MCP - Method 2 Direct Contact Standards	18 MOUNTAIN ROAD					
	S-1/GW-1	S-1	18MTN S-1	18MTN S-2	18MTN S-3	18MTN S-4	18MTN S-5	18MTN S-6
Sampling Date			11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021
Sample Depth (inches)			0-6	0-6	0-6	0-6	0-6	0-6
SOP-466 PFAS (µg/kg dry)								
Perfluorobutanoic acid (PFBA)	~	~	0.19	ND (0.46)	0.4	0.1	0.72	0.12
Perfluorobutanesulfonic acid (PFBS)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoropentanoic acid (PFPeA)	~	~	0.48	ND (0.46)	0.14	ND (0.48)	0.4	ND (0.53)
Perfluorohexanoic acid (PFHxA)	~	~	0.32	ND (0.46)	ND (0.52)	ND (0.48)	0.27	ND (0.53)
11Cl-PF3OUds (F53B Minor)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
9Cl-PF3ONS (F53B Major)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluorododecanoic acid (PFDoA)	~	~	0.35	0.091	0.088	0.077	0.12	ND (0.53)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoroheptanesulfonic acid (PFHpS)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
N-EtFOSAA	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
N-MeFOSAA	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluorotetradecanoic acid (PFTA)	~	~	0.22	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluorotridecanoic acid (PFTDA)	~	~	0.2	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluorodecanesulfonic acid (PFDS)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluorooctanesulfonamide (FOSA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoronanesulfonic acid (PFNS)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoro-1-butanesulfonamide (FBSA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoropentanesulfonic acid (PFPeS)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoroundecanoic acid (PFUnA)	~	~	0.4	0.13	0.19	0.17	0.2	0.13
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	~	ND (0.88)	ND (0.46)	ND (0.52)	ND (0.48)	ND (0.69)	ND (0.53)
Perfluoroheptanoic acid (PFHpA)	0.5	300	0.33	ND (0.46)	0.13	ND (0.48)	0.44	0.09
Perfluorooctanoic acid (PFOA)	0.72	300	1.3	ND (0.46)	0.24	ND (0.48)	2.4	0.29
Perfluorooctanesulfonic acid (PFOS)	2	300	2.7	0.18	2.1	1.4	4	2.4
Perfluorononanoic acid (PFNA)	0.32	300	0.32	ND (0.46) *	0.51	0.26	0.67	0.28
Perfluorodecanoic acid (PFDA)	0.3	300	0.4	ND (0.46) *	0.23	0.26	0.3	0.18
Perfluorohexanesulfonic acid (PFHxS)	0.3	300	ND (0.88) *	ND (0.46) *	ND (0.52) *	ND (0.48) *	ND (0.69) *	ND (0.53) *

NOTES:
Gray colored cells indicate those compounds that are regulated by MassDEP
ND = Not detected above the lab reporting limits shown in parentheses.

~ indicates that no current standard or RC for those compounds

Bolded values exceed Method 1 Standard

An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	19 MOUNTAIN ROAD					
	S-1/GW-1	19MTN S-1	19MTN S-1 (DUP)	19MTN S-2	19MTN S-3	19MTN S-4	19MTN S-5
Sampling Date		11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021
Sample Depth (inches)		0-6	0-6	0-6	0-6	0-6	0-6
SOP-466 PFAS (µg/kg dry)							
Perfluorobutanoic acid (PFBA)	~	0.1	0.073	ND (0.50)	0.3	0.17	0.064
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoropentanoic acid (PFPeA)	~	0.1	0.28	ND (0.50)	ND (0.54)	0.11	ND (0.46)
Perfluorohexanoic acid (PFHxA)	~	ND (0.48)	0.14	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
11Cl-PF3OUds (F53B Minor)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
9Cl-PF3ONS (F53B Major)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluorododecanoic acid (PFDoA)	~	0.12	0.26	ND (0.50)	ND (0.54)	0.17	ND (0.46)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
N-EtFOSAA	~	ND (0.48)	0.22	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
N-MeFOSAA	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.48)	0.13	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoro-1-butanefulfonamide (FBSA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoroundecanoic acid (PFUnA)	~	0.14	0.28	0.18	0.12	0.28	ND (0.46)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.48)	ND (0.52)	ND (0.50)	ND (0.54)	ND (0.58)	ND (0.46)
Perfluoroheptanoic acid (PFHpA)	0.5	ND (0.48)	0.083	ND (0.50)	0.2	0.1	0.078
Perfluorooctanoic acid (PFOA)	0.72	0.18	0.45	ND (0.50)	0.59	0.41	0.21
Perfluorooctanesulfonic acid (PFOS)	2	0.72	1.2	1.4	1.8	2.2	0.28
Perfluorononanoic acid (PFNA)	0.32	0.1	0.22	0.11	0.37	0.23	0.21
Perfluorodecanoic acid (PFDA)	0.3	0.17	0.34	0.19	0.22	0.31	0.11
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.48) *	ND (0.52) *	ND (0.50) *	ND (0.54) *	ND (0.58) *	ND (0.46) *

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	21 MOUNTAIN ROAD						
	S-1/GW-1	21MTN S-1	21MTN S-2	21MTN S-3	21MTN S-4	21MTN S-5	21MTN S-6	21MTN S-7
Sampling Date		11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021	11/17/2021
Sample Depth (inches)		0-6	0-6	0-6	0-6	0-6	0-6	0-6
SOP-466 PFAS (µg/kg dry)								
Perfluorobutanoic acid (PFBA)	~	0.2	0.17	0.15	ND (0.49)	0.63	0.21	0.25
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoropentanoic acid (PFPeA)	~	ND (0.48)	ND (0.50)	0.12	0.075	1.6	0.17	0.15
Perfluorohexanoic acid (PFHxA)	~	ND (0.48)	ND (0.50)	0.12	ND (0.49)	1.2	0.22	0.11
11Cl-PF3OUds (F53B Minor)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
9Cl-PF3ONS (F53B Major)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluorododecanoic acid (PFDoA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
N-EtFOSAA	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
N-MeFOSAA	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoro-1-butananesulfonamide (FBSA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	1	ND (0.54)
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoroundecanoic acid (PFUnA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	0.15	ND (0.57)	ND (0.54)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.48)	ND (0.50)	ND (0.54)	ND (0.49)	ND (0.57)	ND (0.57)	ND (0.54)
Perfluoroheptanoic acid (PFHpA)	0.5	0.081	0.08	0.098	ND (0.49)	0.27	0.21	0.14
Perfluorooctanoic acid (PFOA)	0.72	0.2	0.16	0.23	0.2	0.91	0.55	0.46
Perfluorooctanesulfonic acid (PFOS)	2	0.46	0.45	0.72	1	1.9	2.5	0.83
Perfluorononanoic acid (PFNA)	0.32	0.13	0.14	0.18	0.14	0.46	0.26	0.2
Perfluorodecanoic acid (PFDA)	0.3	ND (0.48) *	ND (0.50) *	0.11	0.11	0.15	0.25	0.084
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.48) *	ND (0.50) *	ND (0.54) *	ND (0.49) *	0.48	0.78	ND (0.54) *

NOTES:
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 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	22 MOUNTAIN ROAD									
	S-1/GW-1	22MTN S-1				22MTN S-2	22MTN S-3		22MTN S-4		
Sampling Date		7/29/2021	7/29/2021	10/27/2021	10/27/2021	7/29/2021	7/29/2021	10/27/2021	7/29/2021	10/27/2021	10/27/2021
Sample Depth (inches)		0-6	0-6 DUP	6-12	12-24	0-6	0-6	6-12	0-6	6-12	12-18
SOP-466 PFAS (µg/kg dry)											
Perfluorobutanoic acid (PFBA)	~	0.91	0.72	0.25	0.21	0.6	0.58	0.23	0.48	0.18	ND (0.55)
Perfluorobutanesulfonic acid (PFBS)	~	0.4	0.27	ND (0.51)	ND (0.52)	0.6	0.25	0.11	0.086	ND (0.57)	ND (0.55)
Perfluoropentanoic acid (PFPeA)	~	0.97	0.71	0.22	0.13	0.38	0.24	0.13	0.29	ND (0.57)	ND (0.55)
Perfluorohexanoic acid (PFHxA)	~	3.4	2.3	0.48	0.27	0.48	ND (0.64)	0.15	0.35	ND (0.57)	ND (0.55)
11CI-PF3OUds (F53B Minor)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
9CI-PF3ONS (F53B Major)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
4,8-dioxo-3H-perfluorononanoic acid (ADONA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluorododecanoic acid (PFDoA)	~	0.09	ND (0.56)	ND (0.51)	ND (0.52)	0.12	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoroheptanesulfonic acid (PFHpS)	~	1.3	0.9	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
N-EtFOSAA	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
N-MeFOSAA	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	0.76	0.6	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoro-1-butananesulfonamide (FBSA)	~	0.24	0.18	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.53)	ND (0.56)	0.72	0.32	ND (0.57)	ND (0.64)	0.28	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoropentanesulfonic acid (PFPeS)	~	0.45	0.3	ND (0.51)	ND (0.52)	0.62	0.24	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoroundecanoic acid (PFUnA)	~	0.15	0.17	ND (0.51)	ND (0.52)	0.27	0.3	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.53)	ND (0.56)	ND (0.51)	ND (0.52)	ND (0.57)	ND (0.64)	ND (0.68)	ND (0.55)	ND (0.57)	ND (0.55)
Perfluoroheptanoic acid (PFHpA)	0.5	0.65	0.48	0.21	0.13	0.38	0.31	0.15	0.3	0.088	ND (0.55) *
Perfluorooctanoic acid (PFOA)	0.72	1.4	0.91	0.45	0.34	1.7	0.71	0.71	1.1	0.36	0.17
Perfluorooctanesulfonic acid (PFOS)	2	17	13	4	4.3	3.1	1.7	0.71	0.88	0.54	0.33
Perfluorononanoic acid (PFNA)	0.32	ND (0.53) *	0.098	ND (0.51) *	0.11	0.68	0.49	0.14	0.19	0.18	0.13
Perfluorodecanoic acid (PFDA)	0.3	0.16	0.14	ND (0.51) *	ND (0.52) *	0.31	0.26	ND (0.68) *	ND (0.55) *	ND (0.57) *	ND (0.55) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	14	8.9	2.8	1.3	3.3	1	0.33	0.22	ND (0.57) *	0.13

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	22 MOUNTAIN ROAD									
	S-1/GW-1	22MTN S-5			22MTN S-6		22MTN S-7		22MTN S-8		
Sampling Date		7/29/2021	10/27/2021	10/27/2021	7/29/2021	10/27/2021	7/29/2021	10/27/2021	7/29/2021	10/27/2021	10/27/2021
Sample Depth (inches)		0-6	6-12	12-18	0-6	6-12	0-6	6-12	0-6	6/12	12-18
SOP-466 PFAS (µg/kg dry)											
Perfluorobutanoic acid (PFBA)	~	0.48	ND (0.39)	ND (0.40)	1.3	ND (0.44)	1.3	ND (0.58)	0.59	ND (0.50)	ND (0.51)
Perfluorobutanesulfonic acid (PFBS)	~	0.22	ND (0.39)	ND (0.40)	0.66	ND (0.44)	ND (0.62)	0.25	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoropentanoic acid (PFPeA)	~	0.2	ND (0.39)	ND (0.40)	0.79	ND (0.44)	0.48	ND (0.58)	0.23	ND (0.50)	ND (0.51)
Perfluorohexanoic acid (PFHxA)	~	0.23	ND (0.39)	ND (0.40)	0.85	ND (0.44)	0.43	ND (0.58)	0.26	ND (0.50)	ND (0.51)
11CI-PF3OUdS (F53B Minor)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
9CI-PF3ONS (F53B Major)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluorododecanoic acid (PFDoA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
N-EtFOSAA	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
N-MeFOSAA	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.50)	ND (0.39)	ND (0.40)	0.26	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoro-1-butananesulfonamide (FBSA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.50)	0.18	0.16	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	0.20	ND (0.51)
Perfluoropentanesulfonic acid (PFPeS)	~	0.15	ND (0.39)	ND (0.40)	0.82	ND (0.44)	ND (0.62)	0.18	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoroundecanoic acid (PFUnA)	~	0.094	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	0.19	ND (0.49)	ND (0.50)	ND (0.51)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.50)	ND (0.39)	ND (0.40)	ND (0.60)	ND (0.44)	ND (0.62)	ND (0.58)	ND (0.49)	ND (0.50)	ND (0.51)
Perfluoroheptanoic acid (PFHpA)	0.5	0.32	ND (0.39)	ND (0.40)	0.92	0.066	0.62	0.17	0.25	ND (0.50)	ND (0.51) *
Perfluorooctanoic acid (PFOA)	0.72	1.5	ND (0.39)	ND (0.40)	3.5	0.22	2.6	0.57	0.69	ND (0.50)	0.25
Perfluorooctanesulfonic acid (PFOS)	2	1.7	0.12	ND (0.40)	2.6	0.37	1.7	2.1	1.4	ND (0.50)	0.26
Perfluorononanoic acid (PFNA)	0.32	0.57	ND (0.39) *	ND (0.40) *	0.8	ND (0.44) *	1.1	0.45	0.46	ND (0.50) *	ND (0.51) *
Perfluorodecanoic acid (PFDA)	0.3	0.15	ND (0.39) *	ND (0.40) *	0.15	ND (0.44) *	0.19	0.23	0.17	ND (0.50) *	ND (0.51) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	0.63	0.17	0.35	5	0.21	ND (0.62) *	0.33	ND (0.49) *	ND (0.50) *	0.095

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

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Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	22 MOUNTAIN ROAD							
	S-1/GW-1	22MTN S-9	22MTN S-10	22MTN S-11	22MTN S-12	22MTN S-13		22MTN Basement-1	22MTN Basement-2
Sampling Date		7/29/2021	10/27/2021	10/27/2021	10/27/2021	10/27/2021	10/27/2021	10/29/2021	10/29/2021
Sample Depth (inches)		0-6	0-6	0-12	0-12	0-12	12-24	0-6	0-6
SOP-466 PFAS (µg/kg dry)									
Perfluorobutanoic acid (PFBA)	~	0.67	0.62	0.36	1.4	0.08	0.09	0.087	0.38
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.49)	0.12	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	0.12
Perfluoropentanoic acid (PFPeA)	~	0.13	0.30	0.17	0.50	0.09	ND (0.48)	ND (0.43)	0.29
Perfluorohexanoic acid (PFHxA)	~	0.17	0.29	0.17	0.43	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
11Cl-PF3OUdS (F53B Minor)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
9Cl-PF3ONS (F53B Major)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
4,8-dioxo-3H-perfluorononanoic acid (ADONA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluorododecanoic acid (PFDoA)	~	ND (0.49)	ND (0.68)	ND (0.57)	0.13	0.11	ND (0.48)	ND (0.43)	0.12
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
N-EtFOSAA	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	0.29	ND (0.48)	ND (0.43)	ND (0.77)
N-MeFOSAA	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluorodecanesulfonic acid (PFDS)	~	0.35	ND (0.68)	ND (0.57)	ND (0.77)	0.13	ND (0.48)	ND (0.43)	ND (0.77)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoro-1-butananesulfonamide (FBSA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.49)	ND (0.68)	ND (0.57)	0.25	0.45	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoroundecanoic acid (PFUnA)	~	0.12	ND (0.68)	ND (0.57)	0.22	0.18	ND (0.48)	ND (0.43)	ND (0.77)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.49)	ND (0.68)	ND (0.57)	ND (0.77)	ND (0.53)	ND (0.48)	ND (0.43)	ND (0.77)
Perfluoroheptanoic acid (PFHpA)	0.5	0.21	0.29	0.25	0.66	0.13	0.1	ND (0.43)	ND (0.77) *
Perfluorooctanoic acid (PFOA)	0.72	0.43	0.86	0.91	1.4	0.58	0.64	ND (0.43)	0.6
Perfluorooctanesulfonic acid (PFOS)	2	2.0	1.1	1.0	1.7	3.9	0.53	0.4	0.65
Perfluorononanoic acid (PFNA)	0.32	0.53	0.2	0.25	0.46	0.15	ND (0.48) *	ND (0.43) *	ND (0.77) *
Perfluorodecanoic acid (PFDA)	0.3	ND (0.49) *	ND (0.68) *	0.11	0.25	0.21	ND (0.48) *	0.09	ND (0.77) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.49) *	0.11	0.16	0.16	ND (0.53) *	0.09	ND (0.43) *	0.13

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

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Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	30 MOUNTAIN ROAD									
	S-1/GW-1	30MTN Basement-1		30MTN Basement-2		30MTN S-1	30MTN S-2		30MTN S-3		
		5/25/2021 0-6	10/29/2021 6-8	5/25/2021 0-6	10/29/2021 6-12	5/25/2021 0-6	5/25/2021 0-6	10/28/2021 12-Jun	5/25/2021 0-6	10/28/2021 6-12	10/28/2021 12-24
Sampling Date		5/25/2021	10/29/2021	5/25/2021	10/29/2021	5/25/2021	5/25/2021	10/28/2021	5/25/2021	10/28/2021	10/28/2021
Sample Depth (inches)		0-6	6-8	0-6	6-12	0-6	0-6	12-Jun	0-6	6-12	12-24
SOP-466 PFAS (µg/kg dry)											
Perfluorobutanoic acid (PFBA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	0.3	ND (1.1)	0.25	0.37
Perfluorobutanesulfonic acid (PFBS)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	0.092	ND (1.1)	ND (0.52)	0.16
Perfluoropentanoic acid (PFPeA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	0.3	ND (1.1)	0.27	0.57
Perfluorohexanoic acid (PFHxA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	0.63	ND (1.1)	1.2	1.6
11CI-PF3OUds (F53B Minor)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
9CI-PF3ONS (F53B Major)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (2.5)	ND (0.48)	ND (2.1)	ND (0.77)	ND (2.0)	ND (2.3)	ND (0.48)	ND (2.3)	ND (0.52)	ND (0.53)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluorododecanoic acid (PFDoA)	~	ND (1.2)	ND (0.48)	ND (1.1)	0.34	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluoroheptanesulfonic acid (PFHpS)	~	1.7	1.3	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	1.1	ND (1.1)	0.71	2
N-EtFOSAA	~	ND (1.2)	ND (0.48)	ND (1.1)	0.33	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
N-MeFOSAA	~	ND (1.2)	ND (0.48)	ND (1.1)	0.85	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluorotetradecanoic acid (PFTA)	~	ND (1.2)	ND (0.48)	ND (1.1)	0.17	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluorotridecanoic acid (PFTDA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluorodecanesulfonic acid (PFDS)	~	ND (1.2)	ND (0.48)	ND (1.1)	0.8	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluorooctanesulfonamide (FOSA)	~	ND (1.2)	0.13	ND (1.1)	2.2	ND (0.99)	ND (1.1)	0.14	ND (1.1)	ND (0.52)	ND (0.53)
Perfluorononanesulfonic acid (PFNS)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	1.1	ND (1.1)	ND (0.52)	ND (0.53)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	3.2	6.1	2.1	0.27	ND (0.99)	1.9	1.4	ND (1.1)	0.54	0.98
Perfluoro-1-butanefulfonamide (FBSA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	0.19	0.6
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (1.2)	0.53	ND (1.1)	0.19	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluoropentanesulfonic acid (PFPeS)	~	ND (1.2)	0.073	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	0.13	ND (1.1)	0.13	0.2
Perfluoroundecanoic acid (PFUnA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77)	ND (0.99)	ND (1.1)	ND (0.48)	ND (1.1)	ND (0.52)	ND (0.53)
Perfluoroheptanoic acid (PFHpA)	0.5	ND (1.2)	ND (0.48)	ND (1.1)	ND (0.77) *	ND (0.99)	ND (1.1)	0.15	ND (1.1)	0.52	0.56
Perfluorooctanoic acid (PFOA)	0.72	2.9	0.97	ND (1.1)	ND (0.77) *	ND (0.99)	1.4	0.72	ND (1.1)	1.3	2.1
Perfluorooctanesulfonic acid (PFOS)	2	120	170	59	13	1.1	100	130	27	9.2	24
Perfluorononanoic acid (PFNA)	0.32	ND (1.2)	0.08	ND (1.1)	ND (0.77) *	ND (0.99)	ND (1.1)	ND (0.48) *	ND (1.1)	ND (0.52) *	0.11
Perfluorodecanoic acid (PFDA)	0.3	ND (1.2)	ND (0.48) *	ND (1.1)	ND (0.77) *	ND (0.99)	ND (1.1)	ND (0.48) *	ND (1.1)	ND (0.52) *	ND (0.53) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	4.5	2.9	1.6	0.41	ND (0.99)	5.2	4.8	5.6	5.5	9.5

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	30 MOUNTAIN ROAD									
	S-1/GW-1	30MTN S-4			30MTN S-5			30MTN S-6	30MTN S-6A	30MTN S-7	30MTN S-8
Sampling Date		5/25/2021	5/25/2021	10/28/2021	5/25/2021	10/28/2021	10/28/2021	5/25/2021	10/29/2021	10/28/2021	10/28/2021
Sample Depth (inches)		0-6	0-6 (DUP)	6-12	0-6	6-12	12-24	0-6	0-12	0-12	0-12
SOP-466 PFAS (µg/kg dry)											
Perfluorobutanoic acid (PFBA)	~	ND (1.0)	ND (1.1)	0.22	ND (0.92)	0.25	ND (0.53)	ND (0.97)	1.2	0.33	ND (0.44)
Perfluorobutanesulfonic acid (PFBS)	~	ND (1.0)	ND (1.1)	0.13	ND (0.92)	ND (0.50)	0.79	ND (0.97)	0.12	ND (0.49)	ND (0.44)
Perfluoropentanoic acid (PFPeA)	~	ND (1.0)	ND (1.1)	0.22	ND (0.92)	0.20	ND (0.53)	ND (0.97)	2.1	0.21	ND (0.44)
Perfluorohexanoic acid (PFHxA)	~	ND (1.0)	ND (1.1)	0.6	ND (0.92)	0.52	0.11	ND (0.97)	3.0	0.3	ND (0.44)
11Cl-PF3OUdS (F53B Minor)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
9Cl-PF3ONS (F53B Major)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (2.0)	ND (2.1)	ND (0.60)	ND (1.8)	ND (0.50)	ND (0.53)	ND (1.9)	ND (0.64)	ND (0.49)	ND (0.44)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluorododecanoic acid (PFDoA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (1.0)	ND (1.1)	0.76	ND (0.92)	0.26	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
N-EtFOSAA	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
N-MeFOSAA	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluorotetradecanoic acid (PFTA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluorotridecanoic acid (PFTDA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluorodecanesulfonic acid (PFDS)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluorooctanesulfonamide (FOSA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluorononanesulfonic acid (PFNS)	~	ND (1.0)	ND (1.1)	0.38	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (1.0)	ND (1.1)	0.99	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	0.14
Perfluoro-1-butanesulfonamide (FBSA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoropentanesulfonic acid (PFPeS)	~	ND (1.0)	ND (1.1)	0.13	ND (0.92)	ND (0.50)	0.58	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoroundecanoic acid (PFUnA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (1.0)	ND (1.1)	ND (0.60)	ND (0.92)	ND (0.50)	ND (0.53)	ND (0.97)	ND (0.64)	ND (0.49)	ND (0.44)
Perfluoroheptanoic acid (PFHpA)	0.5	ND (1.0)	ND (1.1)	0.21	ND (0.92)	0.28	0.085	ND (0.97)	0.36	0.28	ND (0.44)
Perfluorooctanoic acid (PFOA)	0.72	ND (1.0)	ND (1.1)	0.68	ND (0.92)	0.85	0.35	ND (0.97)	1.2	0.92	0.14
Perfluorooctanesulfonic acid (PFOS)	2	9.8	11	72	3.5	11	2	ND (0.97)	1.0	2.8	6.1
Perfluorononanoic acid (PFNA)	0.32	ND (1.0)	ND (1.1)	0.13	ND (0.92)	0.33	ND (0.53) *	ND (0.97)	0.22	0.14	ND (0.44) *
Perfluorodecanoic acid (PFDA)	0.3	ND (1.0)	ND (1.1)	ND (0.60) *	ND (0.92)	ND (0.50) *	ND (0.53) *	ND (0.97)	0.12	ND (0.49) *	ND (0.44) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	1.6	2.1	6.7	ND (0.92)	1	1.8	ND (0.97)	0.15	1.2	0.8

NOTES:
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 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	30 MOUNTAIN ROAD									
	S-1/GW-1	30MTN S-9	30MTN S-10	30MTN S-11		30MTN S-12		30MTN S-13		30MTN S-14	
Sampling Date		10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021
Sample Depth (inches)		0-12	0-12	0-12	24-36	0-12	12-24	0-12	12-24	0-12	12-24
SOP-466 PFAS (µg/kg dry)											
Perfluorobutanoic acid (PFBA)	~	0.18	0.46	0.2	ND (0.41)	ND (0.52)	0.11	0.17	0.078	0.4	0.11
Perfluorobutanesulfonic acid (PFBS)	~	0.18	0.12	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	0.1	ND (0.51)	0.1
Perfluoropentanoic acid (PFPeA)	~	0.17	0.39	0.093	ND (0.41)	ND (0.52)	ND (0.54)	0.1	0.092	0.48	0.16
Perfluorohexanoic acid (PFHxA)	~	0.9	0.9	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	0.1	0.3	0.6	0.8
11Cl-PF3OUds (F53B Minor)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
9Cl-PF3ONS (F53B Major)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluorododecanoic acid (PFDoA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	0.22	ND (0.54)	ND (0.55)	ND (0.52)	0.13	ND (0.50)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoroheptanesulfonic acid (PFHpS)	~	0.82	1.9	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
N-EtFOSAA	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
N-MeFOSAA	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.52)	0.2	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluorononanesulfonic acid (PFNS)	~	0.14	1.3	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	0.9	2	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoro-1-butanesulfonamide (FBSA)	~	0.2	0.31	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.52)	ND (0.56)	ND (0.51)	0.14	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoropentanesulfonic acid (PFPeS)	~	0.24	0.17	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	0.092	ND (0.51)	ND (0.50)
Perfluoroundecanoic acid (PFUnA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	0.43	ND (0.54)	0.12	ND (0.52)	0.12	ND (0.50)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.52)	ND (0.56)	ND (0.51)	ND (0.41)	ND (0.52)	ND (0.54)	ND (0.55)	ND (0.52)	ND (0.51)	ND (0.50)
Perfluoroheptanoic acid (PFHpA)	0.5	0.4	0.26	0.099	ND (0.41)	0.084	0.11	0.11	0.14	0.11	0.18
Perfluorooctanoic acid (PFOA)	0.72	0.93	1.1	0.39	ND (0.41)	0.37	0.69	0.48	0.70	0.46	0.58
Perfluorooctanesulfonic acid (PFOS)	2	26.0	110	1	ND (0.41)	6.9	2.3	2.4	2.7	0.8	1.6
Perfluorononanoic acid (PFNA)	0.32	0.095	0.098	0.22	ND (0.41) *	0.32	0.32	0.32	ND (0.52) *	0.22	0.27
Perfluorodecanoic acid (PFDA)	0.3	ND (0.52) *	ND (0.56) *	ND (0.51) *	ND (0.41) *	0.66	0.11	0.17	ND (0.52) *	0.27	0.09
Perfluorohexanesulfonic acid (PFHxS)	0.3	11	7.7	ND (0.51) *	ND (0.41) *	ND (0.52) *	ND (0.54) *	0.33	0.96	ND (0.51) *	ND (0.50) *

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	30 MOUNTAIN ROAD					
	S-1/GW-1	30MTN S-15		30MTN S-16	Soil Pile-1	Soil Pile-2	Mountain Rd Runoff Area
Sampling Date		10/28/2021	10/28/2021	10/28/2021	10/29/2021	10/29/2021	10/29/2021
Sample Depth (inches)					Composite	Composite	0-8
SOP-466 PFAS (µg/kg dry)							
Perfluorobutanoic acid (PFBA)	~	0.3	0.11	0.14	ND (0.47)	0.12	ND (0.74)
Perfluorobutanesulfonic acid (PFBS)	~	0.11	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluoropentanoic acid (PFPeA)	~	0.69	0.28	0.11	ND (0.47)	0.1	0.15
Perfluorohexanoic acid (PFHxA)	~	0.5	0.5	0.15	ND (0.47)	ND (0.52)	0.17
11Cl-PF3OUdS (F53B Minor)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
9Cl-PF3ONS (F53B Major)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluorododecanoic acid (PFDoA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.87
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.41
N-EtFOSAA	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
N-MeFOSAA	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.22
Perfluorotetradecanoic acid (PFTA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.19
Perfluorotridecanoic acid (PFTDA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.17
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	1.4
Perfluorooctanesulfonamide (FOSA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.96
Perfluorononanesulfonic acid (PFNS)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.97
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	2
Perfluoro-1-butanesulfonamide (FBSA)	~	0.18	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.25
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.12
Perfluoroundecanoic acid (PFUnA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	0.77
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.51)	ND (0.44)	ND (0.60)	ND (0.47)	ND (0.52)	ND (0.74)
Perfluoroheptanoic acid (PFHpA)	0.5	0.1	0.091	0.17	ND (0.47)	ND (0.52) *	ND (0.74) *
Perfluorooctanoic acid (PFOA)	0.72	0.63	0.55	0.76	ND (0.47)	0.46	0.92
Perfluorooctanesulfonic acid (PFOS)	2	2.1	1.1	0.9	1.1	5.7	76
Perfluorononanoic acid (PFNA)	0.32	0.23	0.14	0.13	ND (0.47) *	0.22	0.18
Perfluorodecanoic acid (PFDA)	0.3	0.16	ND (0.44) *	ND (0.60) *	ND (0.47) *	0.17	0.69
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.51) *	ND (0.44) *	0.17	ND (0.47) *	0.16	3.4

NOTES:
Gray colored cells indicate those compounds that are regulated by MassDEP
ND = Not detected above the lab reporting limits shown in parentheses.
~ indicates that no current standard or RC for those compounds
Bolded values exceed Method 1 Standard
An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	TOWN CAMPUS SAMPLE LOCATIONS					
	S-1/GW-1	Transformer Building S-1	Transformer Building S-2	Transformer Building S-3	Transformer Building S-4	Library-1	Library-2
Sampling Date		8/24/2021	8/24/2021	8/24/2021	8/24/2021	10/29/2021	10/29/2021
Sample Depth (inches)		0-6	0-6	0-6	0-6	0-6	0-6
SOP-466 PFAS (µg/kg dry)							
Perfluorobutanoic acid (PFBA)	~	ND (0.47)	0.28 J	0.18 J	0.10 J	ND (0.51)	0.24
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoropentanoic acid (PFPeA)	~	ND (0.47)	0.09	ND (0.58)	ND (0.47)	ND (0.51)	0.14
Perfluorohexanoic acid (PFHxA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	0.17
11Cl-PF3OUds (F53B Minor)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
9Cl-PF3ONS (F53B Major)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluorododecanoic acid (PFDoA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
N-EtFOSAA	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
N-MeFOSAA	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.47)	ND (0.47)	0.23 J	ND (0.47)	ND (0.51)	ND (0.50)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoronanesulfonic acid (PFNS)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoro-1-butananesulfonamide (FBSA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	0.099
Perfluoroundecanoic acid (PFUnA)	~	ND (0.47)	0.099 J	0.19 J	ND (0.47)	ND (0.51)	ND (0.50)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.47)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	ND (0.50)
Perfluoroheptanoic acid (PFHpA)	0.5	ND (0.47)	ND (0.47)	0.098 J	ND (0.47)	ND (0.51) *	0.18
Perfluorooctanoic acid (PFOA)	0.72	ND (0.13)	ND (0.47)	ND (0.58)	ND (0.47)	ND (0.51)	0.6
Perfluorooctanesulfonic acid (PFOS)	2	ND (0.47)	0.30 J	0.95	0.099 J	0.48	1.3
Perfluorononanoic acid (PFNA)	0.32	ND (0.08) *	ND (0.08) *	0.17 J	ND (0.07) *	ND (0.51) *	0.22
Perfluorodecanoic acid (PFDA)	0.3	ND (0.06) *	0.088 J	0.20 J	ND (0.06) *	ND (0.51) *	0.094
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.08) *	ND (0.08) *	ND (0.09) *	ND (0.07) *	ND (0.51) *	1.2

NOTES:
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 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	54 MOUNTAIN ROAD								
	S-1/GW-1	54MTN S-1	54MTN S-2	54MTN S-3	54MTN S-4		54MTN S-5	54MTN S-5A	54MTN S-6	
Sampling Date		8/24/2021	8/24/2021	8/24/2021	8/24/2021	8/24/2021	8/24/2021	10/28/2021	8/24/2021	10/28/2021
Sample Depth (inches)		0-6	0-6	0-6	0-6	0-6 DUP	0-6	0-12	0-6	6-12
SOP-466 PFAS (µg/kg dry)										
Perfluorobutanoic acid (PFBA)	~	0.18 J	ND (1.0)	ND (0.48)	0.10 J	0.11 J	0.14 J	ND (0.48)	0.18 J	0.31
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	0.31	ND (0.53)	ND (0.55)
Perfluoropentanoic acid (PFPeA)	~	0.21 J	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	0.13 J	0.12	0.26 J	0.57
Perfluorohexanoic acid (PFHxA)	~	0.18 J	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	0.12 J	0.15	0.15 J	0.42
11Cl-PF3OUds (F53B Minor)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
9Cl-PF3ONS (F53B Major)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
4,8-dioxo-3H-perfluorononanoic acid (ADONA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluorododecanoic acid (PFDoA)	~	0.096 J	ND (1.0)	ND (0.48)	0.14 J	0.20 J	0.29 J	ND (0.48)	0.50 J	ND (0.55)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
N-EtFOSAA	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
N-MeFOSAA	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	0.25 J	ND (0.55)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.57)	ND (1.0)	ND (0.48)	0.19 J	0.27 J	0.16 J	ND (0.48)	0.13 J	ND (0.55)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	0.24 J	ND (0.48)	0.65	ND (0.55)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	0.21
Perfluorononanesulfonic acid (PFNS)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoro-1-butanefulfonamide (FBSA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	0.29
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoroundecanoic acid (PFUnA)	~	0.14 J	0.22 J	ND (0.48)	0.38 J	0.41 J	0.29 J	ND (0.48)	0.27 J	ND (0.55)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.57)	ND (1.0)	ND (0.48)	ND (0.55)	ND (0.57)	ND (0.58)	ND (0.48)	ND (0.53)	ND (0.55)
Perfluoroheptanoic acid (PFHpA)	0.5	0.3 J	ND (0.15)	0.073 J	ND (0.08)	ND (0.08)	0.18 J	0.11	0.17 J	0.69
Perfluorooctanoic acid (PFOA)	0.72	0.86	ND (0.29)	0.28 J	0.16 J	ND (0.57)	0.51 J	0.23	0.54	1.3
Perfluorooctanesulfonic acid (PFOS)	2	1.1	0.73 J	0.33 J	3.1	3.2	4.9	0.71	2.2	13
Perfluorononanoic acid (PFNA)	0.32	0.24 J	ND (0.17)	0.17	0.2 J	0.19 J	0.4 J	ND (0.48) *	0.36 J	0.55
Perfluorodecanoic acid (PFDA)	0.3	0.2 J	0.18 J	ND (0.06)	0.51 J	0.56 J	0.5 J	0.083	1.1	1.5
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.09) J	ND (0.16)	ND (0.07)	ND (0.09)	ND (0.09)	ND (0.09)	ND (0.48) *	ND (0.08)	0.15

NOTES:
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 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	54 MOUNTAIN ROAD									
	S-1/GW-1	54MTN S-7			54MTN S-8	54MTN S-9		54MTN S-10		54MTN S-11	
Sampling Date		8/24/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021	10/28/2021
Sample Depth (inches)		0-6	6-12	12-24	0-12	0-12	12-24	0-12	12-24	0-12	12-24
SOP-466 PFAS (µg/kg dry)											
Perfluorobutanoic acid (PFBA)	~	0.069 J	ND (0.52)	ND (0.45)	0.16	ND (0.48)	ND (0.52)	ND (0.43)	0.47	0.064	ND (0.45)
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoropentanoic acid (PFPeA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	0.76	ND (0.43)	ND (0.45)
Perfluorohexanoic acid (PFHxA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	0.99	ND (0.43)	ND (0.45)
11CI-PF3OUds (F53B Minor)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
9CI-PF3ONS (F53B Major)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluorododecanoic acid (PFDoA)	~	0.12 J	ND (0.52)	ND (0.45)	0.094	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
N-EtFOSAA	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
N-MeFOSAA	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoro-1-butanefulfonamide (FBSA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.51)	0.22	ND (0.45)	ND (0.46)	0.18	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	0.16
Perfluoropentanesulfonic acid (PFPeS)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoroundecanoic acid (PFUnA)	~	0.15 J	ND (0.52)	ND (0.45)	0.19	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.51)	ND (0.52)	ND (0.45)	ND (0.46)	ND (0.48)	ND (0.52)	ND (0.43)	ND (0.50)	ND (0.43)	ND (0.45)
Perfluoroheptanoic acid (PFHpA)	0.5	ND (0.07)	ND (0.52) *	ND (0.45)	ND (0.46)	0.13	0.093	0.12	1.9	0.063	ND (0.45)
Perfluorooctanoic acid (PFOA)	0.72	0.18 J	ND (0.52)	ND (0.45)	0.43	0.47	0.39	0.43	5	0.17	ND (0.45)
Perfluorooctanesulfonic acid (PFOS)	2	1.1	0.11	ND (0.45)	0.64	1.2	0.29	0.78	2.1	0.17	ND (0.45)
Perfluorononanoic acid (PFNA)	0.32	0.088 J	ND (0.52) *	ND (0.45) *	0.18	0.13	ND (0.52) *	0.27	0.68	ND (0.43) *	ND (0.45) *
Perfluorodecanoic acid (PFDA)	0.3	0.29 J	ND (0.52) *	ND (0.45) *	0.2	0.12	ND (0.52) *	0.089	ND (0.50) *	ND (0.43) *	ND (0.45) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.08)	ND (0.52) *	ND (0.45) *	ND (0.46) *	ND (0.48) *	ND (0.52) *	ND (0.43) *	ND (0.50) *	ND (0.43) *	ND (0.45) *

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 2 - PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	54 MOUNTAIN ROAD			
	S-1/GW-1	54MTN S-12	54MTN S-13		54MTN S-14
Sampling Date		10/28/2021	10/28/2021	10/28/2021	10/28/2021
Sample Depth (inches)		0-12	0-12	12-24	0-6
SOP-466 PFAS (µg/kg dry)					
Perfluorobutanoic acid (PFBA)	~	ND (0.48)	0.19	0.21	0.38
Perfluorobutanesulfonic acid (PFBS)	~	ND (0.48)	ND (0.49)	0.11	ND (0.59)
Perfluoropentanoic acid (PFPeA)	~	ND (0.48)	0.22	0.25	0.2
Perfluorohexanoic acid (PFHxA)	~	ND (0.48)	0.11	0.18	0.29
11Cl-PF3OUdS (F53B Minor)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
9Cl-PF3ONS (F53B Major)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluorododecanoic acid (PFDoA)	~	ND (0.48)	0.13	ND (0.47)	ND (0.59)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoroheptanesulfonic acid (PFHpS)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
N-EtFOSAA	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
N-MeFOSAA	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluorotetradecanoic acid (PFTA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluorotridecanoic acid (PFTDA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluorodecanesulfonic acid (PFDS)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluorooctanesulfonamide (FOSA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluorononanesulfonic acid (PFNS)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoro-1-butananesulfonamide (FBSA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	ND (0.48)	ND (0.49)	ND (0.47)	0.22
Perfluoropetanesulfonic acid (PFPeS)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoroundecanoic acid (PFUnA)	~	ND (0.48)	0.15	ND (0.47)	ND (0.59)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	ND (0.48)	ND (0.49)	ND (0.47)	ND (0.59)
Perfluoroheptanoic acid (PFHpA)	0.5	ND (0.48)	0.12	0.21	0.42
Perfluorooctanoic acid (PFOA)	0.72	0.34	0.34	0.65	1.8
Perfluorooctanesulfonic acid (PFOS)	2	0.19	2.4	2.4	1
Perfluorononanoic acid (PFNA)	0.32	ND (0.48) *	0.17	0.37	0.3
Perfluorodecanoic acid (PFDA)	0.3	ND (0.48) *	0.39	0.14	ND (0.59) *
Perfluorohexanesulfonic acid (PFHxS)	0.3	ND (0.48) *	ND (0.49) *	ND (0.47) *	ND (0.59) *

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEP
 ND = Not detected above the lab reporting limits shown in parentheses.
 ~ indicates that no current standard or RC for those compounds
 Bolded values exceed Method 1 Standard
 An asterisk (*) following a detection limit indicates that the minimum laborat

TABLE 3 - SPLP PFAS Soil Sampling Summary
Princeton, Massachusetts

Parameter	MCP - Method 1 Standards	MCP - Method 2 Standards	22 Mountain						30 Mountain										54 Mountain					
	S-1/GW-1	S-1	22MTN S-1			22MTN S-7			30MTN S-3		30MTN S-4		30MTN S-5				30MTN S-8		30MTN S-9		54 MTN S-6		54 MTN S-10	
			10/27/2021		10/27/2021		10/28/2021		10/28/2021		10/28/2021		10/28/2021		10/28/2021		10/28/2021		10/28/2021		10/28/2021			
General Soil Stratigraphy			Organics & Loam			Loam & Fine Sand			Fine Silty Sand		Fine Silty Sand		Loam and Sand		Clayey Silt and Fine Sand		Fine Sand and Gravel		Loam, Fine Sand and Silt		Loam and Clayey Silt		Fine Silty Sand	
Sampling Date			6-12		12-24		6-12		12-24		6-12		12-24		6-12		12-24		6-12		12-24			
Sample Depth (inches)			SPLP		SPLP		SPLP		SPLP		SPLP		SPLP		SPLP		SPLP		SPLP		SPLP			
Notes																								
Parts-Per-Trillion (ppt)																								
Perfluorobutanoic acid (PFBA)	~	~	250	12	210	13	ND (580)	ND (2.0)	370	4.9	220	6.9	250	12	ND (530)	2.5	ND (440)	ND (2.0)	180	4.9	310	8.3	470	12
Perfluorobutanesulfonic acid (PFBS)	~	~	ND (510)	2.1	ND (0.52)	2.8	ND (580)	11	160	5.8	130	5.5	ND (500)	ND (2.0)	790	25	ND (440)	ND (2.0)	180	6.7	ND (550)	ND (2.0)	67	ND (2.0)
Perfluoropentanoic acid (PFPeA)	~	~	220	6.6	130	12	ND (580)	ND (2.0)	570	5.9	220	7.6	200	9.3	ND (530)	ND (2.0)	ND (440)	ND (2.0)	170	4.6	570	15	760	18
Perfluorohexanoic acid (PFHxA)	~	~	480	12	270	29	ND (580)	2.7	1,600	39	600	33	520	24	110	3.4	ND (440)	ND (2.0)	900	36	420	11	990	26
11Cl-PF3OLDS (F538 Minor)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
9Cl-PF3ONS (F538 Major)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Hexafluoropropylene oxide dimer acid (HFPO-DA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
8:2 Fluorotelomersulfonic acid (8:2FTS A)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorododecanoic acid (PFDoA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	~	~	ND (510)	2.2	ND (520)	2.8	ND (580)	ND (2.0)	2,000	41	760	44	260	11	ND (530)	3.2	ND (440)	ND (2.0)	820	31	ND (550)	ND (2.0)	ND (500)	ND (2.0)
N-EtFOSAA	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
N-MeFOSAA	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
4:2 Fluorotelomersulfonic acid (4:2FTS A)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorodecanesulfonic acid (PFDS)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorooctanesulfonamide (FOSA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorononanesulfonic acid (PFNS)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoro-1-hexanesulfonamide (FHxSA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	980	3.6	990	8.7	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	140	2.8	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoro-1-butanedisulfonamide (FBSA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	600	7.8	ND (600)	4.8	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	200	5.2	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoro-4-oxapentanoic acid (PFMPA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoro-5-oxahexanoic acid (PFMBA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
6:2 Fluorotelomersulfonic acid (6:2FTS A)	~	~	720	ND (2.0)	320	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoropentanesulfonic acid (PFPeS)	~	~	ND (510)	2.6	ND (520)	4.2	ND (580)	7.7	200	8.1	130	7.4	ND (500)	ND (2.0)	580	20	ND (440)	ND (2.0)	240	12	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	190	ND (2.0)	ND (530)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	~	~	ND (510)	ND (2.0)	ND (520)	ND (2.0)	ND (580)	ND (2.0)	ND (530)	ND (2.0)	ND (600)	ND (2.0)	ND (500)	ND (2.0)	ND (530)	ND (2.0)	ND (440)	ND (2.0)	ND (520)	ND (2.0)	ND (550)	ND (2.0)	ND (500)	ND (2.0)
Perfluorohexanoic acid (PFHxA)	500	300,000	210	4.9	130	14	170	7.4	560	16	210	12	280	12	85	2.8	ND (440)	ND (2.0)	400	16	690	18	1,900	50
Perfluorooctanoic acid (PFOA)	720	300,000	450	10	340	26	570	22	2,100	47	680	36	1,000	33	350	8.3	140	2.5	930	36	1,300	32	5,000	120
Perfluorooctanesulfonic acid (PFOS)	2,000	300,000	4,000	140	4,300	85	21,000	19	330	72,000	1,800	11,000	290	2,000	31	6,100	110	26,000	400	13,000	130	2,100	26	
Perfluorononanoic acid (PFNA)	320	300,000	ND (510)*	2.5	110	4	450	8	110	2.7	130	4.1	330	11	ND (530)*	ND (2.0)	ND (440)*	ND (2.0)	95	2.1	550	16	680	11
Perfluorodecanoic acid (PFDA)	300	300,000	ND (510)*	ND (2.0)	ND (520)*	ND (2.0)	230	ND (2.0)	ND (530)*	ND (2.0)	ND (600)*	ND (2.0)	ND (500)*	ND (2.0)	ND (530)*	ND (2.0)	ND (440)*	ND (2.0)	ND (520)*	ND (2.0)	1,500	16	ND (500)*	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	300	300,000	2,800	52	1,300	120	330	9.5	9,500	230	6,700	250	1,000	41	1,800	49	800	22	11,000	370	150	ND (2.0)	ND (500)*	ND (2.0)

NOTES:
 Gray colored cells indicate those compounds that are regulated by MassDEI
 ND = Not detected above the lab reporting limits shown in parentheses
 ~ indicates that no current standard or RC for those compound
 Bolded values exceed Method 1 Standard/RCS-1 Value
 An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria

APPENDIX C

Appendix C will be submitted to MassDEP under separate cover due to file size limitations

Tighe&Bond

APPENDIX D



ANALYTICAL REPORT

Lab Number:	L2201897
Client:	White Water Inc. 253B Worcester Road Charlton, MA 01507
ATTN:	Andrew Donnelly
Phone:	(888) 377-7678
Project Name:	PRINCETON TOWN CAMPUS
Project Number:	2241017
Report Date:	02/09/22

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2201897-01	TC001G WELL #1	DW	6 TOWN HALL DRIVE, PRINCETON, MA 01541	01/11/22 09:30	01/13/22
L2201897-02	TC001G WELL #1-FIELD BLANK	DW	6 TOWN HALL DRIVE, PRINCETON, MA 01541	01/11/22 09:30	01/13/22

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

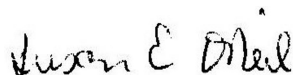
Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Susan O'Neil

Title: Technical Director/Representative

Date: 02/09/22

ORGANICS

SEMIVOLATILES

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

SAMPLE RESULTS

Lab ID: L2201897-01
Client ID: TC001G WELL #1
Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA 01541

Date Collected: 01/11/22 09:30
Date Received: 01/13/22
Field Prep: Not Specified

Sample Depth:

Matrix: Dw
Analytical Method: 133,537.1
Analytical Date: 02/01/22 20:55
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 01/20/22 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	38.3		ng/l	2.00	0.584	1
Perfluorohexanoic Acid (PFHxA)	6.78		ng/l	2.00	0.584	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.584	1
Perfluoroheptanoic Acid (PFHpA)	5.14		ng/l	2.00	0.584	1
Perfluorohexanesulfonic Acid (PFHxS)	301		ng/l	2.00	0.584	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.584	1
Perfluorooctanoic Acid (PFOA)	16.0		ng/l	2.00	0.584	1
Perfluorononanoic Acid (PFNA)	0.979	J	ng/l	2.00	0.584	1
Perfluorooctanesulfonic Acid (PFOS)	113		ng/l	2.00	0.584	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.584	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.584	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.584	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.584	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.584	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.584	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.584	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.584	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.584	1
PFAS, Total (6)	435		ng/l	2.00	0.584	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	100		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	80		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	93		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	100		70-130

Project Name: PRINCETON TOWN CAMPUS**Lab Number:** L2201897**Project Number:** 2241017**Report Date:** 02/09/22**SAMPLE RESULTS**

Lab ID: L2201897-02
 Client ID: TC001G WELL #1-FIELD BLANK
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA 01541

Date Collected: 01/11/22 09:30
 Date Received: 01/13/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw
 Analytical Method: 133,537.1
 Analytical Date: 02/01/22 21:04
 Analyst: LV

Extraction Method: EPA 537.1
 Extraction Date: 01/20/22 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.620	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.620	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.620	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.620	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.620	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.620	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.620	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.620	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.620	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.620	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.620	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.620	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.620	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.620	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.620	1
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.620	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.620	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.620	1
PFAS, Total (6)	ND		ng/l	2.00	0.620	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	100		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	113		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	111		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	98		70-130

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 133,537.1
Analytical Date: 02/01/22 18:09
Analyst: LV

Extraction Method: EPA 537.1
Extraction Date: 01/20/22 07:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01-02 Batch: WG1596082-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.668
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.668
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.668
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.668
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.668
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.668
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.668
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.668
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.668
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.668
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.668
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.668
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.668
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.668
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.668
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.668
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.668
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.668
PFAS, Total (6)	ND		ng/l	2.00	0.668

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	93		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	109		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Lab Number: L2201897

Project Number: 2241017

Report Date: 02/09/22

Parameter	LCS	Qual	LCS	Qual	%Recovery	RPD	Qual	RPD
	%Recovery		%Recovery		Limits			Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1596082-2								
Perfluorobutanesulfonic Acid (PFBS)	108		-		50-150	-		30
Perfluorohexanoic Acid (PFHxA)	102		-		50-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	110		-		50-150	-		30
Perfluoroheptanoic Acid (PFHpA)	110		-		50-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	118		-		50-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	97		-		50-150	-		30
Perfluorooctanoic Acid (PFOA)	106		-		50-150	-		30
Perfluorononanoic Acid (PFNA)	106		-		50-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	108		-		50-150	-		30
Perfluorodecanoic Acid (PFDA)	86		-		50-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	118		-		50-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		-		50-150	-		30
Perfluoroundecanoic Acid (PFUnA)	118		-		50-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	106		-		50-150	-		30
Perfluorododecanoic Acid (PFDoA)	116		-		50-150	-		30
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	93		-		50-150	-		30
Perfluorotridecanoic Acid (PFTrDA)	108		-		50-150	-		30
Perfluorotetradecanoic Acid (PFTA)	110		-		50-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1596082-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	105				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	105				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	111				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	108				70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Lab Number: L2201897

Project Number: 2241017

Report Date: 02/09/22

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Sample Associated sample(s): 01-02 QC Batch ID: WG1596082-3 QC Sample: L2201754-01 Client ID: MS												
Perfluorobutanesulfonic Acid (PFBS)	ND	1.59	1.54J	97		-	-		50-150	-		30
Perfluorohexanoic Acid (PFHxA)	ND	1.79	1.68J	94		-	-		50-150	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	1.79	1.61J	90		-	-		50-150	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	1.79	1.86	104		-	-		50-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	1.64	1.79	109		-	-		50-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	1.69	1.50J	89		-	-		50-150	-		30
Perfluorooctanoic Acid (PFOA)	ND	1.79	2.00	112		-	-		50-150	-		30
Perfluorononanoic Acid (PFNA)	ND	1.79	1.79J	100		-	-		50-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	1.66	1.50J	90		-	-		50-150	-		30
Perfluorodecanoic Acid (PFDA)	ND	1.79	1.61J	90		-	-		50-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	1.67	1.54J	92		-	-		50-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	1.79	1.58J	88		-	-		50-150	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	1.79	1.72J	96		-	-		50-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.79	1.75J	98		-	-		50-150	-		30
Perfluorododecanoic Acid (PFDoA)	ND	1.79	1.68J	94		-	-		50-150	-		30
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	1.69	1.22J	72		-	-		50-150	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	1.79	1.50J	84		-	-		50-150	-		30
Perfluorotetradecanoic Acid (PFTTA)	ND	1.79	1.54J	86		-	-		50-150	-		30

Matrix Spike Analysis**Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2201897**Report Date:** 02/09/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MS Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1596082-3 QC Sample: L2201754-01 Client ID: MS Sample

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	86				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	104				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96				70-130

Lab Duplicate Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Lab Number: L2201897

Report Date: 02/09/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1596082-4 QC Sample: L2201803-01 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Lab Number: L2201897

Report Date: 02/09/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1596082-4 QC Sample: L2201803-01 Client ID: DUP Sample						

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	114		108		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	115		117		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	101		102		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	103		104		70-130

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2201897-01A	Plastic 250ml Trizma preserved	A	NA		4.5	Y	Absent		A2-MA-537.1(14)
L2201897-01B	Plastic 250ml Trizma preserved	A	NA		4.5	Y	Absent		A2-MA-537.1(14)
L2201897-02A	Plastic 250ml Trizma preserved	A	NA		4.5	Y	Absent		A2-MA-537.1(14)

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: PRINCETON TOWN CAMPUS
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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: PRINCETON TOWN CAMPUS
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Lab Number: L2201897
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Data Qualifiers

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: PRINCETON TOWN CAMPUS
Project Number: 2241017

Lab Number: L2201897
Report Date: 02/09/22

REFERENCES

- 133 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537.1, EPA/600/R-18/352. Version 1.0, November 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



253B Worcester Road, Charlton MA 01507 Phone: (888) 377-7678 Fax: (508) 248-2895

- Initial Monitoring
- Routine Monitoring
- Confirmation Sample
- Other: 2201897

PWS ID #: 2241017 PWS CLASS: TNC JOB/SO #: _____
 PWS NAME: Princeton Town Campus
 PWS ADDRESS: 6 Town Hall Drive, Princeton, MA 01541
 PWS PHONE #: (978) 464 2100 Does this facility have PFAS Treatment?
 DATE COLLECTED: 1/11/22 YES NO

SPECIAL NOTES:
 Drinking Water - PFAS Method 537.1 (Include Sum of PFAS 6)
 Run Field Blank Analysis
 PFAS Quarterly per client
OPERATOR QA/QC CHECKLIST
 Sampler has been trained on PFAS sampling protocols.
 Sampler has adhered to PFAS sampling protocols.
 Samples are representative and acceptable for analysis.

LOCATION CODE	SAMPLE LOCATION	SAMPLE TYPE	TIME	PFAS	FIELD BLANK	NOTES:	Total # of Bottles
TC001G	Well #1	Finish	0930	✓	✓		4

Custody Transfer	Name & Signature	DATE	TIME
Sampler:	<i>William Hibbs</i>	1/11/22	0930
Relinquished by:	<i>William Hibbs</i>	1/11/22	1400
Received by:	<i>Jane Muter AAC</i>	1/13/22	11:20
Relinquished by:	<i>Jane Muter AAC</i>	1/13/22	1800
Received by:	<i>[Signature]</i>	1/15	10

Tighe&Bond

APPENDIX E

November 16, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

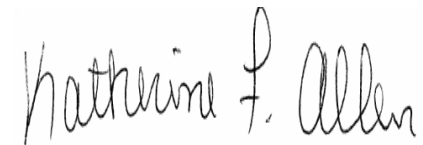
Project Location: 30 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1946

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 11/16/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1946

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 30 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30MTN S-6A (0-12)	21J1946-01	Soil		SM 2540G SOP-466 PFAS	
30MTN Basement 1 (6-8)	21J1946-02	Soil		SM 2540G SOP-466 PFAS	
30MTN Basement 2 (6-12)	21J1946-03	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-466 PFAS

Qualifications:

Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Perfluorononanesulfonic acid (PFNS)
B294575-BS1

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-6:2FTS, M2-8:2FTS
21J1946-01[30MTN S-6A (0-12)]

Sample prepared and extracted at a dilution.

Analyte & Samples(s) Qualified:

21J1946-02RE1[30MTN Basement 1 (6-8)]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1946

Date Received: 10/29/2021

Field Sample #: 30MTN S-6A (0-12)

Sampled: 10/29/2021 08:00

Sample ID: 21J1946-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	1.2	0.64	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorobutanesulfonic acid (PFBS)	0.12	0.64	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoropentanoic acid (PFPeA)	2.1	0.64	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorohexanoic acid (PFHxA)	3.0	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.64	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
9Cl-PF3ONS (F53B Major)	ND	0.64	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.64	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.64	0.31	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.64	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorodecanoic acid (PFDA)	0.12	0.64	0.083	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.64	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.64	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.64	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
N-EtFOSAA	ND	0.64	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
N-MeFOSAA	ND	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.64	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.64	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.64	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.64	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.64	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.64	0.20	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.15	0.64	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.64	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.64	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.64	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.64	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluoroheptanoic acid (PFHpA)	0.36	0.64	0.093	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorooctanoic acid (PFOA)	1.2	0.64	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorooctanesulfonic acid (PFOS)	1.0	0.64	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH
Perfluorononanoic acid (PFNA)	0.22	0.64	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:36	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1946

Date Received: 10/29/2021

Field Sample #: 30MTN S-6A (0-12)

Sampled: 10/29/2021 08:00

Sample ID: 21J1946-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	60.5		% Wt	1		SM 2540G	11/11/21	11/12/21 9:05	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1946

Date Received: 10/29/2021

Field Sample #: 30MTN Basement 1 (6-8)

Sampled: 10/29/2021 08:30

Sample ID: 21J1946-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.48	0.064	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorodecanoic acid (PFDA)	ND	0.48	0.062	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoroheptanesulfonic acid (PFHpS)	1.3	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
N-EtFOSAA	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
N-MeFOSAA	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorooctanesulfonamide (FOSA)	0.13	0.48	0.094	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	6.1	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorohexanesulfonic acid (PFHxS)	2.9	0.48	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.53	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.073	0.48	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.48	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorooctanoic acid (PFOA)	0.97	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH
Perfluorooctanesulfonic acid (PFOS)	170	5.4	0.73	µg/kg dry	1		SOP-466 PFAS	11/13/21	11/15/21 19:20	BLH
Perfluorononanoic acid (PFNA)	0.080	0.48	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:43	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1946

Date Received: 10/29/2021

Field Sample #: 30MTN Basement 1 (6-8)

Sampled: 10/29/2021 08:30

Sample ID: 21J1946-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.3		% Wt	1		SM 2540G	11/11/21	11/12/21 9:06	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1946

Date Received: 10/29/2021

Field Sample #: 30MTN Basement 2 (6-12)

Sampled: 10/29/2021 09:00

Sample ID: 21J1946-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.77	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.77	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.77	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.77	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
9Cl-PF3ONS (F53B Major)	ND	0.77	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.77	0.25	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.77	0.37	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.77	0.20	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorodecanoic acid (PFDA)	ND	0.77	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorododecanoic acid (PFDoA)	0.34	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.77	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.77	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
N-EtFOSAA	0.33	0.77	0.22	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
N-MeFOSAA	0.85	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorotetradecanoic acid (PFTA)	0.17	0.77	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.77	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorodecanesulfonic acid (PFDS)	0.80	0.77	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorooctanesulfonamide (FOSA)	2.2	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.77	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	0.27	0.77	0.23	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.77	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.41	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.19	0.77	0.18	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.77	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.77	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.77	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorooctanoic acid (PFOA)	ND	0.77	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorooctanesulfonic acid (PFOS)	13	0.77	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH
Perfluorononanoic acid (PFNA)	ND	0.77	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:50	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1946

Date Received: 10/29/2021

Field Sample #: 30MTN Basement 2 (6-12)

Sampled: 10/29/2021 09:00

Sample ID: 21J1946-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	53.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:06	WT

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1946-01 [30MTN S-6A (0-12)]	B294465	11/11/21
21J1946-02 [30MTN Basement 1 (6-8)]	B294465	11/11/21
21J1946-03 [30MTN Basement 2 (6-12)]	B294465	11/11/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1946-01 [30MTN S-6A (0-12)]	B294033	5.80	5.00	11/09/21
21J1946-02 [30MTN Basement 1 (6-8)]	B294033	5.65	5.00	11/09/21
21J1946-03 [30MTN Basement 2 (6-12)]	B294033	5.54	5.00	11/09/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1946-02RE1 [30MTN Basement 1 (6-8)]	B294575	0.502	5.00	11/13/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

Blank (B294033-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	1.89	0.38	µg/kg wet	2.12		89.1	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.77	0.38	µg/kg wet	1.87		94.6	72-128			
Perfluoropentanoic acid (PFPeA)	1.91	0.38	µg/kg wet	2.12		90.2	69-132			
Perfluorohexanoic acid (PFHxA)	1.89	0.38	µg/kg wet	2.12		89.0	70-132			
11Cl-PF3OUdS (F53B Minor)	1.89	0.38	µg/kg wet	2.00		94.6	50-150			
9Cl-PF3ONS (F53B Major)	1.88	0.38	µg/kg wet	1.97		95.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.94	0.38	µg/kg wet	2.00		97.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	0.38	µg/kg wet	2.12		83.4	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.87	0.38	µg/kg wet	2.03		92.1	65-137			
Perfluorodecanoic acid (PFDA)	1.80	0.38	µg/kg wet	2.12		85.1	69-133			
Perfluorododecanoic acid (PFDoA)	1.82	0.38	µg/kg wet	2.12		85.8	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.90	0.38	µg/kg wet	1.89		101	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluoroheptanesulfonic acid (PFHpS)	1.97	0.38	µg/kg wet	2.03		97.1	70-132			
N-EtFOSAA	2.09	0.38	µg/kg wet	2.12		98.5	61-139			
N-MeFOSAA	2.13	0.38	µg/kg wet	2.12		100	63-144			
Perfluorotetradecanoic acid (PFTA)	1.91	0.38	µg/kg wet	2.12		90.1	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.00	0.38	µg/kg wet	2.12		94.4	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.03	0.38	µg/kg wet	1.98		102	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.90	0.38	µg/kg wet	2.04		93.2	59-134			
Perfluorooctanesulfonamide (FOSA)	1.83	0.38	µg/kg wet	2.12		86.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.08	0.38	µg/kg wet	2.03		102	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.15	0.38	µg/kg wet	2.12		102	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.05	0.38	µg/kg wet	2.12		96.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.81	0.38	µg/kg wet	1.93		93.9	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.17	0.38	µg/kg wet	2.12		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.16	0.38	µg/kg wet	2.01		107	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.73	0.38	µg/kg wet	1.99		86.7	73-123			
Perfluoroundecanoic acid (PFUnA)	1.87	0.38	µg/kg wet	2.12		88.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.21	0.38	µg/kg wet	2.12		104	50-150			
Perfluoroheptanoic acid (PFHpA)	2.04	0.38	µg/kg wet	2.12		96.5	71-131			
Perfluorooctanoic acid (PFOA)	2.05	0.38	µg/kg wet	2.12		96.9	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.89	0.38	µg/kg wet	1.96		96.5	68-136			
Perfluorononanoic acid (PFNA)	2.09	0.38	µg/kg wet	2.12		98.7	72-129			

Batch B294575 - SOP 465-PFAAS

Blank (B294575-BLK1)

Prepared: 11/13/21 Analyzed: 11/15/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294575 - SOP 465-PFAAS

Blank (B294575-BLK1)

Prepared: 11/13/21 Analyzed: 11/15/21

Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropetanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294575-BS1)

Prepared: 11/13/21 Analyzed: 11/15/21

Perfluorobutanoic acid (PFBA)	2.25	0.38	µg/kg wet	2.14		105	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.09	0.38	µg/kg wet	1.89		111	72-128			
Perfluoropentanoic acid (PFPeA)	2.31	0.38	µg/kg wet	2.14		108	69-132			
Perfluorohexanoic acid (PFHxA)	2.25	0.38	µg/kg wet	2.14		105	70-132			
11Cl-PF3OUdS (F53B Minor)	2.32	0.38	µg/kg wet	2.01		115	50-150			
9Cl-PF3ONS (F53B Major)	2.59	0.38	µg/kg wet	1.99		130	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.15	0.38	µg/kg wet	2.01		107	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.46	0.38	µg/kg wet	2.14		115	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.44	0.38	µg/kg wet	2.05		119	65-137			
Perfluorodecanoic acid (PFDA)	2.22	0.38	µg/kg wet	2.14		104	69-133			
Perfluorododecanoic acid (PFDoA)	2.44	0.38	µg/kg wet	2.14		114	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.22	0.38	µg/kg wet	1.90		117	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.35	0.38	µg/kg wet	2.04		115	70-132			
N-EtFOSAA	2.77	0.38	µg/kg wet	2.14		129	61-139			
N-MeFOSAA	2.80	0.38	µg/kg wet	2.14		131	63-144			
Perfluorotetradecanoic acid (PFTA)	2.07	0.38	µg/kg wet	2.14		96.8	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.13	0.38	µg/kg wet	2.14		99.7	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.20	0.38	µg/kg wet	2.00		110	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.54	0.38	µg/kg wet	2.06		123	59-134			
Perfluorooctanesulfonamide (FOSA)	2.19	0.38	µg/kg wet	2.14		103	67-137			
Perfluorononanesulfonic acid (PFNS)	2.67	0.38	µg/kg wet	2.05		130	69-125	*		L-01
Perfluoro-1-hexanesulfonamide (FHxSA)	2.29	0.38	µg/kg wet	2.14		107	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.42	0.38	µg/kg wet	2.14		113	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.96	0.38	µg/kg wet	1.94		101	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.40	0.38	µg/kg wet	2.14		113	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.28	0.38	µg/kg wet	2.14		107	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.55	0.38	µg/kg wet	2.03		126	64-140			
Perfluoropetanesulfonic acid (PFPeS)	1.95	0.38	µg/kg wet	2.01		97.4	73-123			
Perfluoroundecanoic acid (PFUnA)	2.10	0.38	µg/kg wet	2.14		98.1	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.40	0.38	µg/kg wet	2.14		113	50-150			
Perfluoroheptanoic acid (PFHpA)	2.28	0.38	µg/kg wet	2.14		107	71-131			
Perfluorooctanoic acid (PFOA)	2.28	0.38	µg/kg wet	2.14		107	69-133			
Perfluorooctanesulfonic acid (PFOS)	2.21	0.38	µg/kg wet	1.97		112	68-136			
Perfluorononanoic acid (PFNA)	2.26	0.38	µg/kg wet	2.14		106	72-129			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m ³	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
Z-01	Sample prepared and extracted at a dilution.

ANALYST

STATION PDF Management Station
JFC James F. Constantino
JLH Jessica L. Hoffman
EGR Evett G Rivera
AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-6A (0-12) (21J1946-01)			Lab File ID: 21J1946-01.d			Analyzed: 11/10/21 19:36			
M8FOSA	392762.7	4.044517	393,192.00	4.044517	100	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	234653.9	2.636617	160,692.00	2.644867	146	50 - 150	-0.0082	+/-0.50	
M2PFTA	1848653	4.394667	1,595,192.00	4.39465	116	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	556972.8	3.866833	226,739.00	3.866833	246	50 - 150	0.0000	+/-0.50	*
MPFBA	677966.6	1.12495	677,435.00	1.116633	100	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	238471.3	2.945967	230,491.00	2.954083	103	50 - 150	-0.0081	+/-0.50	
M6PFDA	1082268	3.867333	1,018,454.00	3.867333	106	50 - 150	0.0000	+/-0.50	
M3PFBS	171162.4	2.011067	149,326.00	2.019367	115	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1500049	4.009984	1,365,067.00	4.017967	110	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	243750.9	3.509617	118,861.00	3.509617	205	50 - 150	0.0000	+/-0.50	*
M5PFPeA	715543.4	1.824517	668,163.00	1.8328	107	50 - 150	-0.0083	+/-0.50	
M5PFHxA	997560.9	2.722683	913,090.00	2.730867	109	50 - 150	-0.0082	+/-0.50	
M3PFHxS	137170.9	3.28425	123,606.00	3.2923	111	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1030229	3.251867	947,771.00	3.25995	109	50 - 150	-0.0081	+/-0.50	
M8PFOA	989248.2	3.51815	1,002,525.00	3.526133	99	50 - 150	-0.0080	+/-0.50	
M8PFOS	141402.3	3.708283	132,723.00	3.708283	107	50 - 150	0.0000	+/-0.50	
M9PFNA	896601.4	3.709283	902,256.00	3.709283	99	50 - 150	0.0000	+/-0.50	
MPFDoA	1519544	4.153117	1,387,824.00	4.153117	109	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	354546.8	4.01745	302,650.00	4.025434	117	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	321481.7	3.937867	280,463.00	3.945867	115	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN Basement 1 (6-8) (21J1946-02)			Lab File ID: 21J1946-02.d			Analyzed: 11/10/21 19:43			
M8FOSA	447391.6	4.044517	393,192.00	4.044517	114	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	153787.2	2.636633	160,692.00	2.644867	96	50 - 150	-0.0082	+/-0.50	
M2PFTA	1883886	4.394667	1,595,192.00	4.39465	118	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	210353.6	3.866833	226,739.00	3.866833	93	50 - 150	0.0000	+/-0.50	
MPFBA	725557.9	1.116633	677,435.00	1.116633	107	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	258691.7	2.954083	230,491.00	2.954083	112	50 - 150	0.0000	+/-0.50	
M6PFDA	1171994	3.867333	1,018,454.00	3.867333	115	50 - 150	0.0000	+/-0.50	
M3PFBS	179727.1	2.011067	149,326.00	2.019367	120	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1518235	4.009984	1,365,067.00	4.017967	111	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	106761.5	3.509617	118,861.00	3.509617	90	50 - 150	0.0000	+/-0.50	
M5PFPeA	753421.3	1.824517	668,163.00	1.8328	113	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1029408	2.722683	913,090.00	2.730867	113	50 - 150	-0.0082	+/-0.50	
M3PFHxS	144150.4	3.28425	123,606.00	3.2923	117	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1094039	3.25995	947,771.00	3.25995	115	50 - 150	0.0000	+/-0.50	
M8PFOA	1088146	3.51815	1,002,525.00	3.526133	109	50 - 150	-0.0080	+/-0.50	
M8PFOS	151878.4	3.708283	132,723.00	3.708283	114	50 - 150	0.0000	+/-0.50	
M9PFNA	952383.6	3.709283	902,256.00	3.709283	106	50 - 150	0.0000	+/-0.50	
MPFDoA	1498584	4.153117	1,387,824.00	4.153117	108	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	299129.6	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	294081.9	3.937867	280,463.00	3.945867	105	50 - 150	-0.0080	+/-0.50	
30MTN Basement 1 (6-8) (21J1946-02RE1)			Lab File ID: 21J1946-02RE1.d			Analyzed: 11/15/21 19:20			
M8PFOS	141097.8	3.724233	107,190.00	3.724233	132	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN Basement 2 (6-12) (21J1946-03)			Lab File ID: 21J1946-03.d			Analyzed: 11/10/21 19:50			
M8FOSA	390043.6	4.044517	393,192.00	4.044517	99	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	160213.4	2.636633	160,692.00	2.644867	100	50 - 150	-0.0082	+/-0.50	
M2PFTA	1807949	4.39465	1,595,192.00	4.39465	113	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	193124	3.866833	226,739.00	3.866833	85	50 - 150	0.0000	+/-0.50	
MPFBA	686207.8	1.116633	677,435.00	1.116633	101	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	244932.6	2.945967	230,491.00	2.954083	106	50 - 150	-0.0081	+/-0.50	
M6PFDA	1048333	3.867333	1,018,454.00	3.867333	103	50 - 150	0.0000	+/-0.50	
M3PFBS	162945.2	2.019367	149,326.00	2.019367	109	50 - 150	0.0000	+/-0.50	
M7PFUnA	1343534	4.009984	1,365,067.00	4.017967	98	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	110241.7	3.509617	118,861.00	3.509617	93	50 - 150	0.0000	+/-0.50	
M5PFPeA	695699.1	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	953459.9	2.722683	913,090.00	2.730867	104	50 - 150	-0.0082	+/-0.50	
M3PFHxS	128526.6	3.28425	123,606.00	3.2923	104	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002240	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	979854.3	3.51815	1,002,525.00	3.526133	98	50 - 150	-0.0080	+/-0.50	
M8PFOS	151848.6	3.708283	132,723.00	3.708283	114	50 - 150	0.0000	+/-0.50	
M9PFNA	997505.8	3.709283	902,256.00	3.709283	111	50 - 150	0.0000	+/-0.50	
MPFDoA	1444393	4.153117	1,387,824.00	4.153117	104	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	278740.2	4.01745	302,650.00	4.025434	92	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	300501.6	3.937867	280,463.00	3.945867	107	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294033-BLK1)			Lab File ID: B294033-BLK1.d			Analyzed: 11/10/21 19:14			
M8FOSA	429016.3	4.044517	393,192.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	177817.3	2.636617	160,692.00	2.644867	111	50 - 150	-0.0082	+/-0.50	
M2PFTA	1578890	4.39465	1,595,192.00	4.39465	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205446.4	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	706423.2	1.116633	677,435.00	1.116633	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	265918.4	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1102411	3.867333	1,018,454.00	3.867333	108	50 - 150	0.0000	+/-0.50	
M3PFBS	159121.3	2.019367	149,326.00	2.019367	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1385367	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117891.1	3.509617	118,861.00	3.509617	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	696645.8	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	974444.4	2.730867	913,090.00	2.730867	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	130763.8	3.28425	123,606.00	3.2923	106	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002456	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	991618.7	3.526133	1,002,525.00	3.526133	99	50 - 150	0.0000	+/-0.50	
M8PFOS	149775.8	3.708283	132,723.00	3.708283	113	50 - 150	0.0000	+/-0.50	
M9PFNA	1028584	3.709283	902,256.00	3.709283	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1414039	4.153117	1,387,824.00	4.153117	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	267962	4.01745	302,650.00	4.025434	89	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	271198.5	3.945867	280,463.00	3.945867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294033-BS1)			Lab File ID: B294033-BS1.d			Analyzed: 11/10/21 19:07			
M8FOSA	507811.9	4.044517	393,192.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	201720	2.636633	160,692.00	2.644867	126	50 - 150	-0.0082	+/-0.50	
M2PFTA	1920522	4.394667	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	228061	3.866833	226,739.00	3.866833	101	50 - 150	0.0000	+/-0.50	
MPFBA	819892.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	293902.4	2.954083	230,491.00	2.954083	128	50 - 150	0.0000	+/-0.50	
M6PFDA	1276603	3.867333	1,018,454.00	3.867333	125	50 - 150	0.0000	+/-0.50	
M3PFBS	195916.2	2.019367	149,326.00	2.019367	131	50 - 150	0.0000	+/-0.50	
M7PFUnA	1573698	4.009984	1,365,067.00	4.017967	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	137275.6	3.509617	118,861.00	3.509617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	812180	1.824517	668,163.00	1.8328	122	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1130201	2.730867	913,090.00	2.730867	124	50 - 150	0.0000	+/-0.50	
M3PFHxS	156806.5	3.2923	123,606.00	3.2923	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1173305	3.25995	947,771.00	3.25995	124	50 - 150	0.0000	+/-0.50	
M8PFOA	1213635	3.526133	1,002,525.00	3.526133	121	50 - 150	0.0000	+/-0.50	
M8PFOS	177309.4	3.708283	132,723.00	3.708283	134	50 - 150	0.0000	+/-0.50	
M9PFNA	1134643	3.709283	902,256.00	3.709283	126	50 - 150	0.0000	+/-0.50	
MPFDoA	1728049	4.153117	1,387,824.00	4.153117	125	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300634.3	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	318777.5	3.945867	280,463.00	3.945867	114	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294575-BLK1)			Lab File ID: B294575-BLK1.d			Analyzed: 11/15/21 18:58			
M8FOSA	407379.8	4.052516	311,249.00	4.052516	131	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	115365.3	2.678933	128,851.00	2.678933	90	50 - 150	0.0000	+/-0.50	
M2PFTA	1661229	4.4109	1,273,177.00	4.4109	130	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	141318.8	3.88305	145,046.00	3.88305	97	50 - 150	0.0000	+/-0.50	
MPFBA	678491	1.13325	515,200.00	1.13325	132	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	214410.4	2.978433	179,402.00	2.978433	120	50 - 150	0.0000	+/-0.50	
M6PFDA	1066047	3.883567	788,638.00	3.883567	135	50 - 150	0.0000	+/-0.50	
M3PFBS	153635.5	2.054933	117,778.00	2.044217	130	50 - 150	0.0107	+/-0.50	
M7PFUnA	1337448	4.03395	977,512.00	4.033967	137	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	77325.73	3.533583	83,394.00	3.5336	93	50 - 150	0.0000	+/-0.50	
M5PFPeA	676308.7	1.857667	516,196.00	1.857667	131	50 - 150	0.0000	+/-0.50	
M5PFHxA	957237.7	2.763583	711,163.00	2.763583	135	50 - 150	0.0000	+/-0.50	
M3PFHxS	128407.5	3.308383	92,621.00	3.308383	139	50 - 150	0.0000	+/-0.50	
M4PFHpA	994516	3.27725	719,839.00	3.27725	138	50 - 150	0.0000	+/-0.50	
M8PFOA	1014359	3.542117	739,739.00	3.542117	137	50 - 150	0.0000	+/-0.50	
M8PFOS	155679.5	3.724217	107,190.00	3.724233	145	50 - 150	0.0000	+/-0.50	
M9PFNA	1003805	3.725217	748,112.00	3.725217	134	50 - 150	0.0000	+/-0.50	
MPFDoA	1423902	4.169267	1,035,336.00	4.169267	138	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	225845.1	4.041433	196,430.00	4.041433	115	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	235990.4	3.96185	185,650.00	3.96185	127	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294575-BS1)									
			Lab File ID: B294575-BS1.d			Analyzed: 11/15/21 18:51			
M8FOSA	383667.2	4.052516	311,249.00	4.052516	123	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	103122.5	2.678933	128,851.00	2.678933	80	50 - 150	0.0000	+/-0.50	
M2PFTA	1641409	4.4109	1,273,177.00	4.4109	129	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	129779.3	3.88305	145,046.00	3.88305	89	50 - 150	0.0000	+/-0.50	
MPFBA	667425.6	1.13325	515,200.00	1.13325	130	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	200409.4	2.978433	179,402.00	2.978433	112	50 - 150	0.0000	+/-0.50	
M6PFDA	965228.1	3.883567	788,638.00	3.883567	122	50 - 150	0.0000	+/-0.50	
M3PFBS	144162.7	2.054933	117,778.00	2.044217	122	50 - 150	0.0107	+/-0.50	
M7PFUnA	1287194	4.033967	977,512.00	4.033967	132	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	78842.82	3.5336	83,394.00	3.5336	95	50 - 150	0.0000	+/-0.50	
M5PFPeA	649074.2	1.857667	516,196.00	1.857667	126	50 - 150	0.0000	+/-0.50	
M5PFHxA	902005.6	2.763583	711,163.00	2.763583	127	50 - 150	0.0000	+/-0.50	
M3PFHxS	123580	3.308383	92,621.00	3.308383	133	50 - 150	0.0000	+/-0.50	
M4PFHpA	932019.6	3.27725	719,839.00	3.27725	129	50 - 150	0.0000	+/-0.50	
M8PFOA	942549.8	3.542117	739,739.00	3.542117	127	50 - 150	0.0000	+/-0.50	
M8PFOS	134067.1	3.724233	107,190.00	3.724233	125	50 - 150	0.0000	+/-0.50	
M9PFNA	962039.8	3.725217	748,112.00	3.725217	129	50 - 150	0.0000	+/-0.50	
MPFDoA	1323406	4.169267	1,035,336.00	4.169267	128	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	218255.2	4.041433	196,430.00	4.041433	111	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	217418.1	3.96185	185,650.00	3.96185	117	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	450	0.8628989	0.8489657		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	405	0.9900012	0.9656811		-8.8	30
Perfluoropentanoic acid (PFPeA)	A	500	443	0.9353824	0.9067352		-11.3	30
Perfluorohexanoic acid (PFHxA)	A	500	436	0.86678	0.8404228		-12.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	438	1.835659	1.72255		-7.3	30
9Cl-PF3ONS (F53B Major)	A	466	482	3.897292	4.025215		3.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	447	1.602632	1.605774		-5.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	352	2.979159	0.1023471		-29.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	504	0.7665044	0.8972762		5.1	30
Perfluorodecanoic acid (PFDA)	A	500	458	0.929213	0.9496842		-8.3	30
Perfluorododecanoic acid (PFDoA)	A	500	435	0.9361562	0.8696535		-13.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	431	3.93233	3.727938		-3.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	520	0.4568315	0.5108367		9.2	30
N-EtFOSAA	A	500	430	0.9836556	0.8555917		-13.9	30
N-MeFOSAA	A	500	457	1.027301	1.04289		-8.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	453	0.8542676	0.868046		-9.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	449	1.009812	1.021105		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	457	1.061084	1.137973		-2.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	495	0.6287667	0.6661969		2.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	476	0.8334166	0.8758551		-4.7	30
Perfluorononanesulfonic acid (PFNS)	A	481	479	0.319818	0.3223431		-0.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	478	0.3462983	0.3157572		-4.4	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	442	0.3044628	0.2916464		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	468	0.9652933	1.058429		2.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	484	0.495495	0.4789839		-3.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	486	0.5879048	0.5703637		-2.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.9984949		-8.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	392	0.9760894	0.9038583		-16.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	444	0.8528971	0.8321599		-11.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	486	0.3237613	0.3176499		-2.9	30
Perfluoroheptanoic acid (PFHpA)	A	500	501	0.9139933	0.918039		0.1	30
Perfluorooctanoic acid (PFOA)	A	500	507	0.8653288	0.8815278		1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	485	0.9382121	1.048587		4.6	30
Perfluorononanoic acid (PFNA)	A	500	478	0.938444	0.9234035		-4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8628989	0.8618408		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.018693		-3.8	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9432757		-7.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.86678	0.8716131		-9.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.907195		1.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2280	3.897292	3.837298		-2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.659407		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	2.979159	0.1219468		-16.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2640	0.7665044	0.927793		9.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2130	0.929213	0.8807296		-15.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2330	0.9361562	0.9308634		-7.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2210	3.93233	3.859621		-0.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2360	0.4568315	0.4644542		-0.8	30
N-EtFOSAA	A	2500	2130	0.9836556	0.8500816		-14.8	30
N-MeFOSAA	A	2500	2420	1.027301	1.106771		-3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.8542676	0.9497799		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2320	1.009812	1.048471		-7.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2340	0.6287667	0.630669		-2.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.18086		2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2180	0.8334166	0.7998474		-13.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3338849		3.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3612544		7.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3133032		-4.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2250	0.9652933	1.021989		-1.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5055786		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2520	0.5879048	0.5947084		0.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2710	1.004025	1.229334		14.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880106		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.8528971	0.8972853		-4.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3237613	0.331833		0.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8814377		-4.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.8653288	0.9226045		5.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9489291		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2410	0.938444	0.9321201		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S065227-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8628989	0.8627174		-8.6	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.009674		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2300	0.9353824	0.9396125		-8.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2290	0.86678	0.8807092		-8.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.980942		5.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2360	3.897292	3.985572		1.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.651563		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2280	2.979159	0.1339799		-8.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9063477		7.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8915286		-13.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2300	0.9361562	0.9185763		-8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.904836		0.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4568315	0.4978434		6.4	30
N-EtFOSAA	A	2500	2330	0.9836556	0.930092		-6.9	30
N-MeFOSAA	A	2500	2490	1.027301	1.137612		-0.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.8542676	0.8827306		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.009812	1.011825		-10.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2540	0.6287667	0.6851027		5.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.239847		7.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2320	0.8334166	0.8529206		-7.2	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.3485505		7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2680	0.3462983	0.3586661		7.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2470	0.3044628	0.325184		-1.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9774449		-5.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2560	0.495495	0.5097064		2.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5927361		0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2510	1.004025	1.139366		5.5	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2020	0.9760894	0.9342668		-13.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2370	0.8528971	0.8885365		-5.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3372505		2.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.928189		0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2520	0.8653288	0.8813973		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2390	0.9382121	1.03376		3.1	30
Perfluorononanoic acid (PFNA)	A	2500	2470	0.938444	0.9576319		-1.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.8628989	0.8686579		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.024446		-3.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9378871		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8576055		-10.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2550	1.835659	2.029106		8.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.164699		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.602632	1.56709		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2430	2.979159	0.1428931		-2.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2620	0.7665044	0.9229413		9.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2040	0.929213	0.8449366		-18.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2430	0.9361562	0.9731098		-2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2240	3.93233	3.910779		0.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2610	0.4568315	0.5133596		9.7	30
N-EtFOSAA	A	2500	2460	0.9836556	0.9846493		-1.4	30
N-MeFOSAA	A	2500	2230	1.027301	1.016687		-10.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2370	0.8542676	0.9031416		-5.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2410	1.009812	1.08576		-3.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6439266		-0.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.173226		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8408944		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2670	0.319818	0.3605046		11.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2670	0.3462983	0.357133		6.7	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2410	0.3044628	0.3177454		-3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.029951		-0.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5056773		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5923859		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.154091		6.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	0.9760894	1.023935		-5.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8700407		-7.1	30
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401819		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9139933	0.9242896		0.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8934024		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.986571		-1.6	30
Perfluorononanoic acid (PFNA)	A	2500	2260	0.938444	0.8753864		-9.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2570	0.9425179	1.011857		2.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2310	1.102869	1.175854		4.2	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9976624	1.078183		3.4	30
Perfluorohexanoic acid (PFHxA)	A	2500	2610	0.9419225	1.032034		4.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2670	1.989388	2.284809		13.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2890	4.109336	4.697106		24.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2400	1.848187	1.962565		1.8	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2540	0.1671191	0.1714838		1.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2480	0.8882675	0.9869106		3.4	30
Perfluorodecanoic acid (PFDA)	A	2500	2470	1.018422	1.090713		-1.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2630	1.020538	1.124969		5.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2360	4.320325	4.516334		6.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.4851688	0.5342313		4.4	30
N-EtFOSAA	A	2500	2480	1.041633	1.051849		-0.7	30
N-MeFOSAA	A	2500	2800	1.161219	1.332719		12.2	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2460	0.9728168	1.046993		-1.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2330	1.116887	1.194674		-6.9	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2810	0.7418148	0.8124729		16.7	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2570	1.197741	1.431409		10.0	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2490	0.9174711	0.9757214		-0.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2910	0.344215	0.3973688		21.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2520	0.3814328	0.3945368		1.0	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2710	0.3389618	0.3771353		8.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2480	1.118146	1.25817		8.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2630	0.5740932	0.6113184		5.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2630	0.6683914	0.7138265		5.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2850	1.148433	1.479325		19.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2360	1.102015	1.20024		0.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2550	0.9600985	1.031645		2.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2650	0.3650421	0.396832		6.1	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2570	1.016118	1.0509		2.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2620	0.9817944	1.026899		4.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2510	1.026673	1.141418		8.2	30
Perfluorononanoic acid (PFNA)	A	2500	2500	1.065202	1.104545		0.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	446	0.9425179	0.8789602		-10.8	30
Perfluorobutanesulfonic acid (PFBS)	A	444	402	1.102869	1.022925		-9.4	30
Perfluoropentanoic acid (PFPeA)	A	500	435	0.9976624	0.9074633		-12.9	30
Perfluorohexanoic acid (PFHxA)	A	500	449	0.9419225	0.8895279		-10.2	30
11Cl-PF3OUdS (F53B Minor)	A	472	504	1.989388	2.149439		6.9	30
9Cl-PF3ONS (F53B Major)	A	466	461	4.109336	3.690343		-1.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	413	1.848187	1.687261		-12.4	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	460	0.1671191	0.1556009		-8.0	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	440	0.8882675	0.8879173		-8.3	30
Perfluorodecanoic acid (PFDA)	A	500	420	1.018422	0.9281777		-16.0	30
Perfluorododecanoic acid (PFDoA)	A	500	479	1.020538	1.024659		-4.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	419	4.320325	3.974917		-5.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	416	0.4851688	0.4488362		-12.5	30
N-EtFOSAA	A	500	506	1.041633	1.070729		1.2	30
N-MeFOSAA	A	500	444	1.161219	1.055627		-11.2	30
Perfluorotetradecanoic acid (PFTA)	A	500	417	0.9728168	0.8937684		-16.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	414	1.116887	1.072322		-17.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	427	1.197741	1.207059		-8.7	30
Perfluorodecanesulfonic acid (PFDS)	A	482	457	0.7418148	0.6594825		-5.2	30
Perfluorooctanesulfonamide (FOSA)	A	500	431	0.9174711	0.8448865		-13.9	30
Perfluorononanesulfonic acid (PFNS)	A	481	474	0.344215	0.3232718		-1.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	457	0.3814328	0.3555244		-8.7	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	446	0.3389618	0.3101889		-10.8	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	412	1.118146	1.04135		-9.8	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	444	0.5740932	0.5126891		-11.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	447	0.6683914	0.6048896		-10.6	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	410	1.148433	1.081922		-13.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	387	1.102015	0.9826578		-17.7	30
Perfluoroundecanoic acid (PFUnA)	A	500	443	0.9600985	0.8955856		-11.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	443	0.3650421	0.3302945		-11.4	30
Perfluoroheptanoic acid (PFHpA)	A	500	472	1.016118	0.9595584		-5.6	30
Perfluorooctanoic acid (PFOA)	A	500	424	0.9817944	0.828537		-15.3	30
Perfluorooctanesulfonic acid (PFOS)	A	464	395	1.026673	0.8973727		-14.9	30
Perfluorononanoic acid (PFNA)	A	500	411	1.065202	0.9036428		-17.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2530	0.9425179	0.9977771		1.2	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2360	1.102869	1.200694		6.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2610	0.9976624	1.089428		4.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2540	0.9419225	1.007325		1.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2570	1.989388	2.193781		8.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2680	4.109336	4.351819		15.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2330	1.848187	1.898803		-1.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2620	0.1671191	0.1769447		4.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2940	0.8882675	1.167213		22.7	30
Perfluorodecanoic acid (PFDA)	A	2500	2450	1.018422	1.080597		-2.2	30
Perfluorododecanoic acid (PFDoA)	A	2500	2570	1.020538	1.098246		2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2440	4.320325	4.685802		10.1	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2560	0.4851688	0.5513349		7.7	30
N-EtFOSAA	A	2500	2540	1.041633	1.077962		1.7	30
N-MeFOSAA	A	2500	2520	1.161219	1.198943		0.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2380	0.9728168	1.015122		-4.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2580	1.116887	1.321682		3.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2480	1.197741	1.381802		6.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2960	0.7418148	0.8545083		22.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2360	0.9174711	0.9252214		-5.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2530	0.344215	0.3454506		5.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2620	0.3814328	0.410242		5.0	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2680	0.3389618	0.3730186		7.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2240	1.118146	1.134301		-1.8	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2600	0.5740932	0.602609		3.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2600	0.6683914	0.7054736		3.9	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2460	1.148433	1.278571		3.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	1.102015	1.129944		-5.3	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2540	0.9600985	1.026172		1.4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2660	0.3650421	0.3976419		6.3	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2580	1.016118	1.052481		3.1	30
Perfluorooctanoic acid (PFOA)	A	2500	2600	0.9817944	1.019889		3.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2340	1.026673	1.065314		1.0	30
Perfluorononanoic acid (PFNA)	A	2500	2580	1.065202	1.135928		3.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2560	0.9425179	1.009928		2.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2360	1.102869	1.200238		6.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2580	0.9976624	1.077524		3.4	30
Perfluorohexanoic acid (PFHxA)	A	2500	2540	0.9419225	1.006907		1.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2670	1.989388	2.27877		13.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2620	4.109336	4.243458		12.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2260	1.848187	1.848178		-4.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2500	0.1671191	0.169153		0.03	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2860	0.8882675	1.136286		19.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2370	1.018422	1.046007		-5.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2680	1.020538	1.147235		7.3	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2410	4.320325	4.610632		8.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2470	0.4851688	0.5302567		3.6	30
N-EtFOSAA	A	2500	3050	1.041633	1.294824		22.1	30
N-MeFOSAA	A	2500	2720	1.161219	1.291607		8.7	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2480	0.9728168	1.058837		-0.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2610	1.116887	1.340955		4.6	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2490	1.197741	1.383167		6.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2810	0.7418148	0.8109223		16.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2460	0.9174711	0.9641574		-1.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2860	0.344215	0.3914161		19.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2400	0.3814328	0.3750717		-4.0	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2670	0.3389618	0.3708676		6.7	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2230	1.118146	1.131498		-2.0	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2590	0.5740932	0.6010995		3.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2570	0.6683914	0.6991464		3.0	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2780	1.148433	1.440807		16.7	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2330	1.102015	1.181506		-1.0	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2550	0.9600985	1.0338		2.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2590	0.3650421	0.3873781		3.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2650	1.016118	1.083714		6.1	30
Perfluorooctanoic acid (PFOA)	A	2500	2580	0.9817944	1.011524		3.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2440	1.026673	1.1092		5.2	30
Perfluorononanoic acid (PFNA)	A	2500	2520	1.065202	1.112442		0.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T 5 B
 Received By MA Date 10/29/11 Time 2035
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? MA Acid _____ Base _____

	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	<u>3</u>	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

[Empty box for comments]

November 12, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

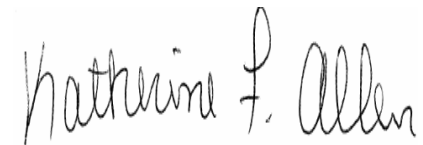
Project Location: 22 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1947

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 11/12/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1947

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 22 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
22MTN Basement 1	21J1947-01	Soil		SM 2540G SOP-466 PFAS	
22MTN Basement 2	21J1947-02	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopycinski
Laboratory Director

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1947

Date Received: 10/29/2021

Field Sample #: 22MTN Basement 1

Sampled: 10/29/2021 11:30

Sample ID: 21J1947-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.087	0.43	0.058	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.43	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
9Cl-PF3ONS (F53B Major)	ND	0.43	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.43	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.43	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.43	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorodecanoic acid (PFDA)	0.090	0.43	0.056	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.43	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.43	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
N-EtFOSAA	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
N-MeFOSAA	ND	0.43	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.43	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.43	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.43	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.43	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.43	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.43	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.43	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.43	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.43	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.43	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.43	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.43	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.43	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.43	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.43	0.062	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorooctanoic acid (PFOA)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorooctanesulfonic acid (PFOS)	0.40	0.43	0.058	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH
Perfluorononanoic acid (PFNA)	ND	0.43	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 19:57	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1947

Date Received: 10/29/2021

Field Sample #: 22MTN Basement 1

Sampled: 10/29/2021 11:30

Sample ID: 21J1947-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:06	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1947

Date Received: 10/29/2021

Field Sample #: 22MTN Basement 2

Sampled: 10/29/2021 12:00

Sample ID: 21J1947-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.38	0.77	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorobutanesulfonic acid (PFBS)	0.12	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoropentanoic acid (PFPeA)	0.29	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.77	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
9Cl-PF3ONS (F53B Major)	ND	0.77	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.77	0.25	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.77	0.37	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.77	0.20	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorodecanoic acid (PFDA)	ND	0.77	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorododecanoic acid (PFDoA)	0.12	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.77	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.77	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
N-EtFOSAA	ND	0.77	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
N-MeFOSAA	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.77	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.77	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.77	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.77	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.77	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.13	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.77	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.77	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.77	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.77	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorooctanoic acid (PFOA)	0.60	0.77	0.22	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorooctanesulfonic acid (PFOS)	0.65	0.77	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH
Perfluorononanoic acid (PFNA)	ND	0.77	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:04	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1947

Date Received: 10/29/2021

Field Sample #: 22MTN Basement 2

Sampled: 10/29/2021 12:00

Sample ID: 21J1947-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	49.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:06	WT

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1947-01 [22MTN Basement 1]	B294465	11/11/21
21J1947-02 [22MTN Basement 2]	B294465	11/11/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1947-01 [22MTN Basement 1]	B294033	5.66	5.00	11/09/21
21J1947-02 [22MTN Basement 2]	B294033	5.91	5.00	11/09/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

Blank (B294033-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	1.89	0.38	µg/kg wet	2.12	89.1	71-135
Perfluorobutanesulfonic acid (PFBS)	1.77	0.38	µg/kg wet	1.87	94.6	72-128
Perfluoropentanoic acid (PFPeA)	1.91	0.38	µg/kg wet	2.12	90.2	69-132
Perfluorohexanoic acid (PFHxA)	1.89	0.38	µg/kg wet	2.12	89.0	70-132
11Cl-PF3OUdS (F53B Minor)	1.89	0.38	µg/kg wet	2.00	94.6	50-150
9Cl-PF3ONS (F53B Major)	1.88	0.38	µg/kg wet	1.97	95.3	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.94	0.38	µg/kg wet	2.00	97.4	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	0.38	µg/kg wet	2.12	83.4	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.87	0.38	µg/kg wet	2.03	92.1	65-137
Perfluorodecanoic acid (PFDA)	1.80	0.38	µg/kg wet	2.12	85.1	69-133
Perfluorododecanoic acid (PFDoA)	1.82	0.38	µg/kg wet	2.12	85.8	69-135
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.90	0.38	µg/kg wet	1.89	101	50-150

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B294033 - SOP 465-PFAAS										
LCS (B294033-BS1)										
					Prepared: 11/09/21 Analyzed: 11/10/21					
Perfluoroheptanesulfonic acid (PFHpS)	1.97	0.38	µg/kg wet	2.03		97.1	70-132			
N-EtFOSAA	2.09	0.38	µg/kg wet	2.12		98.5	61-139			
N-MeFOSAA	2.13	0.38	µg/kg wet	2.12		100	63-144			
Perfluorotetradecanoic acid (PFTA)	1.91	0.38	µg/kg wet	2.12		90.1	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.00	0.38	µg/kg wet	2.12		94.4	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.03	0.38	µg/kg wet	1.98		102	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.90	0.38	µg/kg wet	2.04		93.2	59-134			
Perfluorooctanesulfonamide (FOSA)	1.83	0.38	µg/kg wet	2.12		86.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.08	0.38	µg/kg wet	2.03		102	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.15	0.38	µg/kg wet	2.12		102	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.05	0.38	µg/kg wet	2.12		96.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.81	0.38	µg/kg wet	1.93		93.9	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.17	0.38	µg/kg wet	2.12		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.16	0.38	µg/kg wet	2.01		107	64-140			
Perfluoropetanesulfonic acid (PFPeS)	1.73	0.38	µg/kg wet	1.99		86.7	73-123			
Perfluoroundecanoic acid (PFUnA)	1.87	0.38	µg/kg wet	2.12		88.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.21	0.38	µg/kg wet	2.12		104	50-150			
Perfluoroheptanoic acid (PFHpA)	2.04	0.38	µg/kg wet	2.12		96.5	71-131			
Perfluorooctanoic acid (PFOA)	2.05	0.38	µg/kg wet	2.12		96.9	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.89	0.38	µg/kg wet	1.96		96.5	68-136			
Perfluorononanoic acid (PFNA)	2.09	0.38	µg/kg wet	2.12		98.7	72-129			

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294465 - % Solids

Duplicate (B294465-DUP8)

Source: 21J1947-01

Prepared: 11/11/21 Analyzed: 11/12/21

% Solids	92.7		% Wt		92.2			0.567	5	
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Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman
 EGR Evett G Rivera
 AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN Basement 1 (21J1947-01)			Lab File ID: 21J1947-01.d			Analyzed: 11/10/21 19:57			
M8FOSA	494698.8	4.044517	393,192.00	4.044517	126	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	193950.8	2.636617	160,692.00	2.644867	121	50 - 150	-0.0082	+/-0.50	
M2PFTA	1913818	4.39465	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	226056.1	3.866833	226,739.00	3.866833	100	50 - 150	0.0000	+/-0.50	
MPFBA	817441.4	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	286130	2.945967	230,491.00	2.954083	124	50 - 150	-0.0081	+/-0.50	
M6PFDA	1217472	3.859367	1,018,454.00	3.867333	120	50 - 150	-0.0080	+/-0.50	
M3PFBS	188134.2	2.011067	149,326.00	2.019367	126	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1619684	4.009984	1,365,067.00	4.017967	119	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	131159.9	3.509617	118,861.00	3.509617	110	50 - 150	0.0000	+/-0.50	
M5PFPeA	808491.1	1.824517	668,163.00	1.8328	121	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1114747	2.722683	913,090.00	2.730867	122	50 - 150	-0.0082	+/-0.50	
M3PFHxS	149091.7	3.28425	123,606.00	3.2923	121	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1137277	3.251867	947,771.00	3.25995	120	50 - 150	-0.0081	+/-0.50	
M8PFOA	1159818	3.51815	1,002,525.00	3.526133	116	50 - 150	-0.0080	+/-0.50	
M8PFOS	159951.3	3.708283	132,723.00	3.708283	121	50 - 150	0.0000	+/-0.50	
M9PFNA	1111668	3.709283	902,256.00	3.709283	123	50 - 150	0.0000	+/-0.50	
MPFDoA	1652934	4.153117	1,387,824.00	4.153117	119	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	285982.5	4.01745	302,650.00	4.025434	94	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	315558.8	3.937867	280,463.00	3.945867	113	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN Basement 2 (21J1947-02)			Lab File ID: 21J1947-02.d			Analyzed: 11/10/21 20:04			
M8FOSA	320345.5	4.044517	393,192.00	4.044517	81	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	158096.7	2.636633	160,692.00	2.644867	98	50 - 150	-0.0082	+/-0.50	
M2PFTA	1770418	4.39465	1,595,192.00	4.39465	111	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	203683.9	3.866833	226,739.00	3.866833	90	50 - 150	0.0000	+/-0.50	
MPFBA	698043.6	1.116633	677,435.00	1.116633	103	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	266240.3	2.945967	230,491.00	2.954083	116	50 - 150	-0.0081	+/-0.50	
M6PFDA	1028029	3.859367	1,018,454.00	3.867333	101	50 - 150	-0.0080	+/-0.50	
M3PFBS	164486	2.011067	149,326.00	2.019367	110	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1372327	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	108210.4	3.509617	118,861.00	3.509617	91	50 - 150	0.0000	+/-0.50	
M5PFPeA	696472.2	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	960727.8	2.722683	913,090.00	2.730867	105	50 - 150	-0.0082	+/-0.50	
M3PFHxS	132342.5	3.28425	123,606.00	3.2923	107	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1009797	3.251867	947,771.00	3.25995	107	50 - 150	-0.0081	+/-0.50	
M8PFOA	1051293	3.51815	1,002,525.00	3.526133	105	50 - 150	-0.0080	+/-0.50	
M8PFOS	148381.8	3.708283	132,723.00	3.708283	112	50 - 150	0.0000	+/-0.50	
M9PFNA	1001546	3.709283	902,256.00	3.709283	111	50 - 150	0.0000	+/-0.50	
MPFDoA	1366642	4.153117	1,387,824.00	4.153117	98	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	257794.2	4.01745	302,650.00	4.025434	85	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	282679.9	3.937867	280,463.00	3.945867	101	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294033-BLK1)			Lab File ID: B294033-BLK1.d			Analyzed: 11/10/21 19:14			
M8FOSA	429016.3	4.044517	393,192.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	177817.3	2.636617	160,692.00	2.644867	111	50 - 150	-0.0082	+/-0.50	
M2PFTA	1578890	4.39465	1,595,192.00	4.39465	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205446.4	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	706423.2	1.116633	677,435.00	1.116633	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	265918.4	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1102411	3.867333	1,018,454.00	3.867333	108	50 - 150	0.0000	+/-0.50	
M3PFBS	159121.3	2.019367	149,326.00	2.019367	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1385367	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117891.1	3.509617	118,861.00	3.509617	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	696645.8	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	974444.4	2.730867	913,090.00	2.730867	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	130763.8	3.28425	123,606.00	3.2923	106	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002456	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	991618.7	3.526133	1,002,525.00	3.526133	99	50 - 150	0.0000	+/-0.50	
M8PFOS	149775.8	3.708283	132,723.00	3.708283	113	50 - 150	0.0000	+/-0.50	
M9PFNA	1028584	3.709283	902,256.00	3.709283	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1414039	4.153117	1,387,824.00	4.153117	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	267962	4.01745	302,650.00	4.025434	89	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	271198.5	3.945867	280,463.00	3.945867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294033-BS1)			Lab File ID: B294033-BS1.d			Analyzed: 11/10/21 19:07			
M8FOSA	507811.9	4.044517	393,192.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	201720	2.636633	160,692.00	2.644867	126	50 - 150	-0.0082	+/-0.50	
M2PFTA	1920522	4.394667	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	228061	3.866833	226,739.00	3.866833	101	50 - 150	0.0000	+/-0.50	
MPFBA	819892.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	293902.4	2.954083	230,491.00	2.954083	128	50 - 150	0.0000	+/-0.50	
M6PFDA	1276603	3.867333	1,018,454.00	3.867333	125	50 - 150	0.0000	+/-0.50	
M3PFBS	195916.2	2.019367	149,326.00	2.019367	131	50 - 150	0.0000	+/-0.50	
M7PFUnA	1573698	4.009984	1,365,067.00	4.017967	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	137275.6	3.509617	118,861.00	3.509617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	812180	1.824517	668,163.00	1.8328	122	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1130201	2.730867	913,090.00	2.730867	124	50 - 150	0.0000	+/-0.50	
M3PFHxS	156806.5	3.2923	123,606.00	3.2923	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1173305	3.25995	947,771.00	3.25995	124	50 - 150	0.0000	+/-0.50	
M8PFOA	1213635	3.526133	1,002,525.00	3.526133	121	50 - 150	0.0000	+/-0.50	
M8PFOS	177309.4	3.708283	132,723.00	3.708283	134	50 - 150	0.0000	+/-0.50	
M9PFNA	1134643	3.709283	902,256.00	3.709283	126	50 - 150	0.0000	+/-0.50	
MPFDoA	1728049	4.153117	1,387,824.00	4.153117	125	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300634.3	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	318777.5	3.945867	280,463.00	3.945867	114	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	450	0.862899	0.8489657		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	405	0.9900012	0.9656811		-8.8	30
Perfluoropentanoic acid (PFPeA)	A	500	443	0.9353824	0.9067352		-11.3	30
Perfluorohexanoic acid (PFHxA)	A	500	436	0.86678	0.8404228		-12.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	438	1.835659	1.72255		-7.3	30
9Cl-PF3ONS (F53B Major)	A	466	482	3.897292	4.025215		3.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	447	1.602632	1.605774		-5.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	352	2.979159	0.1023471		-29.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	504	0.7665044	0.8972762		5.1	30
Perfluorodecanoic acid (PFDA)	A	500	458	0.929213	0.9496842		-8.3	30
Perfluorododecanoic acid (PFDoA)	A	500	435	0.9361562	0.8696535		-13.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	431	3.93233	3.727938		-3.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	520	0.4568315	0.5108367		9.2	30
N-EtFOSAA	A	500	430	0.9836556	0.8555917		-13.9	30
N-MeFOSAA	A	500	457	1.027301	1.04289		-8.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	453	0.8542676	0.868046		-9.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	449	1.009812	1.021105		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	457	1.061084	1.137973		-2.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	495	0.6287667	0.6661969		2.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	476	0.8334166	0.8758551		-4.7	30
Perfluorononanesulfonic acid (PFNS)	A	481	479	0.319818	0.3223431		-0.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	478	0.3462983	0.3157572		-4.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	442	0.3044628	0.2916464		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	468	0.9652933	1.058429		2.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	484	0.495495	0.4789839		-3.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	486	0.5879048	0.5703637		-2.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.9984949		-8.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	392	0.9760894	0.9038583		-16.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	444	0.8528971	0.8321599		-11.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	486	0.3237613	0.3176499		-2.9	30
Perfluoroheptanoic acid (PFHpA)	A	500	501	0.9139933	0.918039		0.1	30
Perfluorooctanoic acid (PFOA)	A	500	507	0.8653288	0.8815278		1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	485	0.9382121	1.048587		4.6	30
Perfluorononanoic acid (PFNA)	A	500	478	0.938444	0.9234035		-4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8618408		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.018693		-3.8	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9432757		-7.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.86678	0.8716131		-9.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.907195		1.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2280	3.897292	3.837298		-2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.659407		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	2.979159	24.38936		-16.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2640	0.7665044	0.927793		9.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2130	0.929213	0.8807296		-15.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2330	0.9361562	0.9308634		-7.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2210	3.93233	3.859621		-0.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2360	0.4568315	0.4644542		-0.8	30
N-EtFOSAA	A	2500	2130	0.9836556	0.8500816		-14.8	30
N-MeFOSAA	A	2500	2420	1.027301	1.106771		-3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.8542676	0.9497799		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2320	1.009812	1.048471		-7.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2340	0.6287667	0.630669		-2.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.18086		2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2180	0.8334166	0.7998474		-13.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3338849		3.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3612544		7.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3133032		-4.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2250	0.9652933	1.021989		-1.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5055786		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2520	0.5879048	0.5947084		0.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2710	1.004025	1.229334		14.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880106		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.8528971	0.8972853		-4.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3237613	0.331833		0.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8814377		-4.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.8653288	0.9226045		5.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9489291		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2410	0.938444	0.9321201		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8627174		-8.6	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.009674		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2300	0.9353824	0.9396125		-8.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2290	0.86678	0.8807092		-8.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.980942		5.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2360	3.897292	3.985572		1.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.651563		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2280	2.979159	26.79598		-8.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9063477		7.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8915286		-13.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2300	0.9361562	0.9185763		-8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.904836		0.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4568315	0.4978434		6.4	30
N-EtFOSAA	A	2500	2330	0.9836556	0.930092		-6.9	30
N-MeFOSAA	A	2500	2490	1.027301	1.137612		-0.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.8542676	0.8827306		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.009812	1.011825		-10.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2540	0.6287667	0.6851027		5.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.239847		7.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2320	0.8334166	0.8529206		-7.2	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.3485505		7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2680	0.3462983	0.3586661		7.1	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2470	0.3044628	0.325184		-1.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9774449		-5.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2560	0.495495	0.5097064		2.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5927361		0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2510	1.004025	1.139366		5.5	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2020	0.9760894	0.9342668		-13.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2370	0.8528971	0.8885365		-5.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3372505		2.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.928189		0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2520	0.8653288	0.8813973		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2390	0.9382121	1.03376		3.1	30
Perfluorononanoic acid (PFNA)	A	2500	2470	0.938444	0.9576319		-1.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.862899	0.8686579		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.024446		-3.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9378871		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8576055		-10.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2550	1.835659	2.029106		8.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.164699		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.602632	1.56709		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2430	2.979159	28.57861		-2.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2620	0.7665044	0.9229413		9.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2040	0.929213	0.8449366		-18.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2430	0.9361562	0.9731098		-2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2240	3.93233	3.910779		0.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2610	0.4568315	0.5133596		9.7	30
N-EtFOSAA	A	2500	2460	0.9836556	0.9846493		-1.4	30
N-MeFOSAA	A	2500	2230	1.027301	1.016687		-10.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2370	0.8542676	0.9031416		-5.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2410	1.009812	1.08576		-3.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6439266		-0.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.173226		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8408944		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2670	0.319818	0.3605046		11.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2670	0.3462983	0.357133		6.7	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2410	0.3044628	0.3177454		-3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.029951		-0.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5056773		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5923859		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.154091		6.9	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2220	0.9760894	1.023935		-5.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8700407		-7.1	30
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401819		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9139933	0.9242896		0.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8934024		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.986571		-1.6	30
Perfluorononanoic acid (PFNA)	A	2500	2260	0.938444	0.8753864		-9.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

2151947

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
 Tights & Bond
 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Princeton ~~MA~~ Sampling
 Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Apps/Michael Scherer
 Pace Analytical Quote Name/Number: Jeff Apps/Michael Scherer
 Invoice recipient: Tights & Bond
 Sampled By: M Scherer

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/ORAB	Matrix Code	Conc Code
1	22 MTN BASEMENT 1	10/29/21	1130	GRAB	DY	U
2	22 MTN BASEMENT 2	10/29/21	1200	LC	LC	U

Relinquished by: *[Signature]* Date/Time: 10/29/21 1200
 Received by: *[Signature]* Date/Time: 10/29/21 18:30
 Relinquished by: *[Signature]* Date/Time: 10/29/21 20:35
 Received by: *[Signature]* Date/Time: 10/29/21 20:35
 Relinquished by: *[Signature]* Date/Time: 10/29/21 20:35
 Received by: *[Signature]* Date/Time: 10/29/21 20:35
 Relinquished by: *[Signature]* Date/Time: 10/29/21 20:35
 Received by: *[Signature]* Date/Time: 10/29/21 20:35

Client Comments: *Please report the MATRICES TO THE*

Special Requirements: GW-1

AA RCP Required:
 RCP Certification Form Required:
 CT RCP Required:
 RCP Certification Form Required:
 MA State DW Required:

PWSID #

Project Entity: Government Municipality WRTA Other
 Federal 21 J School Chromatogram
 City Brownfield MBTA AIHA-LAP, LLC

7-Day	10-Day	Field Filtered	PFAS 10-Day (std)	Due Date:	1-Day	3-Day	Field Filtered	2-Day	4-Day	Lab to Filter	PCB ONLY	Format:	PDF	EXCEL	Other:	CLP Like Data Pkg Required:	SOXHLET	NON SOXHLET	Ending Date/Time	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PCB ONLY	PDF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SOXHLET	<input type="checkbox"/>	NON SOXHLET									

ANALYSIS REQUESTED

Preservation Code: *Control Use only*

Total Number Of: *VIALS GLASS PLASTIC BACTERIA ENCORE*

Glassware in the fridge? *Y/N*

Glassware in freezer? *Y/N*

Prepackaged Cooler? *Y/N*

*Pace Analytical is not responsible for missing samples from prepacked coolers

1 Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

2 Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B

Received By MA Date 10/29/11 Time 2035

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp -3.0
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all Client T Analysis T Sampler Name T
 pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F

Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

November 12, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

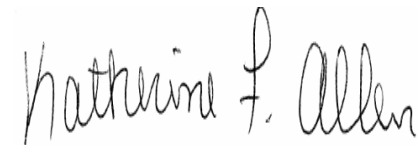
Project Location: Library, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1951

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 11/12/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1951

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Library, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Library 1	21J1951-01	Soil		SM 2540G SOP-466 PFAS	
Library 2	21J1951-02	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive style with a large, sweeping initial "T".

Tod E. Kopycinski
Laboratory Director

Project Location: Library, Princeton, MA

Sample Description:

Work Order: 21J1951

Date Received: 10/29/2021

Field Sample #: Library 1

Sampled: 10/29/2021 10:00

Sample ID: 21J1951-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.51	0.068	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.51	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
9Cl-PF3ONS (F53B Major)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.51	0.25	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorodecanoic acid (PFDA)	ND	0.51	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
N-EtFOSAA	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
N-MeFOSAA	ND	0.51	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.51	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.51	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.51	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.51	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.51	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.51	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.51	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.51	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.51	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorooctanoic acid (PFOA)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorooctanesulfonic acid (PFOS)	0.48	0.51	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH
Perfluorononanoic acid (PFNA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:19	BLH

Project Location: Library, Princeton, MA

Sample Description:

Work Order: 21J1951

Date Received: 10/29/2021

Sampled: 10/29/2021 10:00

Field Sample #: Library 1

Sample ID: 21J1951-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.1		% Wt	1		SM 2540G	11/11/21	11/12/21 9:07	WT

Project Location: Library, Princeton, MA

Sample Description:

Work Order: 21J1951

Date Received: 10/29/2021

Field Sample #: Library 2

Sampled: 10/29/2021 10:20

Sample ID: 21J1951-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.24	0.50	0.067	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoropentanoic acid (PFPeA)	0.14	0.50	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorohexanoic acid (PFHxA)	0.17	0.50	0.094	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorodecanoic acid (PFDA)	0.094	0.50	0.065	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
N-MeFOSAA	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorohexanesulfonic acid (PFHxS)	1.2	0.50	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.095	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.099	0.50	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluoroheptanoic acid (PFHpA)	0.18	0.50	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorooctanoic acid (PFOA)	0.60	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorooctanesulfonic acid (PFOS)	1.3	0.50	0.068	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH
Perfluorononanoic acid (PFNA)	0.22	0.50	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:26	BLH

Project Location: Library, Princeton, MA

Sample Description:

Work Order: 21J1951

Date Received: 10/29/2021

Sampled: 10/29/2021 10:20

Field Sample #: Library 2

Sample ID: 21J1951-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:07	WT

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1951-01 [Library 1]	B294465	11/11/21
21J1951-02 [Library 2]	B294465	11/11/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1951-01 [Library 1]	B294033	5.62	5.00	11/09/21
21J1951-02 [Library 2]	B294033	5.93	5.00	11/09/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

Blank (B294033-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	1.89	0.38	µg/kg wet	2.12	89.1	71-135
Perfluorobutanesulfonic acid (PFBS)	1.77	0.38	µg/kg wet	1.87	94.6	72-128
Perfluoropentanoic acid (PFPeA)	1.91	0.38	µg/kg wet	2.12	90.2	69-132
Perfluorohexanoic acid (PFHxA)	1.89	0.38	µg/kg wet	2.12	89.0	70-132
11Cl-PF3OUdS (F53B Minor)	1.89	0.38	µg/kg wet	2.00	94.6	50-150
9Cl-PF3ONS (F53B Major)	1.88	0.38	µg/kg wet	1.97	95.3	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.94	0.38	µg/kg wet	2.00	97.4	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	0.38	µg/kg wet	2.12	83.4	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.87	0.38	µg/kg wet	2.03	92.1	65-137
Perfluorodecanoic acid (PFDA)	1.80	0.38	µg/kg wet	2.12	85.1	69-133
Perfluorododecanoic acid (PFDoA)	1.82	0.38	µg/kg wet	2.12	85.8	69-135
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.90	0.38	µg/kg wet	1.89	101	50-150

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluoroheptanesulfonic acid (PFHpS)	1.97	0.38	µg/kg wet	2.03		97.1	70-132			
N-EtFOSAA	2.09	0.38	µg/kg wet	2.12		98.5	61-139			
N-MeFOSAA	2.13	0.38	µg/kg wet	2.12		100	63-144			
Perfluorotetradecanoic acid (PFTA)	1.91	0.38	µg/kg wet	2.12		90.1	69-133			
Perfluorotridecanoic acid (PFTTrDA)	2.00	0.38	µg/kg wet	2.12		94.4	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.03	0.38	µg/kg wet	1.98		102	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.90	0.38	µg/kg wet	2.04		93.2	59-134			
Perfluorooctanesulfonamide (FOSA)	1.83	0.38	µg/kg wet	2.12		86.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.08	0.38	µg/kg wet	2.03		102	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.15	0.38	µg/kg wet	2.12		102	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.05	0.38	µg/kg wet	2.12		96.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.81	0.38	µg/kg wet	1.93		93.9	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.17	0.38	µg/kg wet	2.12		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.16	0.38	µg/kg wet	2.01		107	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.73	0.38	µg/kg wet	1.99		86.7	73-123			
Perfluoroundecanoic acid (PFUnA)	1.87	0.38	µg/kg wet	2.12		88.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.21	0.38	µg/kg wet	2.12		104	50-150			
Perfluoroheptanoic acid (PFHpA)	2.04	0.38	µg/kg wet	2.12		96.5	71-131			
Perfluorooctanoic acid (PFOA)	2.05	0.38	µg/kg wet	2.12		96.9	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.89	0.38	µg/kg wet	1.96		96.5	68-136			
Perfluorononanoic acid (PFNA)	2.09	0.38	µg/kg wet	2.12		98.7	72-129			

Matrix Spike (B294033-MS1)

Source: 21J1951-01

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	2.39	0.49	µg/kg dry	2.70	ND	88.7	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.16	0.49	µg/kg dry	2.38	ND	90.5	72-128			
Perfluoropentanoic acid (PFPeA)	2.41	0.49	µg/kg dry	2.70	ND	89.2	69-132			
Perfluorohexanoic acid (PFHxA)	2.33	0.49	µg/kg dry	2.70	ND	86.5	70-132			
11Cl-PF3OUdS (F53B Minor)	2.40	0.49	µg/kg dry	2.54	ND	94.5	50-150			
9Cl-PF3ONS (F53B Major)	2.31	0.49	µg/kg dry	2.51	ND	91.7	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.38	0.49	µg/kg dry	2.54	ND	93.7	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.25	0.49	µg/kg dry	2.70	ND	83.4	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.49	0.49	µg/kg dry	2.59	ND	96.2	65-137			
Perfluorodecanoic acid (PFDA)	2.62	0.49	µg/kg dry	2.70	ND	97.2	69-133			
Perfluorododecanoic acid (PFDoA)	2.35	0.49	µg/kg dry	2.70	ND	87.1	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.31	0.49	µg/kg dry	2.40	ND	96.2	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.53	0.49	µg/kg dry	2.58	ND	98.1	70-132			
N-EtFOSAA	2.68	0.49	µg/kg dry	2.70	ND	99.3	61-139			
N-MeFOSAA	2.77	0.49	µg/kg dry	2.70	ND	103	63-144			
Perfluorotetradecanoic acid (PFTA)	2.19	0.49	µg/kg dry	2.70	ND	81.0	69-133			
Perfluorotridecanoic acid (PFTTrDA)	2.56	0.49	µg/kg dry	2.70	ND	94.9	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.51	0.49	µg/kg dry	2.53	ND	99.5	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.48	0.49	µg/kg dry	2.60	ND	95.3	59-134			
Perfluorooctanesulfonamide (FOSA)	2.41	0.49	µg/kg dry	2.70	ND	89.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.58	0.49	µg/kg dry	2.59	ND	99.6	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.71	0.49	µg/kg dry	2.70	ND	100	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.64	0.49	µg/kg dry	2.70	ND	97.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.22	0.49	µg/kg dry	2.46	ND	90.5	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.70	0.49	µg/kg dry	2.70	ND	100	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.51	0.49	µg/kg dry	2.70	ND	93.2	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

Matrix Spike (B294033-MS1)

Source: 21J1951-01

Prepared: 11/09/21 Analyzed: 11/10/21

6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.53	0.49	µg/kg dry	2.56	ND	98.5	64-140			
Perfluoropetanesulfonic acid (PFPeS)	2.03	0.49	µg/kg dry	2.54	ND	80.1	73-123			
Perfluoroundecanoic acid (PFUnA)	2.62	0.49	µg/kg dry	2.70	ND	97.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.75	0.49	µg/kg dry	2.70	ND	102	50-150			
Perfluoroheptanoic acid (PFHpA)	2.62	0.49	µg/kg dry	2.70	ND	97.0	71-131			
Perfluorooctanoic acid (PFOA)	2.68	0.49	µg/kg dry	2.70	ND	99.3	69-133			
Perfluorooctanesulfonic acid (PFOS)	2.60	0.49	µg/kg dry	2.49	0.477	85.1	68-136			
Perfluorononanoic acid (PFNA)	2.67	0.49	µg/kg dry	2.70	0.0809	96.1	72-129			

Matrix Spike Dup (B294033-MSD1)

Source: 21J1951-01

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	2.58	0.51	µg/kg dry	2.84	ND	90.8	71-135	7.61	30	
Perfluorobutanesulfonic acid (PFBS)	2.40	0.51	µg/kg dry	2.51	ND	95.6	72-128	10.7	30	
Perfluoropentanoic acid (PFPeA)	2.57	0.51	µg/kg dry	2.84	ND	90.2	69-132	6.37	30	
Perfluorohexanoic acid (PFHxA)	2.57	0.51	µg/kg dry	2.84	ND	90.4	70-132	9.70	30	
11Cl-PF3OUdS (F53B Minor)	2.52	0.51	µg/kg dry	2.68	ND	94.2	50-150	4.90	30	
9Cl-PF3ONS (F53B Major)	2.55	0.51	µg/kg dry	2.65	ND	96.4	50-150	10.2	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.51	0.51	µg/kg dry	2.68	ND	93.7	50-150	5.27	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.33	0.51	µg/kg dry	2.84	ND	81.8	50-150	3.34	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	3.12	0.51	µg/kg dry	2.73	ND	114	65-137	22.4	30	
Perfluorodecanoic acid (PFDA)	2.76	0.51	µg/kg dry	2.84	ND	97.0	69-133	5.05	30	
Perfluorododecanoic acid (PFDoA)	2.51	0.51	µg/kg dry	2.84	ND	88.3	69-135	6.61	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.57	0.51	µg/kg dry	2.53	ND	101	50-150	10.6	30	
Perfluoroheptanesulfonic acid (PFHpS)	2.99	0.51	µg/kg dry	2.72	ND	110	70-132	16.5	30	
N-EtFOSAA	3.39	0.51	µg/kg dry	2.84	ND	119	61-139	23.4	30	
N-MeFOSAA	2.88	0.51	µg/kg dry	2.84	ND	101	63-144	3.73	30	
Perfluorotetradecanoic acid (PFTA)	2.63	0.51	µg/kg dry	2.84	ND	92.6	69-133	18.6	30	
Perfluorotridecanoic acid (PFTrDA)	2.93	0.51	µg/kg dry	2.84	ND	103	66-139	13.6	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.73	0.51	µg/kg dry	2.66	ND	103	62-145	8.31	30	
Perfluorodecanesulfonic acid (PFDS)	2.79	0.51	µg/kg dry	2.74	ND	102	59-134	11.8	30	
Perfluorooctanesulfonamide (FOSA)	2.55	0.51	µg/kg dry	2.84	ND	89.8	67-137	5.89	30	
Perfluoronanesulfonic acid (PFNS)	2.46	0.51	µg/kg dry	2.73	ND	90.1	69-125	4.77	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	3.26	0.51	µg/kg dry	2.84	ND	115	50-150	18.6	30	
Perfluoro-1-butanesulfonamide (FBSA)	2.92	0.51	µg/kg dry	2.84	ND	103	50-150	10.2	30	
Perfluorohexanesulfonic acid (PFHxS)	2.48	0.51	µg/kg dry	2.59	ND	95.9	67-130	11.0	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	2.96	0.51	µg/kg dry	2.84	ND	104	50-150	9.02	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	2.81	0.51	µg/kg dry	2.84	ND	98.8	50-150	11.1	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.67	0.51	µg/kg dry	2.70	ND	99.0	64-140	5.71	30	
Perfluoropetanesulfonic acid (PFPeS)	2.41	0.51	µg/kg dry	2.67	ND	90.0	73-123	16.9	30	
Perfluoroundecanoic acid (PFUnA)	2.54	0.51	µg/kg dry	2.84	ND	89.4	64-136	3.08	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.02	0.51	µg/kg dry	2.84	ND	106	50-150	9.07	30	
Perfluoroheptanoic acid (PFHpA)	2.77	0.51	µg/kg dry	2.84	ND	97.5	71-131	5.76	30	
Perfluorooctanoic acid (PFOA)	2.90	0.51	µg/kg dry	2.84	ND	102	69-133	7.84	30	
Perfluorooctanesulfonic acid (PFOS)	2.93	0.51	µg/kg dry	2.63	0.477	93.5	68-136	12.2	30	
Perfluorononanoic acid (PFNA)	2.79	0.51	µg/kg dry	2.84	ND	98.3	72-129	4.36	30	

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294465 - % Solids

Duplicate (B294465-DUP9)

Source: 21J1951-01

Prepared: 11/11/21 Analyzed: 11/12/21

% Solids	80.9		% Wt		78.1			3.48	5	
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Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman
 EGR Evett G Rivera
 AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Library 1 (21J1951-01)			Lab File ID: 21J1951-01.d			Analyzed: 11/10/21 20:19			
M8FOSA	497270.2	4.044517	393,192.00	4.044517	126	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	179085.1	2.628217	160,692.00	2.636633	111	50 - 150	-0.0084	+/-0.50	
M2PFTA	2196192	4.386533	1,595,192.00	4.39465	138	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	224542.3	3.858883	226,739.00	3.866833	99	50 - 150	-0.0080	+/-0.50	
MPFBA	817412.6	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	287617.8	2.945967	230,491.00	2.945967	125	50 - 150	0.0000	+/-0.50	
M6PFDA	1207011	3.859367	1,018,454.00	3.859367	119	50 - 150	0.0000	+/-0.50	
M3PFBS	192756.5	2.011067	149,326.00	2.011067	129	50 - 150	0.0000	+/-0.50	
M7PFUnA	1589604	4.009984	1,365,067.00	4.009984	116	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	119356.8	3.509617	118,861.00	3.509617	100	50 - 150	0.0000	+/-0.50	
M5PFPeA	817081.9	1.824517	668,163.00	1.824517	122	50 - 150	0.0000	+/-0.50	
M5PFHxA	1120793	2.722683	913,090.00	2.722683	123	50 - 150	0.0000	+/-0.50	
M3PFHxS	153240.9	3.28425	123,606.00	3.28425	124	50 - 150	0.0000	+/-0.50	
M4PFHpA	1196395	3.251867	947,771.00	3.251867	126	50 - 150	0.0000	+/-0.50	
M8PFOA	1170076	3.51815	1,002,525.00	3.51815	117	50 - 150	0.0000	+/-0.50	
M8PFOS	173398.1	3.700067	132,723.00	3.708283	131	50 - 150	-0.0082	+/-0.50	
M9PFNA	1059690	3.7011	902,256.00	3.709283	117	50 - 150	-0.0082	+/-0.50	
MPFDoA	1632398	4.144834	1,387,824.00	4.153117	118	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	323590.6	4.01745	302,650.00	4.01745	107	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	330787.9	3.937867	280,463.00	3.937867	118	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Library 2 (21J1951-02)									
			Lab File ID: 21J1951-02.d			Analyzed: 11/10/21 20:26			
M8FOSA	487797.6	4.044517	393,192.00	4.044517	124	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	173780.9	2.6118	160,692.00	2.636633	108	50 - 150	-0.0248	+/-0.50	
M2PFTA	1974277	4.386533	1,595,192.00	4.39465	124	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	240689.9	3.858883	226,739.00	3.866833	106	50 - 150	-0.0080	+/-0.50	
MPFBA	817193.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	271679.8	2.929717	230,491.00	2.945967	118	50 - 150	-0.0162	+/-0.50	
M6PFDA	1194814	3.859367	1,018,454.00	3.859367	117	50 - 150	0.0000	+/-0.50	
M3PFBS	191466.8	2.002783	149,326.00	2.011067	128	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1565560	4.001983	1,365,067.00	4.009984	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	130311.9	3.501317	118,861.00	3.509617	110	50 - 150	-0.0083	+/-0.50	
M5PFPeA	820387.6	1.816233	668,163.00	1.824517	123	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1118863	2.706317	913,090.00	2.722683	123	50 - 150	-0.0164	+/-0.50	
M3PFHxS	146655.5	3.276217	123,606.00	3.28425	119	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1175516	3.243783	947,771.00	3.251867	124	50 - 150	-0.0081	+/-0.50	
M8PFOA	1186454	3.51815	1,002,525.00	3.51815	118	50 - 150	0.0000	+/-0.50	
M8PFOS	169198	3.700067	132,723.00	3.708283	127	50 - 150	-0.0082	+/-0.50	
M9PFNA	1065630	3.7011	902,256.00	3.709283	118	50 - 150	-0.0082	+/-0.50	
MPFDoA	1666613	4.144834	1,387,824.00	4.153117	120	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	316185.9	4.00945	302,650.00	4.01745	104	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	339087.6	3.937867	280,463.00	3.937867	121	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294033-BLK1)			Lab File ID: B294033-BLK1.d			Analyzed: 11/10/21 19:14			
M8FOSA	429016.3	4.044517	393,192.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	177817.3	2.636617	160,692.00	2.644867	111	50 - 150	-0.0082	+/-0.50	
M2PFTA	1578890	4.39465	1,595,192.00	4.39465	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205446.4	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	706423.2	1.116633	677,435.00	1.116633	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	265918.4	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1102411	3.867333	1,018,454.00	3.867333	108	50 - 150	0.0000	+/-0.50	
M3PFBS	159121.3	2.019367	149,326.00	2.019367	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1385367	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117891.1	3.509617	118,861.00	3.509617	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	696645.8	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	974444.4	2.730867	913,090.00	2.730867	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	130763.8	3.28425	123,606.00	3.2923	106	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002456	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	991618.7	3.526133	1,002,525.00	3.526133	99	50 - 150	0.0000	+/-0.50	
M8PFOS	149775.8	3.708283	132,723.00	3.708283	113	50 - 150	0.0000	+/-0.50	
M9PFNA	1028584	3.709283	902,256.00	3.709283	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1414039	4.153117	1,387,824.00	4.153117	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	267962	4.01745	302,650.00	4.025434	89	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	271198.5	3.945867	280,463.00	3.945867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294033-BS1)			Lab File ID: B294033-BS1.d			Analyzed: 11/10/21 19:07			
M8FOSA	507811.9	4.044517	393,192.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	201720	2.636633	160,692.00	2.644867	126	50 - 150	-0.0082	+/-0.50	
M2PFTA	1920522	4.394667	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	228061	3.866833	226,739.00	3.866833	101	50 - 150	0.0000	+/-0.50	
MPFBA	819892.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	293902.4	2.954083	230,491.00	2.954083	128	50 - 150	0.0000	+/-0.50	
M6PFDA	1276603	3.867333	1,018,454.00	3.867333	125	50 - 150	0.0000	+/-0.50	
M3PFBS	195916.2	2.019367	149,326.00	2.019367	131	50 - 150	0.0000	+/-0.50	
M7PFUnA	1573698	4.009984	1,365,067.00	4.017967	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	137275.6	3.509617	118,861.00	3.509617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	812180	1.824517	668,163.00	1.8328	122	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1130201	2.730867	913,090.00	2.730867	124	50 - 150	0.0000	+/-0.50	
M3PFHxS	156806.5	3.2923	123,606.00	3.2923	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1173305	3.25995	947,771.00	3.25995	124	50 - 150	0.0000	+/-0.50	
M8PFOA	1213635	3.526133	1,002,525.00	3.526133	121	50 - 150	0.0000	+/-0.50	
M8PFOS	177309.4	3.708283	132,723.00	3.708283	134	50 - 150	0.0000	+/-0.50	
M9PFNA	1134643	3.709283	902,256.00	3.709283	126	50 - 150	0.0000	+/-0.50	
MPFDoA	1728049	4.153117	1,387,824.00	4.153117	125	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300634.3	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	318777.5	3.945867	280,463.00	3.945867	114	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B294033-MS1)									
			Lab File ID: B294033-MS1.d			Analyzed: 11/10/21 19:21			
M8FOSA	477069	4.044517	393,192.00	4.044517	121	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	187772.3	2.636633	160,692.00	2.644867	117	50 - 150	-0.0082	+/-0.50	
M2PFTA	1803849	4.394667	1,595,192.00	4.39465	113	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	218009.4	3.866833	226,739.00	3.866833	96	50 - 150	0.0000	+/-0.50	
MPFBA	774405.8	1.12495	677,435.00	1.116633	114	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	265024.3	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1126308	3.867333	1,018,454.00	3.867333	111	50 - 150	0.0000	+/-0.50	
M3PFBS	184615.2	2.019367	149,326.00	2.019367	124	50 - 150	0.0000	+/-0.50	
M7PFUnA	1512791	4.009984	1,365,067.00	4.017967	111	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	130285.8	3.509617	118,861.00	3.509617	110	50 - 150	0.0000	+/-0.50	
M5PFPeA	778792.6	1.8328	668,163.00	1.8328	117	50 - 150	0.0000	+/-0.50	
M5PFHxA	1064018	2.730867	913,090.00	2.730867	117	50 - 150	0.0000	+/-0.50	
M3PFHxS	153972.4	3.2923	123,606.00	3.2923	125	50 - 150	0.0000	+/-0.50	
M4PFHpA	1100934	3.25995	947,771.00	3.25995	116	50 - 150	0.0000	+/-0.50	
M8PFOA	1078937	3.526133	1,002,525.00	3.526133	108	50 - 150	0.0000	+/-0.50	
M8PFOS	169952.3	3.708283	132,723.00	3.708283	128	50 - 150	0.0000	+/-0.50	
M9PFNA	1090340	3.709283	902,256.00	3.709283	121	50 - 150	0.0000	+/-0.50	
MPFDoA	1568931	4.153117	1,387,824.00	4.153117	113	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	287678.3	4.01745	302,650.00	4.025434	95	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	282450.8	3.945867	280,463.00	3.945867	101	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B294033-MSD1)									
			Lab File ID: B294033-MSD1.d			Analyzed: 11/10/21 19:28			
M8FOSA	476043.4	4.044517	393,192.00	4.044517	121	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	179308.5	2.636633	160,692.00	2.644867	112	50 - 150	-0.0082	+/-0.50	
M2PFTA	1659713	4.394667	1,595,192.00	4.39465	104	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	206159.8	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	766450.5	1.12495	677,435.00	1.116633	113	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	272027.3	2.954083	230,491.00	2.954083	118	50 - 150	0.0000	+/-0.50	
M6PFDA	1120970	3.867333	1,018,454.00	3.867333	110	50 - 150	0.0000	+/-0.50	
M3PFBS	180132.6	2.019367	149,326.00	2.019367	121	50 - 150	0.0000	+/-0.50	
M7PFUnA	1526935	4.009984	1,365,067.00	4.017967	112	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	124800	3.509617	118,861.00	3.509617	105	50 - 150	0.0000	+/-0.50	
M5PFPeA	764717.6	1.824517	668,163.00	1.8328	114	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1041289	2.730867	913,090.00	2.730867	114	50 - 150	0.0000	+/-0.50	
M3PFHxS	139235.5	3.28425	123,606.00	3.2923	113	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1104220	3.25995	947,771.00	3.25995	117	50 - 150	0.0000	+/-0.50	
M8PFOA	1072358	3.526133	1,002,525.00	3.526133	107	50 - 150	0.0000	+/-0.50	
M8PFOS	166503.7	3.708283	132,723.00	3.708283	125	50 - 150	0.0000	+/-0.50	
M9PFNA	1098333	3.709283	902,256.00	3.709283	122	50 - 150	0.0000	+/-0.50	
MPFDoA	1527225	4.153117	1,387,824.00	4.153117	110	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	264038.1	4.01745	302,650.00	4.025434	87	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	290640.9	3.937867	280,463.00	3.945867	104	50 - 150	-0.0080	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	450	0.862899	0.8489657		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	405	0.9900012	0.9656811		-8.8	30
Perfluoropentanoic acid (PFPeA)	A	500	443	0.9353824	0.9067352		-11.3	30
Perfluorohexanoic acid (PFHxA)	A	500	436	0.86678	0.8404228		-12.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	438	1.835659	1.72255		-7.3	30
9Cl-PF3ONS (F53B Major)	A	466	482	3.897292	4.025215		3.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	447	1.602632	1.605774		-5.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	352	2.979159	0.1023471		-29.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	504	0.7665044	0.8972762		5.1	30
Perfluorodecanoic acid (PFDA)	A	500	458	0.929213	0.9496842		-8.3	30
Perfluorododecanoic acid (PFDoA)	A	500	435	0.9361562	0.8696535		-13.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	431	3.93233	3.727938		-3.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	520	0.4568315	0.5108367		9.2	30
N-EtFOSAA	A	500	430	0.9836556	0.8555917		-13.9	30
N-MeFOSAA	A	500	457	1.027301	1.04289		-8.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	453	0.8542676	0.868046		-9.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	449	1.009812	1.021105		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	457	1.061084	1.137973		-2.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	495	0.6287667	0.6661969		2.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	476	0.8334166	0.8758551		-4.7	30
Perfluorononanesulfonic acid (PFNS)	A	481	479	0.319818	0.3223431		-0.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	478	0.3462983	0.3157572		-4.4	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	442	0.3044628	0.2916464		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	468	0.9652933	1.058429		2.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	484	0.495495	0.4789839		-3.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	486	0.5879048	0.5703637		-2.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.9984949		-8.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	392	0.9760894	0.9038583		-16.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	444	0.8528971	0.8321599		-11.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	486	0.3237613	0.3176499		-2.9	30
Perfluoroheptanoic acid (PFHpA)	A	500	501	0.9139933	0.918039		0.1	30
Perfluorooctanoic acid (PFOA)	A	500	507	0.8653288	0.8815278		1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	485	0.9382121	1.048587		4.6	30
Perfluorononanoic acid (PFNA)	A	500	478	0.938444	0.9234035		-4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8618408		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.018693		-3.8	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9432757		-7.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.86678	0.8716131		-9.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.907195		1.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2280	3.897292	3.837298		-2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.659407		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	2.979159	24.38936		-16.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2640	0.7665044	0.927793		9.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2130	0.929213	0.8807296		-15.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2330	0.9361562	0.9308634		-7.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2210	3.93233	3.859621		-0.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2360	0.4568315	0.4644542		-0.8	30
N-EtFOSAA	A	2500	2130	0.9836556	0.8500816		-14.8	30
N-MeFOSAA	A	2500	2420	1.027301	1.106771		-3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.8542676	0.9497799		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2320	1.009812	1.048471		-7.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2340	0.6287667	0.630669		-2.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.18086		2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2180	0.8334166	0.7998474		-13.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3338849		3.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3612544		7.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3133032		-4.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2250	0.9652933	1.021989		-1.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5055786		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2520	0.5879048	0.5947084		0.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2710	1.004025	1.229334		14.0	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880106		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.8528971	0.8972853		-4.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3237613	0.331833		0.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8814377		-4.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.8653288	0.9226045		5.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9489291		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2410	0.938444	0.9321201		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8627174		-8.6	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.009674		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2300	0.9353824	0.9396125		-8.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2290	0.86678	0.8807092		-8.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.980942		5.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2360	3.897292	3.985572		1.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.651563		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2280	2.979159	26.79598		-8.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9063477		7.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8915286		-13.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2300	0.9361562	0.9185763		-8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.904836		0.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4568315	0.4978434		6.4	30
N-EtFOSAA	A	2500	2330	0.9836556	0.930092		-6.9	30
N-MeFOSAA	A	2500	2490	1.027301	1.137612		-0.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.8542676	0.8827306		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.009812	1.011825		-10.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2540	0.6287667	0.6851027		5.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.239847		7.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2320	0.8334166	0.8529206		-7.2	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.3485505		7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2680	0.3462983	0.3586661		7.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2470	0.3044628	0.325184		-1.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9774449		-5.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2560	0.495495	0.5097064		2.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5927361		0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2510	1.004025	1.139366		5.5	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2020	0.9760894	0.9342668		-13.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2370	0.8528971	0.8885365		-5.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3372505		2.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.928189		0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2520	0.8653288	0.8813973		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2390	0.9382121	1.03376		3.1	30
Perfluorononanoic acid (PFNA)	A	2500	2470	0.938444	0.9576319		-1.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.862899	0.8686579		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.024446		-3.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9378871		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8576055		-10.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2550	1.835659	2.029106		8.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.164699		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.602632	1.56709		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2430	2.979159	28.57861		-2.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2620	0.7665044	0.9229413		9.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2040	0.929213	0.8449366		-18.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2430	0.9361562	0.9731098		-2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2240	3.93233	3.910779		0.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2610	0.4568315	0.5133596		9.7	30
N-EtFOSAA	A	2500	2460	0.9836556	0.9846493		-1.4	30
N-MeFOSAA	A	2500	2230	1.027301	1.016687		-10.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2370	0.8542676	0.9031416		-5.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2410	1.009812	1.08576		-3.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6439266		-0.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.173226		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8408944		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2670	0.319818	0.3605046		11.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2670	0.3462983	0.357133		6.7	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2410	0.3044628	0.3177454		-3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.029951		-0.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5056773		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5923859		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.154091		6.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	0.9760894	1.023935		-5.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8700407		-7.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401819		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9139933	0.9242896		0.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8934024		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.986571		-1.6	30
Perfluorononanoic acid (PFNA)	A	2500	2260	0.938444	0.8753864		-9.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

2171951

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
Tighe & Bond
120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Location: Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps/Michael Scherer
Pace Analytical Quote Name/Number
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

7-Day PFAS 10-Day (std) 10-Day Field Filtered Lab to Filter
1-Day 3-Day 4-Day Field Filtered Lab to Filter
Format: PDF EXCEL
Other: SOXHLET
CLP Like Data Pkg Required: NON SOXHLET
Email To: mjscherer@tighebond.com
Fax To #:

ANALYSIS REQUESTED

Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
LIBRARY-1	10/21/21	1020	GRAB	U	U					
LIBRARY-2	10/21/21	1020	GRAB	U	U					

Client Comments: Please replace the sample container

1 Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

2 Preservation Codes:
1 = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

3 Preservation Code
Carrier Use Only
Total Number Of:
VIALS
GLASS
BACTERIA
ENCORE

Glassware in the fridge? Y/N
Glassware in freezer? Y/N
Prepackaged Cooler? Y/N

*Pace Analytical is not responsible for missing samples from prepacked coolers

MA RCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State Pkg Required

Special Requirements

Project Entity
Government
Federal
City
Municipality
21 J
Brownfield
MWRA School MBTA
WRMA
Chromatogram
ALHA-LAP, LLC

Relinquished by: (signature) [Signature]
Date/Time: 10/29/21 18:20
Received by: (signature) [Signature]
Date/Time: 10/29/21 20:35
Relinquished by: (signature) [Signature]
Date/Time: 10/29/21 20:35
Received by: (signature) [Signature]
Date/Time: 10/29/21 20:35

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B
 Received By MA Date 10/29/11 Time 2035
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

[Empty box for comments]

November 12, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

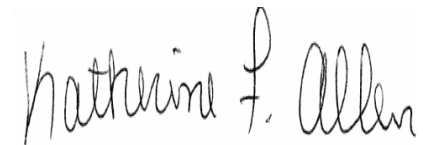
Project Location: 30 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1952

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 11/12/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1952

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 30 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30MTN Soilpile 1	21J1952-01	Soil		SM 2540G SOP-466 PFAS	
30MTN Soilpile 2	21J1952-02	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopycinski
Laboratory Director

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1952

Date Received: 10/29/2021

Field Sample #: 30MTN Soilpile 1

Sampled: 10/29/2021 08:30

Sample ID: 21J1952-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.47	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.47	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.47	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.47	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
9Cl-PF3ONS (F53B Major)	ND	0.47	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.47	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.47	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.47	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorodecanoic acid (PFDA)	ND	0.47	0.060	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.47	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.47	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.47	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
N-EtFOSAA	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
N-MeFOSAA	ND	0.47	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.47	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.47	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.47	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.47	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.47	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.47	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.47	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.47	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.47	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.47	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.47	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.47	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.47	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.47	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.47	0.068	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorooctanoic acid (PFOA)	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorooctanesulfonic acid (PFOS)	1.1	0.47	0.064	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH
Perfluorononanoic acid (PFNA)	ND	0.47	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:33	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1952

Date Received: 10/29/2021

Field Sample #: 30MTN Soilpile 1

Sampled: 10/29/2021 08:30

Sample ID: 21J1952-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:07	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1952

Date Received: 10/29/2021

Field Sample #: 30MTN Soilpile 2

Sampled: 10/29/2021 08:30

Sample ID: 21J1952-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.12	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoropentanoic acid (PFPeA)	0.10	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorodecanoic acid (PFDA)	0.17	0.52	0.068	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.16	0.52	0.084	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.52	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorooctanoic acid (PFOA)	0.46	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorooctanesulfonic acid (PFOS)	5.7	0.52	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH
Perfluorononanoic acid (PFNA)	0.22	0.52	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:40	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1952

Date Received: 10/29/2021

Field Sample #: 30MTN Soilpile 2

Sampled: 10/29/2021 08:30

Sample ID: 21J1952-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:07	WT

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1952-01 [30MTN Soilpile 1]	B294465	11/11/21
21J1952-02 [30MTN Soilpile 2]	B294465	11/11/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1952-01 [30MTN Soilpile 1]	B294033	5.83	5.00	11/09/21
21J1952-02 [30MTN Soilpile 2]	B294033	5.51	5.00	11/09/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B294033 - SOP 465-PFAAS

Blank (B294033-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	1.89	0.38	µg/kg wet	2.12	89.1	71-135
Perfluorobutanesulfonic acid (PFBS)	1.77	0.38	µg/kg wet	1.87	94.6	72-128
Perfluoropentanoic acid (PFPeA)	1.91	0.38	µg/kg wet	2.12	90.2	69-132
Perfluorohexanoic acid (PFHxA)	1.89	0.38	µg/kg wet	2.12	89.0	70-132
11Cl-PF3OUdS (F53B Minor)	1.89	0.38	µg/kg wet	2.00	94.6	50-150
9Cl-PF3ONS (F53B Major)	1.88	0.38	µg/kg wet	1.97	95.3	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.94	0.38	µg/kg wet	2.00	97.4	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	0.38	µg/kg wet	2.12	83.4	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.87	0.38	µg/kg wet	2.03	92.1	65-137
Perfluorodecanoic acid (PFDA)	1.80	0.38	µg/kg wet	2.12	85.1	69-133
Perfluorododecanoic acid (PFDoA)	1.82	0.38	µg/kg wet	2.12	85.8	69-135
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.90	0.38	µg/kg wet	1.89	101	50-150

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluoroheptanesulfonic acid (PFHpS)	1.97	0.38	µg/kg wet	2.03		97.1	70-132			
N-EtFOSAA	2.09	0.38	µg/kg wet	2.12		98.5	61-139			
N-MeFOSAA	2.13	0.38	µg/kg wet	2.12		100	63-144			
Perfluorotetradecanoic acid (PFTA)	1.91	0.38	µg/kg wet	2.12		90.1	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.00	0.38	µg/kg wet	2.12		94.4	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.03	0.38	µg/kg wet	1.98		102	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.90	0.38	µg/kg wet	2.04		93.2	59-134			
Perfluorooctanesulfonamide (FOSA)	1.83	0.38	µg/kg wet	2.12		86.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.08	0.38	µg/kg wet	2.03		102	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.15	0.38	µg/kg wet	2.12		102	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.05	0.38	µg/kg wet	2.12		96.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.81	0.38	µg/kg wet	1.93		93.9	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.17	0.38	µg/kg wet	2.12		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.16	0.38	µg/kg wet	2.01		107	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.73	0.38	µg/kg wet	1.99		86.7	73-123			
Perfluoroundecanoic acid (PFUnA)	1.87	0.38	µg/kg wet	2.12		88.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.21	0.38	µg/kg wet	2.12		104	50-150			
Perfluoroheptanoic acid (PFHpA)	2.04	0.38	µg/kg wet	2.12		96.5	71-131			
Perfluorooctanoic acid (PFOA)	2.05	0.38	µg/kg wet	2.12		96.9	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.89	0.38	µg/kg wet	1.96		96.5	68-136			
Perfluorononanoic acid (PFNA)	2.09	0.38	µg/kg wet	2.12		98.7	72-129			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman
 EGR Evett G Rivera
 AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN Soilpile 1 (21J1952-01)			Lab File ID: 21J1952-01.d			Analyzed: 11/10/21 20:33			
M8FOSA	492220.1	4.036517	393,192.00	4.044517	125	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	169906.7	2.603583	160,692.00	2.636633	106	50 - 150	-0.0330	+/-0.50	
M2PFTA	2102767	4.386533	1,595,192.00	4.39465	132	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	256383	3.858883	226,739.00	3.866833	113	50 - 150	-0.0080	+/-0.50	
MPFBA	846536.5	1.116633	677,435.00	1.116633	125	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	291930.9	2.929717	230,491.00	2.945967	127	50 - 150	-0.0162	+/-0.50	
M6PFDA	1275989	3.851417	1,018,454.00	3.859367	125	50 - 150	-0.0080	+/-0.50	
M3PFBS	191377.4	1.986217	149,326.00	2.011067	128	50 - 150	-0.0249	+/-0.50	
M7PFUnA	1717402	4.001983	1,365,067.00	4.009984	126	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	126432.4	3.501317	118,861.00	3.509617	106	50 - 150	-0.0083	+/-0.50	
M5PFPeA	844220.1	1.799667	668,163.00	1.824517	126	50 - 150	-0.0249	+/-0.50	
M5PFHxA	1122327	2.696967	913,090.00	2.722683	123	50 - 150	-0.0257	+/-0.50	
M3PFHxS	154139.1	3.276217	123,606.00	3.28425	125	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1215328	3.243783	947,771.00	3.251867	128	50 - 150	-0.0081	+/-0.50	
M8PFOA	1183442	3.51015	1,002,525.00	3.51815	118	50 - 150	-0.0080	+/-0.50	
M8PFOS	168427.2	3.700067	132,723.00	3.708283	127	50 - 150	-0.0082	+/-0.50	
M9PFNA	1116291	3.7011	902,256.00	3.709283	124	50 - 150	-0.0082	+/-0.50	
MPFDoA	1769260	4.144834	1,387,824.00	4.153117	127	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	314835	4.00945	302,650.00	4.01745	104	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	365190.2	3.929883	280,463.00	3.937867	130	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN Soilpile 2 (21J1952-02)			Lab File ID: 21J1952-02.d			Analyzed: 11/10/21 20:40			
M8FOSA	473444.4	4.036533	393,192.00	4.044517	120	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	166415.1	2.6118	160,692.00	2.636633	104	50 - 150	-0.0248	+/-0.50	
M2PFTA	1991104	4.386533	1,595,192.00	4.39465	125	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	220874.8	3.858883	226,739.00	3.866833	97	50 - 150	-0.0080	+/-0.50	
MPFBA	793941.9	1.116633	677,435.00	1.116633	117	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	290151.7	2.929717	230,491.00	2.945967	126	50 - 150	-0.0162	+/-0.50	
M6PFDA	1267445	3.851417	1,018,454.00	3.859367	124	50 - 150	-0.0080	+/-0.50	
M3PFBS	184679.5	1.9945	149,326.00	2.011067	124	50 - 150	-0.0166	+/-0.50	
M7PFUnA	1572943	4.001983	1,365,067.00	4.009984	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	118541.3	3.501317	118,861.00	3.509617	100	50 - 150	-0.0083	+/-0.50	
M5PFPeA	790766.9	1.80795	668,163.00	1.824517	118	50 - 150	-0.0166	+/-0.50	
M5PFHxA	1059915	2.696967	913,090.00	2.722683	116	50 - 150	-0.0257	+/-0.50	
M3PFHxS	145755	3.276217	123,606.00	3.28425	118	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1164629	3.243783	947,771.00	3.251867	123	50 - 150	-0.0081	+/-0.50	
M8PFOA	1108975	3.51015	1,002,525.00	3.51815	111	50 - 150	-0.0080	+/-0.50	
M8PFOS	153943	3.700067	132,723.00	3.708283	116	50 - 150	-0.0082	+/-0.50	
M9PFNA	1057718	3.7011	902,256.00	3.709283	117	50 - 150	-0.0082	+/-0.50	
MPFDoA	1643380	4.14485	1,387,824.00	4.153117	118	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	302891.1	4.00945	302,650.00	4.01745	100	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	344621.7	3.929883	280,463.00	3.937867	123	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294033-BLK1)									
			Lab File ID: B294033-BLK1.d			Analyzed: 11/10/21 19:14			
M8FOSA	429016.3	4.044517	393,192.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	177817.3	2.636617	160,692.00	2.644867	111	50 - 150	-0.0082	+/-0.50	
M2PFTA	1578890	4.39465	1,595,192.00	4.39465	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205446.4	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	706423.2	1.116633	677,435.00	1.116633	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	265918.4	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1102411	3.867333	1,018,454.00	3.867333	108	50 - 150	0.0000	+/-0.50	
M3PFBS	159121.3	2.019367	149,326.00	2.019367	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1385367	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117891.1	3.509617	118,861.00	3.509617	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	696645.8	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	974444.4	2.730867	913,090.00	2.730867	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	130763.8	3.28425	123,606.00	3.2923	106	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002456	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	991618.7	3.526133	1,002,525.00	3.526133	99	50 - 150	0.0000	+/-0.50	
M8PFOS	149775.8	3.708283	132,723.00	3.708283	113	50 - 150	0.0000	+/-0.50	
M9PFNA	1028584	3.709283	902,256.00	3.709283	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1414039	4.153117	1,387,824.00	4.153117	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	267962	4.01745	302,650.00	4.025434	89	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	271198.5	3.945867	280,463.00	3.945867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294033-BS1)			Lab File ID: B294033-BS1.d			Analyzed: 11/10/21 19:07			
M8FOSA	507811.9	4.044517	393,192.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	201720	2.636633	160,692.00	2.644867	126	50 - 150	-0.0082	+/-0.50	
M2PFTA	1920522	4.394667	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	228061	3.866833	226,739.00	3.866833	101	50 - 150	0.0000	+/-0.50	
MPFBA	819892.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	293902.4	2.954083	230,491.00	2.954083	128	50 - 150	0.0000	+/-0.50	
M6PFDA	1276603	3.867333	1,018,454.00	3.867333	125	50 - 150	0.0000	+/-0.50	
M3PFBS	195916.2	2.019367	149,326.00	2.019367	131	50 - 150	0.0000	+/-0.50	
M7PFUnA	1573698	4.009984	1,365,067.00	4.017967	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	137275.6	3.509617	118,861.00	3.509617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	812180	1.824517	668,163.00	1.8328	122	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1130201	2.730867	913,090.00	2.730867	124	50 - 150	0.0000	+/-0.50	
M3PFHxS	156806.5	3.2923	123,606.00	3.2923	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1173305	3.25995	947,771.00	3.25995	124	50 - 150	0.0000	+/-0.50	
M8PFOA	1213635	3.526133	1,002,525.00	3.526133	121	50 - 150	0.0000	+/-0.50	
M8PFOS	177309.4	3.708283	132,723.00	3.708283	134	50 - 150	0.0000	+/-0.50	
M9PFNA	1134643	3.709283	902,256.00	3.709283	126	50 - 150	0.0000	+/-0.50	
MPFDoA	1728049	4.153117	1,387,824.00	4.153117	125	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300634.3	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	318777.5	3.945867	280,463.00	3.945867	114	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	450	0.862899	0.8489657		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	405	0.9900012	0.9656811		-8.8	30
Perfluoropentanoic acid (PFPeA)	A	500	443	0.9353824	0.9067352		-11.3	30
Perfluorohexanoic acid (PFHxA)	A	500	436	0.86678	0.8404228		-12.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	438	1.835659	1.72255		-7.3	30
9Cl-PF3ONS (F53B Major)	A	466	482	3.897292	4.025215		3.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	447	1.602632	1.605774		-5.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	352	2.979159	0.1023471		-29.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	504	0.7665044	0.8972762		5.1	30
Perfluorodecanoic acid (PFDA)	A	500	458	0.929213	0.9496842		-8.3	30
Perfluorododecanoic acid (PFDoA)	A	500	435	0.9361562	0.8696535		-13.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	431	3.93233	3.727938		-3.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	520	0.4568315	0.5108367		9.2	30
N-EtFOSAA	A	500	430	0.9836556	0.8555917		-13.9	30
N-MeFOSAA	A	500	457	1.027301	1.04289		-8.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	453	0.8542676	0.868046		-9.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	449	1.009812	1.021105		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	457	1.061084	1.137973		-2.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	495	0.6287667	0.6661969		2.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	476	0.8334166	0.8758551		-4.7	30
Perfluorononanesulfonic acid (PFNS)	A	481	479	0.319818	0.3223431		-0.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	478	0.3462983	0.3157572		-4.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	442	0.3044628	0.2916464		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	468	0.9652933	1.058429		2.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	484	0.495495	0.4789839		-3.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	486	0.5879048	0.5703637		-2.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.9984949		-8.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	392	0.9760894	0.9038583		-16.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	444	0.8528971	0.8321599		-11.1	30
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	A	500	486	0.3237613	0.3176499		-2.9	30
Perfluoroheptanoic acid (PFHpA)	A	500	501	0.9139933	0.918039		0.1	30
Perfluorooctanoic acid (PFOA)	A	500	507	0.8653288	0.8815278		1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	485	0.9382121	1.048587		4.6	30
Perfluorononanoic acid (PFNA)	A	500	478	0.938444	0.9234035		-4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8618408		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.018693		-3.8	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9432757		-7.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.86678	0.8716131		-9.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.907195		1.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2280	3.897292	3.837298		-2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.659407		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	2.979159	24.38936		-16.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2640	0.7665044	0.927793		9.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2130	0.929213	0.8807296		-15.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2330	0.9361562	0.9308634		-7.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2210	3.93233	3.859621		-0.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2360	0.4568315	0.4644542		-0.8	30
N-EtFOSAA	A	2500	2130	0.9836556	0.8500816		-14.8	30
N-MeFOSAA	A	2500	2420	1.027301	1.106771		-3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.8542676	0.9497799		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2320	1.009812	1.048471		-7.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2340	0.6287667	0.630669		-2.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.18086		2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2180	0.8334166	0.7998474		-13.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3338849		3.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3612544		7.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3133032		-4.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2250	0.9652933	1.021989		-1.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5055786		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2520	0.5879048	0.5947084		0.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2710	1.004025	1.229334		14.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880106		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.8528971	0.8972853		-4.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3237613	0.331833		0.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8814377		-4.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.8653288	0.9226045		5.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9489291		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2410	0.938444	0.9321201		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8627174		-8.6	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.009674		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2300	0.9353824	0.9396125		-8.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2290	0.86678	0.8807092		-8.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.980942		5.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2360	3.897292	3.985572		1.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.651563		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2280	2.979159	26.79598		-8.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9063477		7.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8915286		-13.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2300	0.9361562	0.9185763		-8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.904836		0.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4568315	0.4978434		6.4	30
N-EtFOSAA	A	2500	2330	0.9836556	0.930092		-6.9	30
N-MeFOSAA	A	2500	2490	1.027301	1.137612		-0.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.8542676	0.8827306		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.009812	1.011825		-10.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2540	0.6287667	0.6851027		5.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.239847		7.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2320	0.8334166	0.8529206		-7.2	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.3485505		7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2680	0.3462983	0.3586661		7.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2470	0.3044628	0.325184		-1.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9774449		-5.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2560	0.495495	0.5097064		2.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5927361		0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2510	1.004025	1.139366		5.5	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2020	0.9760894	0.9342668		-13.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2370	0.8528971	0.8885365		-5.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3372505		2.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.928189		0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2520	0.8653288	0.8813973		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2390	0.9382121	1.03376		3.1	30
Perfluorononanoic acid (PFNA)	A	2500	2470	0.938444	0.9576319		-1.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.862899	0.8686579		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.024446		-3.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9378871		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8576055		-10.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2550	1.835659	2.029106		8.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.164699		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.602632	1.56709		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2430	2.979159	28.57861		-2.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2620	0.7665044	0.9229413		9.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2040	0.929213	0.8449366		-18.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2430	0.9361562	0.9731098		-2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2240	3.93233	3.910779		0.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2610	0.4568315	0.5133596		9.7	30
N-EtFOSAA	A	2500	2460	0.9836556	0.9846493		-1.4	30
N-MeFOSAA	A	2500	2230	1.027301	1.016687		-10.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2370	0.8542676	0.9031416		-5.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2410	1.009812	1.08576		-3.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6439266		-0.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.173226		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8408944		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2670	0.319818	0.3605046		11.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2670	0.3462983	0.357133		6.7	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2410	0.3044628	0.3177454		-3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.029951		-0.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5056773		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5923859		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.154091		6.9	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2220	0.9760894	1.023935		-5.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8700407		-7.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401819		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9139933	0.9242896		0.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8934024		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.986571		-1.6	30
Perfluorononanoic acid (PFNA)	A	2500	2260	0.938444	0.8753864		-9.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
 Tighe & Bond
 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Project Location: Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Arps/Michael Scherer
 Pace Analytical Quote Name/Number
 Invoice Recipient:
 Sampled By: M. Scherer

CHAIN OF CUSTODY RECORD
 1800 Elm Street SE
 Minneapolis, MN 55414

21J 1952

ANALYSIS REQUESTED

7-Day PFAS 10-Day (std) 10-Day Due Date:
 1-Day 3-Day 3-Day 4-Day 4-Day
 Format: PDF EXCEL
 Other: SOXHLET
 CLP Like Data Pkg Required:
 Email To: mjscherer@tighebond.com
 Fax To #:

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	30 MTN Soil (P, L, E, Z)	10/29/21	0830	SOIL	S	U	1				
2	30 KTN Soil (P, L, E, Z)	10/29/21	0830	SOIL	S	U	1				

Client Comments: Please report the LA component list

Relinquished by: *[Signature]* Date/Time: 10/29/21 12:00
 Received by: *[Signature]* Date/Time: 10/29/21 18:20
 Relinquished by: *[Signature]* Date/Time: 10/29/21 20:35
 Received by: *[Signature]* Date/Time: 10/29/21 20:35
 Relinquished by: *[Signature]* Date/Time: 10/29/21 20:35
 Received by: *[Signature]* Date/Time:
 Relinquished by: *[Signature]* Date/Time:
 Received by: *[Signature]* Date/Time:

Special Requirements: MA MCP Required GW-1
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State Pkg Required
 PWSD #
 Project Entity: Government Municipality WRTA
 Federal 21 J School Chromatogram
 City Brownfield MBTA AHA-LAP, LLC

Comments:
 Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Preservation Code	Carrier Use Only	Total Number Of:
VIALS		
GLASS		
PLASTIC		
BACTERIA		
ENCORE		
Glassware in the fridge? Y/N		
Glassware in freezer? Y/N		
Prepackaged Cooler? Y/N		
*Pace Analytical is not responsible for missing samples from prepacked coolers		
1 Matrix Codes: GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)		
2 Preservation Codes: 1 = Iced H = HCL M = Methanol N = Nitric Acid S = Sulfuric Acid B = Sodium Bisulfate X = Sodium Hydroxide T = Sodium Thiosulfate O = Other (please define)		

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T 13
 Received By MA Date 10/29/11 Time 2035
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

November 12, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

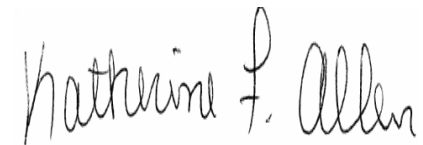
Project Location: Mountain Rd., Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1953

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 11/12/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1953

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Mountain Rd., Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Mountain Rd Runoff	21J1953-01	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopycinski
Laboratory Director

Project Location: Mountain Rd., Princeton, MA

Sample Description:

Work Order: 21J1953

Date Received: 10/29/2021

Field Sample #: Mountain Rd Runoff

Sampled: 10/29/2021 09:40

Sample ID: 21J1953-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.74	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.74	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoropentanoic acid (PFPeA)	0.15	0.74	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorohexanoic acid (PFHxA)	0.17	0.74	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.74	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
9Cl-PF3ONS (F53B Major)	ND	0.74	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.74	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.74	0.36	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.74	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorodecanoic acid (PFDA)	0.69	0.74	0.096	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorododecanoic acid (PFDoA)	0.87	0.74	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.74	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoroheptanesulfonic acid (PFHpS)	0.41	0.74	0.22	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
N-EtFOSAA	ND	0.74	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
N-MeFOSAA	0.22	0.74	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorotetradecanoic acid (PFTA)	0.19	0.74	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorotridecanoic acid (PFTTrDA)	0.17	0.74	0.17	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.74	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorodecanesulfonic acid (PFDS)	1.4	0.74	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorooctanesulfonamide (FOSA)	0.96	0.74	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorononanesulfonic acid (PFNS)	0.97	0.74	0.20	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	2.0	0.74	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.74	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorohexanesulfonic acid (PFHxS)	3.4	0.74	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.74	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.74	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.25	0.74	0.17	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.12	0.74	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoroundecanoic acid (PFUnA)	0.77	0.74	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.74	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.74	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorooctanoic acid (PFOA)	0.92	0.74	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorooctanesulfonic acid (PFOS)	76	0.74	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH
Perfluorononanoic acid (PFNA)	0.18	0.74	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:47	BLH

Project Location: Mountain Rd., Princeton, MA

Sample Description:

Work Order: 21J1953

Date Received: 10/29/2021

Field Sample #: Mountain Rd Runoff

Sampled: 10/29/2021 09:40

Sample ID: 21J1953-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	52.6		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	WT

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1953-01 [Mountain Rd Runoff]	B294465	11/11/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1953-01 [Mountain Rd Runoff]	B294033	5.76	5.00	11/09/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

Blank (B294033-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	1.89	0.38	µg/kg wet	2.12		89.1	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.77	0.38	µg/kg wet	1.87		94.6	72-128			
Perfluoropentanoic acid (PFPeA)	1.91	0.38	µg/kg wet	2.12		90.2	69-132			
Perfluorohexanoic acid (PFHxA)	1.89	0.38	µg/kg wet	2.12		89.0	70-132			
11Cl-PF3OUdS (F53B Minor)	1.89	0.38	µg/kg wet	2.00		94.6	50-150			
9Cl-PF3ONS (F53B Major)	1.88	0.38	µg/kg wet	1.97		95.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.94	0.38	µg/kg wet	2.00		97.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	0.38	µg/kg wet	2.12		83.4	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.87	0.38	µg/kg wet	2.03		92.1	65-137			
Perfluorodecanoic acid (PFDA)	1.80	0.38	µg/kg wet	2.12		85.1	69-133			
Perfluorododecanoic acid (PFDoA)	1.82	0.38	µg/kg wet	2.12		85.8	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.90	0.38	µg/kg wet	1.89		101	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluoroheptanesulfonic acid (PFHpS)	1.97	0.38	µg/kg wet	2.03		97.1	70-132			
N-EtFOSAA	2.09	0.38	µg/kg wet	2.12		98.5	61-139			
N-MeFOSAA	2.13	0.38	µg/kg wet	2.12		100	63-144			
Perfluorotetradecanoic acid (PFTA)	1.91	0.38	µg/kg wet	2.12		90.1	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.00	0.38	µg/kg wet	2.12		94.4	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.03	0.38	µg/kg wet	1.98		102	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.90	0.38	µg/kg wet	2.04		93.2	59-134			
Perfluorooctanesulfonamide (FOSA)	1.83	0.38	µg/kg wet	2.12		86.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.08	0.38	µg/kg wet	2.03		102	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.15	0.38	µg/kg wet	2.12		102	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.05	0.38	µg/kg wet	2.12		96.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.81	0.38	µg/kg wet	1.93		93.9	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.17	0.38	µg/kg wet	2.12		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.16	0.38	µg/kg wet	2.01		107	64-140			
Perfluoropetanesulfonic acid (PFPeS)	1.73	0.38	µg/kg wet	1.99		86.7	73-123			
Perfluoroundecanoic acid (PFUnA)	1.87	0.38	µg/kg wet	2.12		88.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.21	0.38	µg/kg wet	2.12		104	50-150			
Perfluoroheptanoic acid (PFHpA)	2.04	0.38	µg/kg wet	2.12		96.5	71-131			
Perfluorooctanoic acid (PFOA)	2.05	0.38	µg/kg wet	2.12		96.9	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.89	0.38	µg/kg wet	1.96		96.5	68-136			
Perfluorononanoic acid (PFNA)	2.09	0.38	µg/kg wet	2.12		98.7	72-129			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman
 EGR Evett G Rivera
 AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Mountain Rd Runoff (21J1953-01)			Lab File ID: 21J1953-01.d			Analyzed: 11/10/21 20:47			
M8FOSA	439118.3	4.036517	393,192.00	4.044517	112	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	161904.2	2.603583	160,692.00	2.636633	101	50 - 150	-0.0330	+/-0.50	
M2PFTA	1699504	4.386533	1,595,192.00	4.39465	107	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	215825	3.858883	226,739.00	3.866833	95	50 - 150	-0.0080	+/-0.50	
MPFBA	757022.1	1.116633	677,435.00	1.116633	112	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	253620	2.929717	230,491.00	2.945967	110	50 - 150	-0.0162	+/-0.50	
M6PFDA	1174735	3.851417	1,018,454.00	3.859367	115	50 - 150	-0.0080	+/-0.50	
M3PFBS	173083.3	1.9945	149,326.00	2.011067	116	50 - 150	-0.0166	+/-0.50	
M7PFUnA	1495988	4.001983	1,365,067.00	4.009984	110	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	112251.3	3.501317	118,861.00	3.509617	94	50 - 150	-0.0083	+/-0.50	
M5PFPeA	747448.2	1.80795	668,163.00	1.824517	112	50 - 150	-0.0166	+/-0.50	
M5PFHxA	1009646	2.696967	913,090.00	2.722683	111	50 - 150	-0.0257	+/-0.50	
M3PFHxS	136719.6	3.276217	123,606.00	3.28425	111	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1080962	3.243783	947,771.00	3.251867	114	50 - 150	-0.0081	+/-0.50	
M8PFOA	1110267	3.51015	1,002,525.00	3.51815	111	50 - 150	-0.0080	+/-0.50	
M8PFOS	146751.4	3.700067	132,723.00	3.708283	111	50 - 150	-0.0082	+/-0.50	
M9PFNA	984631.9	3.7011	902,256.00	3.709283	109	50 - 150	-0.0082	+/-0.50	
MPFDoA	1459539	4.144834	1,387,824.00	4.153117	105	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	276837.2	4.00945	302,650.00	4.01745	91	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	285379.9	3.929883	280,463.00	3.937867	102	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294033-BLK1)			Lab File ID: B294033-BLK1.d			Analyzed: 11/10/21 19:14			
M8FOSA	429016.3	4.044517	393,192.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	177817.3	2.636617	160,692.00	2.644867	111	50 - 150	-0.0082	+/-0.50	
M2PFTA	1578890	4.39465	1,595,192.00	4.39465	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205446.4	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	706423.2	1.116633	677,435.00	1.116633	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	265918.4	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1102411	3.867333	1,018,454.00	3.867333	108	50 - 150	0.0000	+/-0.50	
M3PFBS	159121.3	2.019367	149,326.00	2.019367	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1385367	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117891.1	3.509617	118,861.00	3.509617	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	696645.8	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	974444.4	2.730867	913,090.00	2.730867	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	130763.8	3.28425	123,606.00	3.2923	106	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002456	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	991618.7	3.526133	1,002,525.00	3.526133	99	50 - 150	0.0000	+/-0.50	
M8PFOS	149775.8	3.708283	132,723.00	3.708283	113	50 - 150	0.0000	+/-0.50	
M9PFNA	1028584	3.709283	902,256.00	3.709283	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1414039	4.153117	1,387,824.00	4.153117	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	267962	4.01745	302,650.00	4.025434	89	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	271198.5	3.945867	280,463.00	3.945867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294033-BS1)			Lab File ID: B294033-BS1.d			Analyzed: 11/10/21 19:07			
M8FOSA	507811.9	4.044517	393,192.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	201720	2.636633	160,692.00	2.644867	126	50 - 150	-0.0082	+/-0.50	
M2PFTA	1920522	4.394667	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	228061	3.866833	226,739.00	3.866833	101	50 - 150	0.0000	+/-0.50	
MPFBA	819892.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	293902.4	2.954083	230,491.00	2.954083	128	50 - 150	0.0000	+/-0.50	
M6PFDA	1276603	3.867333	1,018,454.00	3.867333	125	50 - 150	0.0000	+/-0.50	
M3PFBS	195916.2	2.019367	149,326.00	2.019367	131	50 - 150	0.0000	+/-0.50	
M7PFUnA	1573698	4.009984	1,365,067.00	4.017967	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	137275.6	3.509617	118,861.00	3.509617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	812180	1.824517	668,163.00	1.8328	122	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1130201	2.730867	913,090.00	2.730867	124	50 - 150	0.0000	+/-0.50	
M3PFHxS	156806.5	3.2923	123,606.00	3.2923	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1173305	3.25995	947,771.00	3.25995	124	50 - 150	0.0000	+/-0.50	
M8PFOA	1213635	3.526133	1,002,525.00	3.526133	121	50 - 150	0.0000	+/-0.50	
M8PFOS	177309.4	3.708283	132,723.00	3.708283	134	50 - 150	0.0000	+/-0.50	
M9PFNA	1134643	3.709283	902,256.00	3.709283	126	50 - 150	0.0000	+/-0.50	
MPFDoA	1728049	4.153117	1,387,824.00	4.153117	125	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300634.3	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	318777.5	3.945867	280,463.00	3.945867	114	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	450	0.862899	0.8489657		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	405	0.9900012	0.9656811		-8.8	30
Perfluoropentanoic acid (PFPeA)	A	500	443	0.9353824	0.9067352		-11.3	30
Perfluorohexanoic acid (PFHxA)	A	500	436	0.86678	0.8404228		-12.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	438	1.835659	1.72255		-7.3	30
9Cl-PF3ONS (F53B Major)	A	466	482	3.897292	4.025215		3.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	447	1.602632	1.605774		-5.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	352	2.979159	0.1023471		-29.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	504	0.7665044	0.8972762		5.1	30
Perfluorodecanoic acid (PFDA)	A	500	458	0.929213	0.9496842		-8.3	30
Perfluorododecanoic acid (PFDoA)	A	500	435	0.9361562	0.8696535		-13.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	431	3.93233	3.727938		-3.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	520	0.4568315	0.5108367		9.2	30
N-EtFOSAA	A	500	430	0.9836556	0.8555917		-13.9	30
N-MeFOSAA	A	500	457	1.027301	1.04289		-8.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	453	0.8542676	0.868046		-9.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	449	1.009812	1.021105		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	457	1.061084	1.137973		-2.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	495	0.6287667	0.6661969		2.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	476	0.8334166	0.8758551		-4.7	30
Perfluorononanesulfonic acid (PFNS)	A	481	479	0.319818	0.3223431		-0.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	478	0.3462983	0.3157572		-4.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	442	0.3044628	0.2916464		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	468	0.9652933	1.058429		2.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	484	0.495495	0.4789839		-3.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	486	0.5879048	0.5703637		-2.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.9984949		-8.6	30
Perfluoropetanesulfonic acid (PFPeS)	A	470	392	0.9760894	0.9038583		-16.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	444	0.8528971	0.8321599		-11.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	486	0.3237613	0.3176499		-2.9	30
Perfluoroheptanoic acid (PFHpA)	A	500	501	0.9139933	0.918039		0.1	30
Perfluorooctanoic acid (PFOA)	A	500	507	0.8653288	0.8815278		1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	485	0.9382121	1.048587		4.6	30
Perfluorononanoic acid (PFNA)	A	500	478	0.938444	0.9234035		-4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8618408		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.018693		-3.8	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9432757		-7.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.86678	0.8716131		-9.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.907195		1.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2280	3.897292	3.837298		-2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.659407		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	2.979159	24.38936		-16.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2640	0.7665044	0.927793		9.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2130	0.929213	0.8807296		-15.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2330	0.9361562	0.9308634		-7.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2210	3.93233	3.859621		-0.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2360	0.4568315	0.4644542		-0.8	30
N-EtFOSAA	A	2500	2130	0.9836556	0.8500816		-14.8	30
N-MeFOSAA	A	2500	2420	1.027301	1.106771		-3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.8542676	0.9497799		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2320	1.009812	1.048471		-7.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2340	0.6287667	0.630669		-2.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.18086		2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2180	0.8334166	0.7998474		-13.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3338849		3.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3612544		7.9	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3133032		-4.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2250	0.9652933	1.021989		-1.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5055786		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2520	0.5879048	0.5947084		0.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2710	1.004025	1.229334		14.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880106		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.8528971	0.8972853		-4.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3237613	0.331833		0.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8814377		-4.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.8653288	0.9226045		5.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9489291		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2410	0.938444	0.9321201		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.862899	0.8627174		-8.6	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.009674		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2300	0.9353824	0.9396125		-8.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2290	0.86678	0.8807092		-8.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.980942		5.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2360	3.897292	3.985572		1.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.651563		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2280	2.979159	26.79598		-8.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9063477		7.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8915286		-13.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2300	0.9361562	0.9185763		-8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.904836		0.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4568315	0.4978434		6.4	30
N-EtFOSAA	A	2500	2330	0.9836556	0.930092		-6.9	30
N-MeFOSAA	A	2500	2490	1.027301	1.137612		-0.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.8542676	0.8827306		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.009812	1.011825		-10.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2540	0.6287667	0.6851027		5.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.239847		7.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2320	0.8334166	0.8529206		-7.2	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.3485505		7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2680	0.3462983	0.3586661		7.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2470	0.3044628	0.325184		-1.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9774449		-5.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2560	0.495495	0.5097064		2.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5927361		0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2510	1.004025	1.139366		5.5	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2020	0.9760894	0.9342668		-13.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2370	0.8528971	0.8885365		-5.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3372505		2.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.928189		0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2520	0.8653288	0.8813973		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2390	0.9382121	1.03376		3.1	30
Perfluorononanoic acid (PFNA)	A	2500	2470	0.938444	0.9576319		-1.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.862899	0.8686579		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.024446		-3.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9378871		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8576055		-10.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2550	1.835659	2.029106		8.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.164699		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.602632	1.56709		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2430	2.979159	28.57861		-2.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2620	0.7665044	0.9229413		9.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2040	0.929213	0.8449366		-18.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2430	0.9361562	0.9731098		-2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2240	3.93233	3.910779		0.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2610	0.4568315	0.5133596		9.7	30
N-EtFOSAA	A	2500	2460	0.9836556	0.9846493		-1.4	30
N-MeFOSAA	A	2500	2230	1.027301	1.016687		-10.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2370	0.8542676	0.9031416		-5.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2410	1.009812	1.08576		-3.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6439266		-0.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.173226		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8408944		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2670	0.319818	0.3605046		11.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2670	0.3462983	0.357133		6.7	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2410	0.3044628	0.3177454		-3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.029951		-0.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5056773		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5923859		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.154091		6.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	0.9760894	1.023935		-5.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8700407		-7.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401819		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9139933	0.9242896		0.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8934024		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.986571		-1.6	30
Perfluorononanoic acid (PFNA)	A	2500	2260	0.938444	0.8753864		-9.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

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Project Number: P-0534017
Project Manager: Jeff Arps/Michael Scherer
Pace Analytical Quote Name/Number: Tighe & Bond
Sampled By: M Scherer

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Minneapolis, MN 55414
Chain of Custody Record

7-Day PFAS 10-Day (std) 10-Day

Due Date:
1-Day 3-Day
2-Day 4-Day
Format: PDF EXCEL
Other: SOXHLET
CLP Like Data Pkg Required:
Email To: mischerer@tighebond.com
Fax To #:

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	CONP/GRAB	Matrix Code	Concentration		Preservation Codes	Analysis Requested
						VIALS	GLASS		
	MOUNTAIN ROAD EROFF	10/29/21	09:40	GRAB	SW		U		
Client Comments: <i>Added to laboratory reagent compound list</i>									

Preservation Code
Container Use Only
Total Number Of:

VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

1 Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SDL = Solid
O = Other (please define)

2 Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Special Requirements
MA MCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State by Required
PWSID #

Project Entity
Government Municipality WRTA
Federal Z1 J School
City Brownfield MBTA
Other Chromatogram
 ALPHA-LAP, LLC

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B
 Received By MA Date 10/29/11 Time 2035
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	
HCL-		500 mL Amb.		500 mL Plastic	
Meoh-		250 mL Amb.		250 mL Plastic	
Bisulfate-		Flashpoint		Col./Bacteria	
DI-		Other Glass		Other Plastic	
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	
HCL-		500 mL Amb.		500 mL Plastic	
Meoh-		250 mL Amb.		250 mL Plastic	
Bisulfate-		Col./Bacteria		Flashpoint	
DI-		Other Plastic		Other Glass	
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

[Empty box for comments]

November 16, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

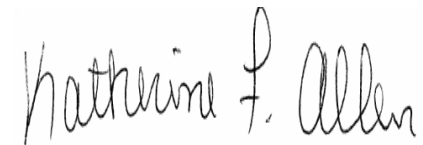
Project Location: 30 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 21J1956

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 11/16/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1956

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 30 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30MTN S-2 (6-12)	21J1956-01	Soil		SM 2540G SOP-466 PFAS	
30MTN S-3 (6-12)	21J1956-02	Soil		SM 2540G SOP-466 PFAS	
30MTN S-3 (12-24)	21J1956-03	Soil		SM 2540G SOP-466 PFAS	
30MTN S-4 (6-12)	21J1956-04	Soil		SM 2540G SOP-466 PFAS	
30MTN S-5 (6-12)	21J1956-05	Soil		SM 2540G SOP-466 PFAS	
30MTN S-5 (12-24)	21J1956-06	Soil		SM 2540G SOP-466 PFAS	
30MTN S-7 (0-12)	21J1956-07	Soil		SM 2540G SOP-466 PFAS	
30MTN S-8 (0-12)	21J1956-08	Soil		SM 2540G SOP-466 PFAS	
30MTN S-9 (0-12)	21J1956-09	Soil		SM 2540G SOP-466 PFAS	
30MTN S-10 (0-12)	21J1956-10	Soil		SM 2540G SOP-466 PFAS	
30MTN S-11 (0-12)	21J1956-11	Soil		SM 2540G SOP-466 PFAS	
30MTN S-11 (24-36)	21J1956-12	Soil		SM 2540G SOP-466 PFAS	
30MTN S-12 (0-12)	21J1956-13	Soil		SM 2540G SOP-466 PFAS	
30MTN S-12 (12-24)	21J1956-14	Soil		SM 2540G SOP-466 PFAS	
30MTN S-13 (0-12)	21J1956-15	Soil		SM 2540G SOP-466 PFAS	
30MTN S-13 (12-24)	21J1956-16	Soil		SM 2540G SOP-466 PFAS	
30MTN S-14 (0-12)	21J1956-17	Soil		SM 2540G SOP-466 PFAS	
30MTN S-14 (12-24)	21J1956-18	Soil		SM 2540G SOP-466 PFAS	
30MTN S-15 (0-12)	21J1956-19	Soil		SM 2540G SOP-466 PFAS	
30MTN S-15 (12-24)	21J1956-20	Soil		SM 2540G SOP-466 PFAS	

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 11/16/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1956

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 30 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30MTN S-16 (0-12)	21J1956-21	Soil		SM 2540G	
				SOP-466 PFAS	
Rinsate	21J1956-22	Water		SOP-454 PFAS	
Trip Blank	21J1956-23	Water		SOP-454 PFAS	
Field Blank	21J1956-24	Water		SOP-454 PFAS	
Equipment Blank	21J1956-25	Water		SOP-454 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-454 PFAS

Qualifications:

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

8:2 Fluorotelomersulfonic acid (8:2FTS A)
S065193-CCV5

SOP-466 PFAS

Qualifications:

Reported result is estimated. Value reported over verified calibration range.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
B294034-MS1, B294034-MSD1

Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Perfluorononanesulfonic acid (PFNS)
B294575-BS1

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Perfluoroheptanesulfonic acid (PFHpS), Perfluorononanesulfonic acid (PFNS)
B294034-MS1, B294034-MSD1

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
B294034-MS1, B294034-MSD1

Sample prepared and extracted at a dilution.

Analyte & Samples(s) Qualified:

21J1956-01RE1[30MTN S-2 (6-12)], 21J1956-04RE1[30MTN S-4 (6-12)], 21J1956-10RE1[30MTN S-10 (0-12)]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-2 (6-12)

Sampled: 10/28/2021 08:00

Sample ID: 21J1956-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.30	0.48	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorobutanesulfonic acid (PFBS)	0.092	0.48	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoropentanoic acid (PFPeA)	0.30	0.48	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorohexanoic acid (PFHxA)	0.63	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorodecanoic acid (PFDA)	ND	0.48	0.062	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoroheptanesulfonic acid (PFHpS)	1.1	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
N-EtFOSAA	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
N-MeFOSAA	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorooctanesulfonamide (FOSA)	0.14	0.48	0.093	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorononanesulfonic acid (PFNS)	1.1	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	1.4	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorohexanesulfonic acid (PFHxS)	4.8	0.48	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.13	0.48	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluoroheptanoic acid (PFHpA)	0.15	0.48	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorooctanoic acid (PFOA)	0.72	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH
Perfluorooctanesulfonic acid (PFOS)	130	5.4	0.74	µg/kg dry	1		SOP-466 PFAS	11/13/21	11/15/21 19:27	BLH
Perfluorononanoic acid (PFNA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:24	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-2 (6-12)

Sampled: 10/28/2021 08:00

Sample ID: 21J1956-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.1		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-3 (6-12)

Sampled: 10/28/2021 08:30

Sample ID: 21J1956-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.25	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoropentanoic acid (PFPeA)	0.27	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorohexanoic acid (PFHxA)	1.2	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorodecanoic acid (PFDA)	ND	0.52	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoroheptanesulfonic acid (PFHpS)	0.71	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	0.54	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoro-1-butanefulfonamide (FBSA)	0.19	0.52	0.17	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorohexanesulfonic acid (PFHxS)	5.5	0.52	0.084	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.13	0.52	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluoroheptanoic acid (PFHpA)	0.52	0.52	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorooctanoic acid (PFOA)	1.3	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorooctanesulfonic acid (PFOS)	9.2	0.52	0.071	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH
Perfluorononanoic acid (PFNA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:31	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-3 (6-12)

Sampled: 10/28/2021 08:30

Sample ID: 21J1956-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.7		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-3 (12-24)

Sampled: 10/28/2021 08:30

Sample ID: 21J1956-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.37	0.53	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorobutanesulfonic acid (PFBS)	0.16	0.53	0.081	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoropentanoic acid (PFPeA)	0.57	0.53	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorohexanoic acid (PFHxA)	1.6	0.53	0.099	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
9Cl-PF3ONS (F53B Major)	ND	0.53	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.53	0.26	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorodecanoic acid (PFDA)	ND	0.53	0.068	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.53	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.53	0.087	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoroheptanesulfonic acid (PFHpS)	2.0	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
N-EtFOSAA	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
N-MeFOSAA	ND	0.53	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.53	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	0.98	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoro-1-butanesulfonamide (FBSA)	0.60	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorohexanesulfonic acid (PFHxS)	9.5	0.53	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.53	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.20	0.53	0.078	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.53	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.53	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluoroheptanoic acid (PFHpA)	0.56	0.53	0.077	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorooctanoic acid (PFOA)	2.1	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorooctanesulfonic acid (PFOS)	24	0.53	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH
Perfluorononanoic acid (PFNA)	0.11	0.53	0.087	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:38	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-3 (12-24)

Sampled: 10/28/2021 08:30

Sample ID: 21J1956-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-4 (6-12)

Sampled: 10/28/2021 09:00

Sample ID: 21J1956-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.22	0.60	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorobutanesulfonic acid (PFBS)	0.13	0.60	0.092	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoropentanoic acid (PFPeA)	0.22	0.60	0.092	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorohexanoic acid (PFHxA)	0.60	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.60	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
9Cl-PF3ONS (F53B Major)	ND	0.60	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.60	0.19	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.60	0.29	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.60	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorodecanoic acid (PFDA)	ND	0.60	0.077	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.60	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.60	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoroheptanesulfonic acid (PFHpS)	0.76	0.60	0.18	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
N-EtFOSAA	ND	0.60	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
N-MeFOSAA	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.60	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.60	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.60	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorononanesulfonic acid (PFNS)	0.38	0.60	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	0.99	0.60	0.18	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.60	0.19	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorohexanesulfonic acid (PFHxS)	6.7	0.60	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.60	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.13	0.60	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.60	0.093	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluoroheptanoic acid (PFHpA)	0.21	0.60	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorooctanoic acid (PFOA)	0.68	0.60	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH
Perfluorooctanesulfonic acid (PFOS)	72	6.7	0.90	µg/kg dry	1		SOP-466 PFAS	11/13/21	11/15/21 19:34	BLH
Perfluorononanoic acid (PFNA)	0.13	0.60	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:45	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-4 (6-12)

Sampled: 10/28/2021 09:00

Sample ID: 21J1956-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	65.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-5 (6-12)

Sampled: 10/28/2021 09:30

Sample ID: 21J1956-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.25	0.50	0.066	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.50	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoropentanoic acid (PFPeA)	0.20	0.50	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorohexanoic acid (PFHxA)	0.52	0.50	0.093	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorodecanoic acid (PFDA)	ND	0.50	0.064	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoroheptanesulfonic acid (PFHpS)	0.26	0.50	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
N-MeFOSAA	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorohexanesulfonic acid (PFHxS)	1.0	0.50	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.094	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.50	0.073	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluoroheptanoic acid (PFHpA)	0.28	0.50	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorooctanoic acid (PFOA)	0.85	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorooctanesulfonic acid (PFOS)	11	0.50	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH
Perfluorononanoic acid (PFNA)	0.33	0.50	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 15:52	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-5 (6-12)

Sampled: 10/28/2021 09:30

Sample ID: 21J1956-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:09	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-5 (12-24)

Sampled: 10/28/2021 09:30

Sample ID: 21J1956-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.53	0.071	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorobutanesulfonic acid (PFBS)	0.79	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorohexanoic acid (PFHxA)	0.11	0.53	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
9Cl-PF3ONS (F53B Major)	ND	0.53	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.53	0.26	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorodecanoic acid (PFDA)	ND	0.53	0.069	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.53	0.088	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
N-EtFOSAA	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
N-MeFOSAA	ND	0.53	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.53	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorohexanesulfonic acid (PFHxS)	1.8	0.53	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.53	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.58	0.53	0.078	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.53	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.53	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluoroheptanoic acid (PFHpA)	0.085	0.53	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorooctanoic acid (PFOA)	0.35	0.53	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorooctanesulfonic acid (PFOS)	2.0	0.53	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH
Perfluorononanoic acid (PFNA)	ND	0.53	0.088	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:00	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-5 (12-24)

Sampled: 10/28/2021 09:30

Sample ID: 21J1956-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	71.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:09	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-7 (0-12)

Sampled: 10/28/2021 10:00

Sample ID: 21J1956-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.33	0.49	0.065	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.49	0.075	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoropentanoic acid (PFPeA)	0.21	0.49	0.075	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorohexanoic acid (PFHxA)	0.32	0.49	0.091	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
9Cl-PF3ONS (F53B Major)	ND	0.49	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.49	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.49	0.24	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.49	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorodecanoic acid (PFDA)	ND	0.49	0.063	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.49	0.075	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.49	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
N-EtFOSAA	ND	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
N-MeFOSAA	ND	0.49	0.089	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.49	0.094	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.49	0.090	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.49	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.49	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.49	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorohexanesulfonic acid (PFHxS)	1.2	0.49	0.078	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.49	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.49	0.090	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.49	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.49	0.089	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.49	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluoroheptanoic acid (PFHpA)	0.28	0.49	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorooctanoic acid (PFOA)	0.92	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorooctanesulfonic acid (PFOS)	2.8	0.49	0.066	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH
Perfluorononanoic acid (PFNA)	0.14	0.49	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:07	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-7 (0-12)

Sampled: 10/28/2021 10:00

Sample ID: 21J1956-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	80.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:09	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-8 (0-12)

Sampled: 10/28/2021 10:30

Sample ID: 21J1956-08

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.44	0.058	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.44	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.44	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.44	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
9Cl-PF3ONS (F53B Major)	ND	0.44	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.44	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.44	0.21	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.44	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorodecanoic acid (PFDA)	ND	0.44	0.056	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.44	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.44	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.44	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
N-EtFOSAA	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
N-MeFOSAA	ND	0.44	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.44	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.44	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.44	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.44	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.44	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	0.14	0.44	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.44	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.80	0.44	0.070	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.44	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.44	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.44	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.44	0.064	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.44	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.44	0.068	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.44	0.063	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorooctanoic acid (PFOA)	0.14	0.44	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorooctanesulfonic acid (PFOS)	6.1	0.44	0.059	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH
Perfluorononanoic acid (PFNA)	ND	0.44	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:14	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-8 (0-12)

Sampled: 10/28/2021 10:30

Sample ID: 21J1956-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:09	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-9 (0-12)

Sampled: 10/28/2021 11:00

Sample ID: 21J1956-09

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.18	0.52	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorobutanesulfonic acid (PFBS)	0.18	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoropentanoic acid (PFPeA)	0.17	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorohexanoic acid (PFHxA)	0.92	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorodecanoic acid (PFDA)	ND	0.52	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoroheptanesulfonic acid (PFHpS)	0.82	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorononanesulfonic acid (PFNS)	0.14	0.52	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	0.90	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoro-1-butanesulfonamide (FBSA)	0.20	0.52	0.17	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorohexanesulfonic acid (PFHxS)	11	0.52	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.24	0.52	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluoroheptanoic acid (PFHpA)	0.40	0.52	0.075	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorooctanoic acid (PFOA)	0.93	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorooctanesulfonic acid (PFOS)	26	0.52	0.070	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH
Perfluorononanoic acid (PFNA)	0.095	0.52	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:21	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-9 (0-12)

Sampled: 10/28/2021 11:00

Sample ID: 21J1956-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.5		% Wt	1		SM 2540G	11/11/21	11/12/21 9:10	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-10 (0-12)

Sampled: 10/28/2021 11:30

Sample ID: 21J1956-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.46	0.56	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorobutanesulfonic acid (PFBS)	0.12	0.56	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoropentanoic acid (PFPeA)	0.39	0.56	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorohexanoic acid (PFHxA)	0.94	0.56	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.56	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
9Cl-PF3ONS (F53B Major)	ND	0.56	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.56	0.18	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.56	0.27	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.56	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorodecanoic acid (PFDA)	ND	0.56	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.56	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.56	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoroheptanesulfonic acid (PFHpS)	1.9	0.56	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
N-EtFOSAA	ND	0.56	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
N-MeFOSAA	ND	0.56	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.56	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.56	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.56	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.56	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorooctanesulfonamide (FOSA)	0.20	0.56	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorononanesulfonic acid (PFNS)	1.3	0.56	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	2.0	0.56	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoro-1-butanefulfonamide (FBSA)	0.31	0.56	0.18	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorohexanesulfonic acid (PFHxS)	7.7	0.56	0.089	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.56	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.56	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.56	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.17	0.56	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.56	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.56	0.087	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluoroheptanoic acid (PFHpA)	0.26	0.56	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorooctanoic acid (PFOA)	1.1	0.56	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH
Perfluorooctanesulfonic acid (PFOS)	110	6.3	0.85	µg/kg dry	1		SOP-466 PFAS	11/13/21	11/15/21 19:41	BLH
Perfluorononanoic acid (PFNA)	0.098	0.56	0.092	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:30	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-10 (0-12)

Sampled: 10/28/2021 11:30

Sample ID: 21J1956-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.7		% Wt	1		SM 2540G	11/11/21	11/12/21 9:10	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-11 (0-12)

Sampled: 10/28/2021 12:00

Sample ID: 21J1956-11

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.20	0.51	0.068	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoropentanoic acid (PFPeA)	0.093	0.51	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.51	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
9Cl-PF3ONS (F53B Major)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.51	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorodecanoic acid (PFDA)	ND	0.51	0.066	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
N-EtFOSAA	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
N-MeFOSAA	ND	0.51	0.093	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.51	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.51	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.51	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.51	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.51	0.075	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.51	0.093	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.51	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluoroheptanoic acid (PFHpA)	0.099	0.51	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorooctanoic acid (PFOA)	0.39	0.51	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorooctanesulfonic acid (PFOS)	1.1	0.51	0.070	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH
Perfluorononanoic acid (PFNA)	0.22	0.51	0.084	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:45	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-11 (0-12)

Sampled: 10/28/2021 12:00

Sample ID: 21J1956-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:10	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-11 (24-36)

Sampled: 10/28/2021 12:00

Sample ID: 21J1956-12

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.41	0.055	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.41	0.063	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.41	0.063	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.41	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.41	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
9Cl-PF3ONS (F53B Major)	ND	0.41	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.41	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.41	0.20	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.41	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorodecanoic acid (PFDA)	ND	0.41	0.053	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.41	0.063	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.41	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.41	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
N-EtFOSAA	ND	0.41	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
N-MeFOSAA	ND	0.41	0.074	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.41	0.078	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.41	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.41	0.075	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.41	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.41	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.41	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.41	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.41	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.41	0.065	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.41	0.077	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.41	0.075	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.14	0.41	0.094	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.41	0.060	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.41	0.074	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.41	0.064	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.41	0.059	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorooctanoic acid (PFOA)	ND	0.41	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.41	0.055	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH
Perfluorononanoic acid (PFNA)	ND	0.41	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:52	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-11 (24-36)

Sampled: 10/28/2021 12:00

Sample ID: 21J1956-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:10	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-12 (0-12)

Sampled: 10/28/2021 12:30

Sample ID: 21J1956-13

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.52	0.069	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorodecanoic acid (PFDA)	0.66	0.52	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorododecanoic acid (PFDoA)	0.22	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.52	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoroundecanoic acid (PFUnA)	0.43	0.52	0.095	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluoroheptanoic acid (PFHpA)	0.084	0.52	0.075	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorooctanoic acid (PFOA)	0.37	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorooctanesulfonic acid (PFOS)	6.9	0.52	0.071	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH
Perfluorononanoic acid (PFNA)	0.32	0.52	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 16:59	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-12 (0-12)

Sampled: 10/28/2021 12:30

Sample ID: 21J1956-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	72.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:11	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-12 (12-24)

Sampled: 10/28/2021 12:30

Sample ID: 21J1956-14

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.11	0.54	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
9Cl-PF3ONS (F53B Major)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.54	0.26	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorodecanoic acid (PFDA)	0.11	0.54	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.54	0.089	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
N-EtFOSAA	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
N-MeFOSAA	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.54	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.54	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.54	0.087	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.54	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.54	0.084	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluoroheptanoic acid (PFHpA)	0.11	0.54	0.078	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorooctanoic acid (PFOA)	0.69	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorooctanesulfonic acid (PFOS)	2.3	0.54	0.074	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH
Perfluorononanoic acid (PFNA)	0.32	0.54	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:06	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-12 (12-24)

Sampled: 10/28/2021 12:30

Sample ID: 21J1956-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.6		% Wt	1		SM 2540G	11/11/21	11/12/21 9:11	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-13 (0-12)

Sampled: 10/28/2021 13:00

Sample ID: 21J1956-15

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.17	0.55	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoropentanoic acid (PFPeA)	0.10	0.55	0.084	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorohexanoic acid (PFHxA)	0.13	0.55	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
9Cl-PF3ONS (F53B Major)	ND	0.55	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.55	0.18	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.55	0.26	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.55	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorodecanoic acid (PFDA)	0.17	0.55	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.55	0.090	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.55	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
N-EtFOSAA	ND	0.55	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
N-MeFOSAA	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.55	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.55	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.55	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.55	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.55	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.55	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.33	0.55	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.55	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.55	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoroundecanoic acid (PFUnA)	0.12	0.55	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.55	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluoroheptanoic acid (PFHpA)	0.11	0.55	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorooctanoic acid (PFOA)	0.48	0.55	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorooctanesulfonic acid (PFOS)	2.4	0.55	0.074	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH
Perfluorononanoic acid (PFNA)	0.32	0.55	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:13	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-13 (0-12)

Sampled: 10/28/2021 13:00

Sample ID: 21J1956-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	69.1		% Wt	1		SM 2540G	11/11/21	11/12/21 9:11	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-13 (12-24)

Sampled: 10/28/2021 13:00

Sample ID: 21J1956-16

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.078	0.52	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorobutanesulfonic acid (PFBS)	0.10	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoropentanoic acid (PFPeA)	0.092	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorohexanoic acid (PFHxA)	0.25	0.52	0.097	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorodecanoic acid (PFDA)	ND	0.52	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.96	0.52	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.092	0.52	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluoroheptanoic acid (PFHpA)	0.14	0.52	0.075	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorooctanoic acid (PFOA)	0.70	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorooctanesulfonic acid (PFOS)	2.7	0.52	0.071	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH
Perfluorononanoic acid (PFNA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:21	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-13 (12-24)

Sampled: 10/28/2021 13:00

Sample ID: 21J1956-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.3		% Wt	1		SM 2540G	11/11/21	11/12/21 9:11	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-14 (0-12)

Sampled: 10/28/2021 13:30

Sample ID: 21J1956-17

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.40	0.51	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoropentanoic acid (PFPeA)	0.48	0.51	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorohexanoic acid (PFHxA)	0.59	0.51	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
9Cl-PF3ONS (F53B Major)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.51	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorodecanoic acid (PFDA)	0.27	0.51	0.066	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorododecanoic acid (PFDoA)	0.13	0.51	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.51	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
N-EtFOSAA	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
N-MeFOSAA	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.51	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.51	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.51	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.51	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.51	0.076	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoroundecanoic acid (PFUnA)	0.12	0.51	0.094	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.51	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluoroheptanoic acid (PFHpA)	0.11	0.51	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorooctanoic acid (PFOA)	0.46	0.51	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorooctanesulfonic acid (PFOS)	0.80	0.51	0.070	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH
Perfluorononanoic acid (PFNA)	0.22	0.51	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:28	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-14 (0-12)

Sampled: 10/28/2021 13:30

Sample ID: 21J1956-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:11	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-14 (12-24)

Sampled: 10/28/2021 13:30

Sample ID: 21J1956-18

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.11	0.50	0.067	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorobutanesulfonic acid (PFBS)	0.10	0.50	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoropentanoic acid (PFPeA)	0.16	0.50	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorohexanoic acid (PFHxA)	0.79	0.50	0.094	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorodecanoic acid (PFDA)	0.090	0.50	0.065	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
N-MeFOSAA	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.096	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.50	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.50	0.074	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.078	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluoroheptanoic acid (PFHpA)	0.18	0.50	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorooctanoic acid (PFOA)	0.58	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorooctanesulfonic acid (PFOS)	1.6	0.50	0.068	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH
Perfluorononanoic acid (PFNA)	0.27	0.50	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:35	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-14 (12-24)

Sampled: 10/28/2021 13:30

Sample ID: 21J1956-18

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.6		% Wt	1		SM 2540G	11/11/21	11/12/21 9:12	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-15 (0-12)

Sampled: 10/28/2021 14:00

Sample ID: 21J1956-19

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.30	0.51	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorobutanesulfonic acid (PFBS)	0.11	0.51	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoropentanoic acid (PFPeA)	0.69	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorohexanoic acid (PFHxA)	0.51	0.51	0.096	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
9Cl-PF3ONS (F53B Major)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.51	0.25	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorodecanoic acid (PFDA)	0.16	0.51	0.066	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.51	0.085	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
N-EtFOSAA	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
N-MeFOSAA	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.51	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.51	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoro-1-butanefulfonamide (FBSA)	0.18	0.51	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.51	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.51	0.097	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.51	0.075	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.51	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluoroheptanoic acid (PFHpA)	0.10	0.51	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorooctanoic acid (PFOA)	0.63	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorooctanesulfonic acid (PFOS)	2.1	0.51	0.070	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH
Perfluorononanoic acid (PFNA)	0.23	0.51	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:42	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-15 (0-12)

Sampled: 10/28/2021 14:00

Sample ID: 21J1956-19

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.5		% Wt	1		SM 2540G	11/11/21	11/12/21 9:12	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-15 (12-24)

Sampled: 10/28/2021 14:00

Sample ID: 21J1956-20

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.11	0.44	0.058	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.44	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoropentanoic acid (PFPeA)	0.28	0.44	0.067	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorohexanoic acid (PFHxA)	0.45	0.44	0.082	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
9Cl-PF3ONS (F53B Major)	ND	0.44	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.44	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.44	0.21	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.44	0.11	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorodecanoic acid (PFDA)	ND	0.44	0.056	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.44	0.067	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.44	0.072	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.44	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
N-EtFOSAA	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
N-MeFOSAA	ND	0.44	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.44	0.084	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.44	0.098	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.44	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.44	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.44	0.086	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.44	0.13	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.44	0.14	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.44	0.070	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.44	0.083	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.44	0.081	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.44	0.10	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.44	0.064	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.44	0.080	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.44	0.068	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluoroheptanoic acid (PFHpA)	0.091	0.44	0.063	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorooctanoic acid (PFOA)	0.55	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorooctanesulfonic acid (PFOS)	1.1	0.44	0.059	µg/kg dry	1		SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH
Perfluorononanoic acid (PFNA)	0.14	0.44	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/4/21	11/11/21 17:49	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-15 (12-24)

Sampled: 10/28/2021 14:00

Sample ID: 21J1956-20

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.1		% Wt	1		SM 2540G	11/11/21	11/12/21 9:12	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-16 (0-12)

Sampled: 10/28/2021 14:30

Sample ID: 21J1956-21

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.14	0.60	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.60	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoropentanoic acid (PFPeA)	0.11	0.60	0.092	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorohexanoic acid (PFHxA)	0.15	0.60	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.60	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
9Cl-PF3ONS (F53B Major)	ND	0.60	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.60	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.60	0.29	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.60	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorodecanoic acid (PFDA)	ND	0.60	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.60	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.60	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.60	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
N-EtFOSAA	ND	0.60	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
N-MeFOSAA	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.60	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.60	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.60	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.60	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.60	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.60	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.17	0.60	0.096	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.60	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.60	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.60	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.60	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluoroheptanoic acid (PFHpA)	0.17	0.60	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorooctanoic acid (PFOA)	0.76	0.60	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorooctanesulfonic acid (PFOS)	0.90	0.60	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH
Perfluorononanoic acid (PFNA)	0.13	0.60	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/10/21 20:55	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: 30MTN S-16 (0-12)

Sampled: 10/28/2021 14:30

Sample ID: 21J1956-21

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	66.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:12	WT

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: Rinsate

Sampled: 10/28/2021 08:00

Sample ID: 21J1956-22

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.8	0.69	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.8	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.8	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
9Cl-PF3ONS (F53B Major)	ND	1.8	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorodecanoic acid (PFDA)	ND	1.8	0.45	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.21	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	0.87	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
N-EtFOSAA	ND	1.8	0.58	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
N-MeFOSAA	ND	1.8	0.70	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.8	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.8	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.8	0.15	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	0.29	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.8	0.18	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.31	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	0.24	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.25	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorooctanoic acid (PFOA)	ND	1.8	0.63	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH
Perfluorononanoic acid (PFNA)	ND	1.8	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:22	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: Trip Blank

Sampled: 10/28/2021 00:00

Sample ID: 21J1956-23

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.69	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.45	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.21	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.87	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
N-EtFOSAA	ND	1.9	0.58	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
N-MeFOSAA	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	1.9	0.18	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.31	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.24	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.63	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:29	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: Field Blank

Sampled: 10/28/2021 08:00

Sample ID: 21J1956-24

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.60	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.57	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.46	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.88	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
N-EtFOSAA	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
N-MeFOSAA	ND	1.9	0.71	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	0.18	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.24	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.64	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:36	BLH

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1956

Date Received: 10/29/2021

Field Sample #: Equipment Blank

Sampled: 10/28/2021 10:00

Sample ID: 21J1956-25

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.69	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.60	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.57	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.46	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.87	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
N-EtFOSAA	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
N-MeFOSAA	ND	1.9	0.71	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	0.18	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.24	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.63	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 17:44	BLH

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1956-01 [30MTN S-2 (6-12)]	B294465	11/11/21
21J1956-02 [30MTN S-3 (6-12)]	B294465	11/11/21
21J1956-03 [30MTN S-3 (12-24)]	B294465	11/11/21
21J1956-04 [30MTN S-4 (6-12)]	B294465	11/11/21
21J1956-05 [30MTN S-5 (6-12)]	B294465	11/11/21
21J1956-06 [30MTN S-5 (12-24)]	B294465	11/11/21
21J1956-07 [30MTN S-7 (0-12)]	B294465	11/11/21
21J1956-08 [30MTN S-8 (0-12)]	B294465	11/11/21
21J1956-09 [30MTN S-9 (0-12)]	B294465	11/11/21
21J1956-10 [30MTN S-10 (0-12)]	B294465	11/11/21
21J1956-11 [30MTN S-11 (0-12)]	B294465	11/11/21
21J1956-12 [30MTN S-11 (24-36)]	B294465	11/11/21
21J1956-13 [30MTN S-12 (0-12)]	B294465	11/11/21
21J1956-14 [30MTN S-12 (12-24)]	B294465	11/11/21
21J1956-15 [30MTN S-13 (0-12)]	B294465	11/11/21
21J1956-16 [30MTN S-13 (12-24)]	B294465	11/11/21
21J1956-17 [30MTN S-14 (0-12)]	B294465	11/11/21
21J1956-18 [30MTN S-14 (12-24)]	B294465	11/11/21
21J1956-19 [30MTN S-15 (0-12)]	B294465	11/11/21
21J1956-20 [30MTN S-15 (12-24)]	B294465	11/11/21
21J1956-21 [30MTN S-16 (0-12)]	B294465	11/11/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21J1956-22 [Rinsate]	B293915	271	1.00	11/04/21
21J1956-23 [Trip Blank]	B293915	270	1.00	11/04/21
21J1956-24 [Field Blank]	B293915	268	1.00	11/04/21
21J1956-25 [Equipment Blank]	B293915	269	1.00	11/04/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1956-21 [30MTN S-16 (0-12)]	B294033	5.68	5.00	11/09/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1956-01 [30MTN S-2 (6-12)]	B294034	5.81	5.00	11/04/21
21J1956-02 [30MTN S-3 (6-12)]	B294034	5.60	5.00	11/04/21
21J1956-03 [30MTN S-3 (12-24)]	B294034	5.79	5.00	11/04/21
21J1956-04 [30MTN S-4 (6-12)]	B294034	5.76	5.00	11/04/21
21J1956-05 [30MTN S-5 (6-12)]	B294034	5.77	5.00	11/04/21
21J1956-06 [30MTN S-5 (12-24)]	B294034	5.87	5.00	11/04/21
21J1956-07 [30MTN S-7 (0-12)]	B294034	5.69	5.00	11/04/21
21J1956-08 [30MTN S-8 (0-12)]	B294034	5.88	5.00	11/04/21
21J1956-09 [30MTN S-9 (0-12)]	B294034	5.90	5.00	11/04/21
21J1956-10 [30MTN S-10 (0-12)]	B294034	5.88	5.00	11/04/21
21J1956-11 [30MTN S-11 (0-12)]	B294034	5.93	5.00	11/04/21
21J1956-12 [30MTN S-11 (24-36)]	B294034	5.66	5.00	11/04/21
21J1956-13 [30MTN S-12 (0-12)]	B294034	5.94	5.00	11/04/21

Sample Extraction Data

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1956-14 [30MTN S-12 (12-24)]	B294034	5.63	5.00	11/04/21
21J1956-15 [30MTN S-13 (0-12)]	B294034	5.93	5.00	11/04/21
21J1956-16 [30MTN S-13 (12-24)]	B294034	5.66	5.00	11/04/21
21J1956-17 [30MTN S-14 (0-12)]	B294034	5.84	5.00	11/04/21
21J1956-18 [30MTN S-14 (12-24)]	B294034	5.64	5.00	11/04/21
21J1956-19 [30MTN S-15 (0-12)]	B294034	5.79	5.00	11/04/21
21J1956-20 [30MTN S-15 (12-24)]	B294034	5.91	5.00	11/04/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1956-01RE1 [30MTN S-2 (6-12)]	B294575	0.509	5.00	11/13/21
21J1956-04RE1 [30MTN S-4 (6-12)]	B294575	0.516	5.00	11/13/21
21J1956-10RE1 [30MTN S-10 (0-12)]	B294575	0.522	5.00	11/13/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B293915 - SOP 454-PFAAS

Blank (B293915-BLK1)

Prepared: 11/04/21 Analyzed: 11/05/21

Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L
N-EtFOSAA	ND	2.0	ng/L
N-MeFOSAA	ND	2.0	ng/L
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.0	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L

LCS (B293915-BS1)

Prepared: 11/04/21 Analyzed: 11/05/21

Perfluorobutanoic acid (PFBA)	8.29	2.0	ng/L	9.97	83.1	73-129
Perfluorobutanesulfonic acid (PFBS)	7.80	2.0	ng/L	8.82	88.5	72-130
Perfluoropentanoic acid (PFPeA)	8.19	2.0	ng/L	9.97	82.1	72-129
Perfluorohexanoic acid (PFHxA)	8.32	2.0	ng/L	9.97	83.4	72-129
11Cl-PF3OUdS (F53B Minor)	7.82	2.0	ng/L	9.39	83.2	50-150
9Cl-PF3ONS (F53B Major)	8.43	2.0	ng/L	9.29	90.8	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.24	2.0	ng/L	9.39	87.8	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	9.97	89.8	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	8.86	2.0	ng/L	9.57	92.6	67-138
Perfluorodecanoic acid (PFDA)	7.33	2.0	ng/L	9.97	73.6	71-129
Perfluorododecanoic acid (PFDoA)	7.95	2.0	ng/L	9.97	79.7	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.06	2.0	ng/L	8.87	90.8	50-150

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B293915 - SOP 454-PFAAS

LCS (B293915-BS1)

Prepared: 11/04/21 Analyzed: 11/05/21

Perfluoroheptanesulfonic acid (PFHpS)	9.17	2.0	ng/L	9.52		96.3	69-134			
N-EtFOSAA	10.8	2.0	ng/L	9.97		108	61-135			
N-MeFOSAA	9.69	2.0	ng/L	9.97		97.2	65-136			
Perfluorotetradecanoic acid (PFTA)	8.30	2.0	ng/L	9.97		83.2	71-132			
Perfluorotridecanoic acid (PFTTrDA)	8.66	2.0	ng/L	9.97		86.9	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.62	2.0	ng/L	9.32		92.5	63-143			
Perfluorodecanesulfonic acid (PFDS)	8.14	2.0	ng/L	9.62		84.7	53-142			
Perfluorooctanesulfonamide (FOSA)	8.41	2.0	ng/L	9.97		84.4	67-137			
Perfluorononanesulfonic acid (PFNS)	8.70	2.0	ng/L	9.57		90.9	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.49	2.0	ng/L	9.97		85.2	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	8.51	2.0	ng/L	9.97		85.4	50-150			
Perfluorohexanesulfonic acid (PFHxS)	7.65	2.0	ng/L	9.07		84.4	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	8.82	2.0	ng/L	9.97		88.4	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	8.78	2.0	ng/L	9.97		88.1	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.54	2.0	ng/L	9.47		101	64-140			
Perfluoropetanesulfonic acid (PFPeS)	7.39	2.0	ng/L	9.37		78.8	71-127			
Perfluoroundecanoic acid (PFUnA)	8.53	2.0	ng/L	9.97		85.6	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	9.37	2.0	ng/L	9.97		94.0	50-150			
Perfluoroheptanoic acid (PFHpA)	8.83	2.0	ng/L	9.97		88.6	72-130			
Perfluorooctanoic acid (PFOA)	8.62	2.0	ng/L	9.97		86.5	71-133			
Perfluorooctanesulfonic acid (PFOS)	8.14	2.0	ng/L	9.22		88.3	65-140			
Perfluorononanoic acid (PFNA)	8.19	2.0	ng/L	9.97		82.2	69-130			

LCS Dup (B293915-BS1)

Prepared: 11/04/21 Analyzed: 11/05/21

Perfluorobutanoic acid (PFBA)	9.41	2.0	ng/L	9.77		96.4	73-129	12.7	30	
Perfluorobutanesulfonic acid (PFBS)	8.87	2.0	ng/L	8.64		103	72-130	12.8	30	
Perfluoropentanoic acid (PFPeA)	9.45	2.0	ng/L	9.77		96.8	72-129	14.3	30	
Perfluorohexanoic acid (PFHxA)	9.54	2.0	ng/L	9.77		97.7	72-129	13.8	30	
11Cl-PF3OUdS (F53B Minor)	8.31	2.0	ng/L	9.20		90.3	50-150	6.10	30	
9Cl-PF3ONS (F53B Major)	9.20	2.0	ng/L	9.10		101	50-150	8.72	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.34	2.0	ng/L	9.20		101	50-150	12.4	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.49	2.0	ng/L	9.77		86.9	50-150	5.34	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	10.1	2.0	ng/L	9.37		107	67-138	12.7	30	
Perfluorodecanoic acid (PFDA)	9.22	2.0	ng/L	9.77		94.4	71-129	22.7	30	
Perfluorododecanoic acid (PFDoA)	9.67	2.0	ng/L	9.77		99.0	72-134	19.5	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	9.31	2.0	ng/L	8.69		107	50-150	14.4	30	
Perfluoroheptanesulfonic acid (PFHpS)	9.81	2.0	ng/L	9.33		105	69-134	6.74	30	
N-EtFOSAA	10.8	2.0	ng/L	9.77		110	61-135	0.189	30	
N-MeFOSAA	11.3	2.0	ng/L	9.77		116	65-136	15.7	30	
Perfluorotetradecanoic acid (PFTA)	9.19	2.0	ng/L	9.77		94.1	71-132	10.1	30	
Perfluorotridecanoic acid (PFTTrDA)	9.44	2.0	ng/L	9.77		96.7	65-144	8.61	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	9.83	2.0	ng/L	9.13		108	63-143	13.1	30	
Perfluorodecanesulfonic acid (PFDS)	9.38	2.0	ng/L	9.42		99.5	53-142	14.1	30	
Perfluorooctanesulfonamide (FOSA)	9.40	2.0	ng/L	9.77		96.2	67-137	11.1	30	
Perfluorononanesulfonic acid (PFNS)	9.91	2.0	ng/L	9.37		106	69-127	13.0	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	10.1	2.0	ng/L	9.77		103	50-150	17.2	30	
Perfluoro-1-butanesulfonamide (FBSA)	9.79	2.0	ng/L	9.77		100	50-150	14.0	30	
Perfluorohexanesulfonic acid (PFHxS)	8.57	2.0	ng/L	8.89		96.5	68-131	11.4	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	10.2	2.0	ng/L	9.77		104	50-150	14.4	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	10.2	2.0	ng/L	9.77		104	50-150	14.7	30	

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B293915 - SOP 454-PFAAS

LCS Dup (B293915-BSD1)

Prepared: 11/04/21 Analyzed: 11/05/21

6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.7	2.0	ng/L	9.28		116	64-140	11.8	30	
Perfluoropetanesulfonic acid (PFPeS)	8.78	2.0	ng/L	9.18		95.6	71-127	17.2	30	
Perfluoroundecanoic acid (PFUnA)	9.35	2.0	ng/L	9.77		95.8	69-133	9.14	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.9	2.0	ng/L	9.77		111	50-150	14.7	30	
Perfluoroheptanoic acid (PFHpA)	10.2	2.0	ng/L	9.77		105	72-130	14.7	30	
Perfluorooctanoic acid (PFOA)	10.4	2.0	ng/L	9.77		107	71-133	18.8	30	
Perfluorooctanesulfonic acid (PFOS)	9.09	2.0	ng/L	9.03		101	65-140	11.0	30	
Perfluorononanoic acid (PFNA)	9.86	2.0	ng/L	9.77		101	69-130	18.5	30	

Batch B294033 - SOP 465-PFAAS

Blank (B294033-BLK1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropetanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294033 - SOP 465-PFAAS

LCS (B294033-BS1)

Prepared: 11/09/21 Analyzed: 11/10/21

Perfluorobutanoic acid (PFBA)	1.89	0.38	µg/kg wet	2.12		89.1	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.77	0.38	µg/kg wet	1.87		94.6	72-128			
Perfluoropentanoic acid (PFPeA)	1.91	0.38	µg/kg wet	2.12		90.2	69-132			
Perfluorohexanoic acid (PFHxA)	1.89	0.38	µg/kg wet	2.12		89.0	70-132			
11Cl-PF3OUdS (F53B Minor)	1.89	0.38	µg/kg wet	2.00		94.6	50-150			
9Cl-PF3ONS (F53B Major)	1.88	0.38	µg/kg wet	1.97		95.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.94	0.38	µg/kg wet	2.00		97.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	0.38	µg/kg wet	2.12		83.4	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.87	0.38	µg/kg wet	2.03		92.1	65-137			
Perfluorodecanoic acid (PFDA)	1.80	0.38	µg/kg wet	2.12		85.1	69-133			
Perfluorododecanoic acid (PFDoA)	1.82	0.38	µg/kg wet	2.12		85.8	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	1.90	0.38	µg/kg wet	1.89		101	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	1.97	0.38	µg/kg wet	2.03		97.1	70-132			
N-EtFOSAA	2.09	0.38	µg/kg wet	2.12		98.5	61-139			
N-MeFOSAA	2.13	0.38	µg/kg wet	2.12		100	63-144			
Perfluorotetradecanoic acid (PFTA)	1.91	0.38	µg/kg wet	2.12		90.1	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.00	0.38	µg/kg wet	2.12		94.4	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.03	0.38	µg/kg wet	1.98		102	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.90	0.38	µg/kg wet	2.04		93.2	59-134			
Perfluorooctanesulfonamide (FOSA)	1.83	0.38	µg/kg wet	2.12		86.2	67-137			
Perfluorononanesulfonic acid (PFNS)	2.08	0.38	µg/kg wet	2.03		102	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.15	0.38	µg/kg wet	2.12		102	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.05	0.38	µg/kg wet	2.12		96.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.81	0.38	µg/kg wet	1.93		93.9	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.17	0.38	µg/kg wet	2.12		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.16	0.38	µg/kg wet	2.01		107	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.73	0.38	µg/kg wet	1.99		86.7	73-123			
Perfluoroundecanoic acid (PFUnA)	1.87	0.38	µg/kg wet	2.12		88.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.21	0.38	µg/kg wet	2.12		104	50-150			
Perfluoroheptanoic acid (PFHpA)	2.04	0.38	µg/kg wet	2.12		96.5	71-131			
Perfluorooctanoic acid (PFOA)	2.05	0.38	µg/kg wet	2.12		96.9	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.89	0.38	µg/kg wet	1.96		96.5	68-136			
Perfluorononanoic acid (PFNA)	2.09	0.38	µg/kg wet	2.12		98.7	72-129			

Batch B294034 - SOP 465-PFAAS

Blank (B294034-BLK1)

Prepared: 11/04/21 Analyzed: 11/11/21

Perfluorobutanoic acid (PFBA)	ND	0.38	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.38	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.38	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.38	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.38	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.38	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.38	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.38	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.38	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.38	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.38	µg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294034 - SOP 465-PFAAS

Blank (B294034-BLK1)

Prepared: 11/04/21 Analyzed: 11/11/21

Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.38	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.38	µg/kg wet							
N-EtFOSAA	ND	0.38	µg/kg wet							
N-MeFOSAA	ND	0.38	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.38	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.38	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.38	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.38	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.38	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.38	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.38	µg/kg wet							
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.38	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.38	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.38	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.38	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.38	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.38	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.38	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.38	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.38	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.38	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.38	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.38	µg/kg wet							

LCS (B294034-BS1)

Prepared: 11/04/21 Analyzed: 11/11/21

Perfluorobutanoic acid (PFBA)	2.10	0.38	µg/kg wet	2.11	99.4	71-135
Perfluorobutanesulfonic acid (PFBS)	1.97	0.38	µg/kg wet	1.86	106	72-128
Perfluoropentanoic acid (PFPeA)	2.08	0.38	µg/kg wet	2.11	98.6	69-132
Perfluorohexanoic acid (PFHxA)	2.04	0.38	µg/kg wet	2.11	96.6	70-132
11Cl-PF3OUdS (F53B Minor)	2.25	0.38	µg/kg wet	1.99	113	50-150
9Cl-PF3ONS (F53B Major)	2.30	0.38	µg/kg wet	1.97	117	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.10	0.38	µg/kg wet	1.99	106	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.52	0.38	µg/kg wet	2.11	120	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.25	0.38	µg/kg wet	2.02	111	65-137
Perfluorodecanoic acid (PFDA)	2.19	0.38	µg/kg wet	2.11	104	69-133
Perfluorododecanoic acid (PFDoA)	2.08	0.38	µg/kg wet	2.11	98.8	69-135
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.11	0.38	µg/kg wet	1.88	112	50-150
Perfluoroheptanesulfonic acid (PFHpS)	2.39	0.38	µg/kg wet	2.02	119	70-132
N-EtFOSAA	2.50	0.38	µg/kg wet	2.11	118	61-139
N-MeFOSAA	2.68	0.38	µg/kg wet	2.11	127	63-144
Perfluorotetradecanoic acid (PFTA)	2.09	0.38	µg/kg wet	2.11	99.0	69-133
Perfluorotridecanoic acid (PFTrDA)	2.10	0.38	µg/kg wet	2.11	99.3	66-139
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.21	0.38	µg/kg wet	1.97	112	62-145
Perfluorodecanesulfonic acid (PFDS)	2.20	0.38	µg/kg wet	2.03	108	59-134
Perfluorooctanesulfonamide (FOSA)	2.20	0.38	µg/kg wet	2.11	105	67-137
Perfluorononanesulfonic acid (PFNS)	2.22	0.38	µg/kg wet	2.02	110	69-125
Perfluoro-1-hexanesulfonamide (FHxSA)	2.32	0.38	µg/kg wet	2.11	110	50-150
Perfluoro-1-butanefulfonamide (FBSA)	2.08	0.38	µg/kg wet	2.11	98.8	50-150
Perfluorohexanesulfonic acid (PFHxS)	1.97	0.38	µg/kg wet	1.92	103	67-130

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B294034 - SOP 465-PFAAS										
LCS (B294034-BS1)										
				Prepared: 11/04/21 Analyzed: 11/11/21						
Perfluoro-4-oxapentanoic acid (PFMPA)	2.50	0.38	µg/kg wet	2.11		118	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.35	0.38	µg/kg wet	2.11		111	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.39	0.38	µg/kg wet	2.00		119	64-140			
Perfluoropentanesulfonic acid (PFPeS)	2.05	0.38	µg/kg wet	1.98		103	73-123			
Perfluoroundecanoic acid (PFUnA)	2.12	0.38	µg/kg wet	2.11		100	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.48	0.38	µg/kg wet	2.11		117	50-150			
Perfluoroheptanoic acid (PFHpA)	2.24	0.38	µg/kg wet	2.11		106	71-131			
Perfluorooctanoic acid (PFOA)	2.29	0.38	µg/kg wet	2.11		109	69-133			
Perfluorooctanesulfonic acid (PFOS)	2.15	0.38	µg/kg wet	1.95		111	68-136			
Perfluorononanoic acid (PFNA)	2.22	0.38	µg/kg wet	2.11		105	72-129			
Matrix Spike (B294034-MS1)										
			Source: 21J1956-01		Prepared: 11/04/21 Analyzed: 11/11/21					
Perfluorobutanoic acid (PFBA)	3.04	0.49	µg/kg dry	2.72	0.304	101	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.65	0.49	µg/kg dry	2.40	0.0919	106	72-128			
Perfluoropentanoic acid (PFPeA)	2.99	0.49	µg/kg dry	2.72	0.299	98.9	69-132			
Perfluorohexanoic acid (PFHxA)	3.37	0.49	µg/kg dry	2.72	0.627	101	70-132			
11Cl-PF3OUdS (F53B Minor)	3.46	0.49	µg/kg dry	2.56	ND	135	50-150			
9Cl-PF3ONS (F53B Major)	3.41	0.49	µg/kg dry	2.54	ND	135	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.60	0.49	µg/kg dry	2.56	ND	102	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	3.52	0.49	µg/kg dry	2.72	ND	129	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.73	0.49	µg/kg dry	2.61	ND	105	65-137			
Perfluorodecanoic acid (PFDA)	2.82	0.49	µg/kg dry	2.72	ND	104	69-133			
Perfluorododecanoic acid (PFDoA)	2.85	0.49	µg/kg dry	2.72	ND	105	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.66	0.49	µg/kg dry	2.42	ND	110	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	4.53	0.49	µg/kg dry	2.60	1.07	133 *	70-132			MS-12
N-EtFOSAA	3.09	0.49	µg/kg dry	2.72	ND	114	61-139			
N-MeFOSAA	3.06	0.49	µg/kg dry	2.72	ND	113	63-144			
Perfluorotetradecanoic acid (PFTA)	2.69	0.49	µg/kg dry	2.72	ND	98.9	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.80	0.49	µg/kg dry	2.72	ND	103	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.79	0.49	µg/kg dry	2.55	ND	110	62-145			
Perfluorodecanesulfonic acid (PFDS)	3.16	0.49	µg/kg dry	2.62	ND	121	59-134			
Perfluorooctanesulfonamide (FOSA)	2.74	0.49	µg/kg dry	2.72	0.139	95.5	67-137			
Perfluorononanesulfonic acid (PFNS)	4.65	0.49	µg/kg dry	2.61	1.11	135 *	69-125			MS-12
Perfluoro-1-hexanesulfonamide (FHxSA)	4.39	0.49	µg/kg dry	2.72	1.44	108	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.94	0.49	µg/kg dry	2.72	ND	108	50-150			
Perfluorohexanesulfonic acid (PFHxS)	7.96	0.49	µg/kg dry	2.48	4.81	127	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	3.32	0.49	µg/kg dry	2.72	ND	122	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.96	0.49	µg/kg dry	2.72	ND	109	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.90	0.49	µg/kg dry	2.58	ND	112	64-140			
Perfluoropentanesulfonic acid (PFPeS)	2.79	0.49	µg/kg dry	2.56	0.128	104	73-123			
Perfluoroundecanoic acid (PFUnA)	2.89	0.49	µg/kg dry	2.72	ND	106	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.11	0.49	µg/kg dry	2.72	ND	114	50-150			
Perfluoroheptanoic acid (PFHpA)	3.00	0.49	µg/kg dry	2.72	0.145	105	71-131			
Perfluorooctanoic acid (PFOA)	3.70	0.49	µg/kg dry	2.72	0.716	110	69-133			
Perfluorooctanesulfonic acid (PFOS)	164	0.49	µg/kg dry	2.51	139	974 *	68-136			E, MS-19
Perfluorononanoic acid (PFNA)	2.84	0.49	µg/kg dry	2.72	ND	104	72-129			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294034 - SOP 465-PFAAS

Matrix Spike Dup (B294034-MSD1)	Source: 21J1956-01			Prepared: 11/04/21 Analyzed: 11/11/21						
Perfluorobutanoic acid (PFBA)	3.07	0.49	µg/kg dry	2.73	0.304	102	71-135	1.15	30	
Perfluorobutanesulfonic acid (PFBS)	2.65	0.49	µg/kg dry	2.41	0.0919	106	72-128	0.152	30	
Perfluoropentanoic acid (PFPeA)	3.04	0.49	µg/kg dry	2.73	0.299	100	69-132	1.52	30	
Perfluorohexanoic acid (PFHxA)	3.33	0.49	µg/kg dry	2.73	0.627	99.3	70-132	0.941	30	
11Cl-PF3OUdS (F53B Minor)	3.63	0.49	µg/kg dry	2.57	ND	141	50-150	4.79	30	
9Cl-PF3ONS (F53B Major)	3.48	0.49	µg/kg dry	2.54	ND	137	50-150	1.97	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.72	0.49	µg/kg dry	2.57	ND	106	50-150	4.25	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	3.03	0.49	µg/kg dry	2.73	ND	111	50-150	15.0	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.84	0.49	µg/kg dry	2.62	ND	109	65-137	4.03	30	
Perfluorodecanoic acid (PFDA)	2.75	0.49	µg/kg dry	2.73	ND	101	69-133	2.68	30	
Perfluorododecanoic acid (PFDoA)	2.73	0.49	µg/kg dry	2.73	ND	100	69-135	4.29	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.74	0.49	µg/kg dry	2.43	ND	113	50-150	2.83	30	
Perfluoroheptanesulfonic acid (PFHpS)	4.81	0.49	µg/kg dry	2.61	1.07	143	* 70-132	5.86	30	MS-12
N-EtFOSAA	3.40	0.49	µg/kg dry	2.73	ND	125	61-139	9.56	30	
N-MeFOSAA	3.26	0.49	µg/kg dry	2.73	ND	120	63-144	6.27	30	
Perfluorotetradecanoic acid (PFTA)	2.83	0.49	µg/kg dry	2.73	ND	104	69-133	5.04	30	
Perfluorotridecanoic acid (PFTrDA)	2.75	0.49	µg/kg dry	2.73	ND	101	66-139	1.93	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.86	0.49	µg/kg dry	2.55	ND	112	62-145	2.60	30	
Perfluorodecanesulfonic acid (PFDS)	3.29	0.49	µg/kg dry	2.63	ND	125	59-134	3.86	30	
Perfluorooctanesulfonamide (FOSA)	3.09	0.49	µg/kg dry	2.73	0.139	108	67-137	12.0	30	
Perfluorononanesulfonic acid (PFNS)	5.53	0.49	µg/kg dry	2.62	1.11	169	* 69-125	17.3	30	MS-12
Perfluoro-1-hexanesulfonamide (FHxSA)	5.00	0.49	µg/kg dry	2.73	1.44	130	50-150	13.0	30	
Perfluoro-1-butanesulfonamide (FBSA)	3.20	0.49	µg/kg dry	2.73	ND	117	50-150	8.48	30	
Perfluorohexanesulfonic acid (PFHxS)	7.53	0.49	µg/kg dry	2.48	4.81	110	67-130	5.60	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	3.25	0.49	µg/kg dry	2.73	ND	119	50-150	2.06	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	3.01	0.49	µg/kg dry	2.73	ND	110	50-150	1.70	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	3.33	0.49	µg/kg dry	2.59	ND	129	64-140	13.8	30	
Perfluoropentanesulfonic acid (PFPeS)	2.79	0.49	µg/kg dry	2.56	0.128	104	73-123	0.104	30	
Perfluoroundecanoic acid (PFUnA)	2.67	0.49	µg/kg dry	2.73	ND	97.7	64-136	7.92	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.20	0.49	µg/kg dry	2.73	ND	117	50-150	2.81	30	
Perfluoroheptanoic acid (PFHpA)	3.00	0.49	µg/kg dry	2.73	0.145	105	71-131	0.0111	30	
Perfluorooctanoic acid (PFOA)	3.64	0.49	µg/kg dry	2.73	0.716	107	69-133	1.59	30	
Perfluorooctanesulfonic acid (PFOS)	192	0.49	µg/kg dry	2.52	139	2100	* 68-136	16.0	30	E, MS-19
Perfluorononanoic acid (PFNA)	2.88	0.49	µg/kg dry	2.73	ND	105	72-129	1.36	30	

Batch B294575 - SOP 465-PFAAS

Blank (B294575-BLK1)	Prepared: 11/13/21 Analyzed: 11/15/21									
Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294575 - SOP 465-PFAAS

Blank (B294575-BLK1)

Prepared: 11/13/21 Analyzed: 11/15/21

Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294575-BS1)

Prepared: 11/13/21 Analyzed: 11/15/21

Perfluorobutanoic acid (PFBA)	2.25	0.38	µg/kg wet	2.14		105	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.09	0.38	µg/kg wet	1.89		111	72-128			
Perfluoropentanoic acid (PFPeA)	2.31	0.38	µg/kg wet	2.14		108	69-132			
Perfluorohexanoic acid (PFHxA)	2.25	0.38	µg/kg wet	2.14		105	70-132			
11Cl-PF3OUdS (F53B Minor)	2.32	0.38	µg/kg wet	2.01		115	50-150			
9Cl-PF3ONS (F53B Major)	2.59	0.38	µg/kg wet	1.99		130	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.15	0.38	µg/kg wet	2.01		107	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.46	0.38	µg/kg wet	2.14		115	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.44	0.38	µg/kg wet	2.05		119	65-137			
Perfluorodecanoic acid (PFDA)	2.22	0.38	µg/kg wet	2.14		104	69-133			
Perfluorododecanoic acid (PFDoA)	2.44	0.38	µg/kg wet	2.14		114	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.22	0.38	µg/kg wet	1.90		117	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.35	0.38	µg/kg wet	2.04		115	70-132			
N-EtFOSAA	2.77	0.38	µg/kg wet	2.14		129	61-139			
N-MeFOSAA	2.80	0.38	µg/kg wet	2.14		131	63-144			
Perfluorotetradecanoic acid (PFTA)	2.07	0.38	µg/kg wet	2.14		96.8	69-133			
Perfluorotridecanoic acid (PFTrDA)	2.13	0.38	µg/kg wet	2.14		99.7	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.20	0.38	µg/kg wet	2.00		110	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.54	0.38	µg/kg wet	2.06		123	59-134			
Perfluorooctanesulfonamide (FOSA)	2.19	0.38	µg/kg wet	2.14		103	67-137			
Perfluorononanesulfonic acid (PFNS)	2.67	0.38	µg/kg wet	2.05		130	* 69-125			L-01
Perfluoro-1-hexanesulfonamide (FHxSA)	2.29	0.38	µg/kg wet	2.14		107	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.42	0.38	µg/kg wet	2.14		113	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.96	0.38	µg/kg wet	1.94		101	67-130			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294575 - SOP 465-PFAAS

LCS (B294575-BS1)

Prepared: 11/13/21 Analyzed: 11/15/21

Perfluoro-4-oxapentanoic acid (PFMPA)	2.40	0.38	µg/kg wet	2.14		113	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.28	0.38	µg/kg wet	2.14		107	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.55	0.38	µg/kg wet	2.03		126	64-140			
Perfluoropetanesulfonic acid (PFPeS)	1.95	0.38	µg/kg wet	2.01		97.4	73-123			
Perfluoroundecanoic acid (PFUnA)	2.10	0.38	µg/kg wet	2.14		98.1	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.40	0.38	µg/kg wet	2.14		113	50-150			
Perfluoroheptanoic acid (PFHpA)	2.28	0.38	µg/kg wet	2.14		107	71-131			
Perfluorooctanoic acid (PFOA)	2.28	0.38	µg/kg wet	2.14		107	69-133			
Perfluorooctanesulfonic acid (PFOS)	2.21	0.38	µg/kg wet	1.97		112	68-136			
Perfluorononanoic acid (PFNA)	2.26	0.38	µg/kg wet	2.14		106	72-129			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
E	Reported result is estimated. Value reported over verified calibration range.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
Z-01	Sample prepared and extracted at a dilution.

ANALYST

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JLH Jessica L. Hoffman
EGR Evett G Rivera
BLM Brianna Henriquez
BAA Bonita A. Abanulo
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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-2 (6-12) (21J1956-01)			Lab File ID: 21J1956-01.d			Analyzed: 11/11/21 15:24			
M8FOSA	415450.5	4.044517	451,140.00	4.044517	92	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	145884.8	2.595367	207,338.00	2.595367	70	50 - 150	0.0000	+/-0.50	
M2PFTA	1765899	4.378417	1,799,881.00	4.378417	98	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	196558.3	3.850917	225,194.00	3.850917	87	50 - 150	0.0000	+/-0.50	
MPFBA	704489.8	1.108317	819,390.00	1.108317	86	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	217213.5	2.921133	298,883.00	2.921133	73	50 - 150	0.0000	+/-0.50	
M6PFDA	1160200	3.851417	1,173,486.00	3.851417	99	50 - 150	0.0000	+/-0.50	
M3PFBS	169950	1.978033	190,139.00	1.978033	89	50 - 150	0.0000	+/-0.50	
M7PFUnA	1448302	4.001983	1,524,213.00	4.001983	95	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	101992	3.493333	131,267.00	3.493333	78	50 - 150	0.0000	+/-0.50	
M5PFPeA	716949.1	1.791367	823,921.00	1.791367	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	999127.2	2.680533	1,131,820.00	2.680533	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	124189.1	3.266817	141,124.00	3.266833	88	50 - 150	0.0000	+/-0.50	
M4PFHpA	1083605	3.2357	1,179,935.00	3.2357	92	50 - 150	0.0000	+/-0.50	
M8PFOA	1006676	3.51015	1,119,574.00	3.51015	90	50 - 150	0.0000	+/-0.50	
M8PFOS	124361.3	3.692083	163,358.00	3.692083	76	50 - 150	0.0000	+/-0.50	
M9PFNA	828808	3.693117	1,027,621.00	3.693117	81	50 - 150	0.0000	+/-0.50	
MPFDoA	1569319	4.136817	1,594,256.00	4.136817	98	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	301235	4.00145	294,893.00	4.001467	102	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	311927.8	3.929883	301,628.00	3.929883	103	50 - 150	0.0000	+/-0.50	
30MTN S-2 (6-12) (21J1956-01RE1)			Lab File ID: 21J1956-01RE1.d			Analyzed: 11/15/21 19:27			
M8PFOS	138816.3	3.724233	107,190.00	3.724233	130	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-3 (6-12) (21J1956-02)			Lab File ID: 21J1956-02.d			Analyzed: 11/11/21 15:31			
M8FOSA	456498.2	4.044517	451,140.00	4.044517	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	150110.6	2.595367	207,338.00	2.595367	72	50 - 150	0.0000	+/-0.50	
M2PFtA	1817019	4.378417	1,799,881.00	4.378417	101	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	216993.3	3.850917	225,194.00	3.850917	96	50 - 150	0.0000	+/-0.50	
MPFBA	758116.1	1.108317	819,390.00	1.108317	93	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	214014.1	2.921133	298,883.00	2.921133	72	50 - 150	0.0000	+/-0.50	
M6PFDA	1253159	3.851417	1,173,486.00	3.851417	107	50 - 150	0.0000	+/-0.50	
M3PFBS	189619.2	1.978033	190,139.00	1.978033	100	50 - 150	0.0000	+/-0.50	
M7PFUnA	1596747	3.993983	1,524,213.00	4.001983	105	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	113622.6	3.493333	131,267.00	3.493333	87	50 - 150	0.0000	+/-0.50	
M5PFPeA	778799.4	1.79965	823,921.00	1.791367	95	50 - 150	0.0083	+/-0.50	
M5PFHxA	1067295	2.680533	1,131,820.00	2.680533	94	50 - 150	0.0000	+/-0.50	
M3PFHxS	138182.3	3.266817	141,124.00	3.266833	98	50 - 150	0.0000	+/-0.50	
M4PFHpA	1139654	3.2357	1,179,935.00	3.2357	97	50 - 150	0.0000	+/-0.50	
M8PFOA	1093200	3.51015	1,119,574.00	3.51015	98	50 - 150	0.0000	+/-0.50	
M8PFOS	162576.2	3.692067	163,358.00	3.692083	100	50 - 150	0.0000	+/-0.50	
M9PFNA	1019251	3.693117	1,027,621.00	3.693117	99	50 - 150	0.0000	+/-0.50	
MPFDoA	1668007	4.136817	1,594,256.00	4.136817	105	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	295374.8	4.00145	294,893.00	4.001467	100	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	351843.4	3.929883	301,628.00	3.929883	117	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-3 (12-24) (21J1956-03)			Lab File ID: 21J1956-03.d			Analyzed: 11/11/21 15:38			
M8FOSA	416657.8	4.044517	451,140.00	4.044517	92	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	137646.8	2.595367	207,338.00	2.595367	66	50 - 150	0.0000	+/-0.50	
M2PFTA	1641660	4.378417	1,799,881.00	4.378417	91	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	193180.3	3.850917	225,194.00	3.850917	86	50 - 150	0.0000	+/-0.50	
MPFBA	715053.4	1.108317	819,390.00	1.108317	87	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	209441.5	2.921133	298,883.00	2.921133	70	50 - 150	0.0000	+/-0.50	
M6PFDA	1156621	3.851417	1,173,486.00	3.851417	99	50 - 150	0.0000	+/-0.50	
M3PFBS	173138.2	1.978033	190,139.00	1.978033	91	50 - 150	0.0000	+/-0.50	
M7PFUnA	1459275	4.001983	1,524,213.00	4.001983	96	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	95532.03	3.493333	131,267.00	3.493333	73	50 - 150	0.0000	+/-0.50	
M5PFPeA	733115	1.791367	823,921.00	1.791367	89	50 - 150	0.0000	+/-0.50	
M5PFHxA	1006593	2.680533	1,131,820.00	2.680533	89	50 - 150	0.0000	+/-0.50	
M3PFHxS	123586.8	3.266833	141,124.00	3.266833	88	50 - 150	0.0000	+/-0.50	
M4PFHpA	1081661	3.2357	1,179,935.00	3.2357	92	50 - 150	0.0000	+/-0.50	
M8PFOA	1053004	3.51015	1,119,574.00	3.51015	94	50 - 150	0.0000	+/-0.50	
M8PFOS	144161.7	3.692083	163,358.00	3.692083	88	50 - 150	0.0000	+/-0.50	
M9PFNA	917777	3.693117	1,027,621.00	3.693117	89	50 - 150	0.0000	+/-0.50	
MPFDoA	1491829	4.136817	1,594,256.00	4.136817	94	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	263686.1	4.00945	294,893.00	4.001467	89	50 - 150	0.0080	+/-0.50	
d3-NMeFOSAA	315633.6	3.929883	301,628.00	3.929883	105	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-4 (6-12) (21J1956-04)									
			Lab File ID: 21J1956-04.d			Analyzed: 11/11/21 15:45			
M8FOSA	440295.4	4.044517	451,140.00	4.044517	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	141814	2.595367	207,338.00	2.595367	68	50 - 150	0.0000	+/-0.50	
M2PFTA	1792580	4.378417	1,799,881.00	4.378417	100	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	255582	3.850917	225,194.00	3.850917	113	50 - 150	0.0000	+/-0.50	
MPFBA	737994.4	1.108317	819,390.00	1.108317	90	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	201444.7	2.921133	298,883.00	2.921133	67	50 - 150	0.0000	+/-0.50	
M6PFDA	1181192	3.851417	1,173,486.00	3.851417	101	50 - 150	0.0000	+/-0.50	
M3PFBS	180805.1	1.978033	190,139.00	1.978033	95	50 - 150	0.0000	+/-0.50	
M7PFUnA	1554364	3.993983	1,524,213.00	4.001983	102	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	123610.6	3.493333	131,267.00	3.493333	94	50 - 150	0.0000	+/-0.50	
M5PFPeA	753394.3	1.791367	823,921.00	1.791367	91	50 - 150	0.0000	+/-0.50	
M5PFHxA	1051087	2.680533	1,131,820.00	2.680533	93	50 - 150	0.0000	+/-0.50	
M3PFHxS	133049.9	3.266817	141,124.00	3.266833	94	50 - 150	0.0000	+/-0.50	
M4PFHpA	1113059	3.2357	1,179,935.00	3.2357	94	50 - 150	0.0000	+/-0.50	
M8PFOA	1097000	3.51015	1,119,574.00	3.51015	98	50 - 150	0.0000	+/-0.50	
M8PFOS	137872	3.692083	163,358.00	3.692083	84	50 - 150	0.0000	+/-0.50	
M9PFNA	915142.1	3.693117	1,027,621.00	3.693117	89	50 - 150	0.0000	+/-0.50	
MPFDoA	1613275	4.136817	1,594,256.00	4.136817	101	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	308803.1	4.00145	294,893.00	4.001467	105	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	373653.4	3.929883	301,628.00	3.929883	124	50 - 150	0.0000	+/-0.50	
30MTN S-4 (6-12) (21J1956-04RE1)									
			Lab File ID: 21J1956-04RE1.d			Analyzed: 11/15/21 19:34			
M8PFOS	151927.2	3.724233	107,190.00	3.724233	142	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-5 (6-12) (21J1956-05)			Lab File ID: 21J1956-05.d			Analyzed: 11/11/21 15:52			
M8FOSA	451579	4.044517	451,140.00	4.044517	100	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	153630.5	2.58715	207,338.00	2.595367	74	50 - 150	-0.0082	+/-0.50	
M2PFTA	1924894	4.378417	1,799,881.00	4.378417	107	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	209638.6	3.850917	225,194.00	3.850917	93	50 - 150	0.0000	+/-0.50	
MPFBA	763819.3	1.108317	819,390.00	1.108317	93	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	222768.5	2.91295	298,883.00	2.921133	75	50 - 150	-0.0082	+/-0.50	
M6PFDA	1242337	3.851417	1,173,486.00	3.851417	106	50 - 150	0.0000	+/-0.50	
M3PFBS	181628	1.978033	190,139.00	1.978033	96	50 - 150	0.0000	+/-0.50	
M7PFUnA	1542788	3.993983	1,524,213.00	4.001983	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117893.8	3.493333	131,267.00	3.493333	90	50 - 150	0.0000	+/-0.50	
M5PFPeA	772919.9	1.791367	823,921.00	1.791367	94	50 - 150	0.0000	+/-0.50	
M5PFHxA	1055756	2.680533	1,131,820.00	2.680533	93	50 - 150	0.0000	+/-0.50	
M3PFHxS	129789.4	3.266817	141,124.00	3.266833	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1134888	3.2357	1,179,935.00	3.2357	96	50 - 150	0.0000	+/-0.50	
M8PFOA	1059798	3.51015	1,119,574.00	3.51015	95	50 - 150	0.0000	+/-0.50	
M8PFOS	158298.6	3.692083	163,358.00	3.692083	97	50 - 150	0.0000	+/-0.50	
M9PFNA	956605.8	3.693117	1,027,621.00	3.693117	93	50 - 150	0.0000	+/-0.50	
MPFDoA	1629817	4.136817	1,594,256.00	4.136817	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	291424.8	4.00145	294,893.00	4.001467	99	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	352890.3	3.921883	301,628.00	3.929883	117	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-5 (12-24) (21J1956-06)			Lab File ID: 21J1956-06.d			Analyzed: 11/11/21 16:00			
M8FOSA	287537.8	4.044517	451,140.00	4.044517	64	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	138771	2.58715	207,338.00	2.595367	67	50 - 150	-0.0082	+/-0.50	
M2PFtA	1350933	4.378417	1,799,881.00	4.378417	75	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	150101.9	3.850917	225,194.00	3.850917	67	50 - 150	0.0000	+/-0.50	
MPFBA	670404.7	1.108317	819,390.00	1.108317	82	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	204534.6	2.91295	298,883.00	2.921133	68	50 - 150	-0.0082	+/-0.50	
M6PFDA	831027.1	3.851417	1,173,486.00	3.851417	71	50 - 150	0.0000	+/-0.50	
M3PFBS	158484.5	1.978033	190,139.00	1.978033	83	50 - 150	0.0000	+/-0.50	
M7PFUnA	1071125	3.993983	1,524,213.00	4.001983	70	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	92216.35	3.493333	131,267.00	3.493333	70	50 - 150	0.0000	+/-0.50	
M5PFPeA	669325.7	1.791367	823,921.00	1.791367	81	50 - 150	0.0000	+/-0.50	
M5PFHxA	903018.3	2.680533	1,131,820.00	2.680533	80	50 - 150	0.0000	+/-0.50	
M3PFHxS	110180.4	3.266817	141,124.00	3.266833	78	50 - 150	0.0000	+/-0.50	
M4PFHpA	948351.9	3.2357	1,179,935.00	3.2357	80	50 - 150	0.0000	+/-0.50	
M8PFOA	892220.4	3.51015	1,119,574.00	3.51015	80	50 - 150	0.0000	+/-0.50	
M8PFOS	116157.8	3.692067	163,358.00	3.692083	71	50 - 150	0.0000	+/-0.50	
M9PFNA	774726.6	3.693117	1,027,621.00	3.693117	75	50 - 150	0.0000	+/-0.50	
MPFDoA	1122326	4.136817	1,594,256.00	4.136817	70	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	207798.1	4.00145	294,893.00	4.001467	70	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	245552.5	3.929883	301,628.00	3.929883	81	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-7 (0-12) (21J1956-07)			Lab File ID: 21J1956-07.d			Analyzed: 11/11/21 16:07			
M8FOSA	434699	4.044517	451,140.00	4.044517	96	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	149308.5	2.58715	207,338.00	2.595367	72	50 - 150	-0.0082	+/-0.50	
M2PFTA	1942827	4.378417	1,799,881.00	4.378417	108	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	290051	3.850917	225,194.00	3.850917	129	50 - 150	0.0000	+/-0.50	
MPFBA	745684.8	1.108317	819,390.00	1.108317	91	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	204561.5	2.91295	298,883.00	2.921133	68	50 - 150	-0.0082	+/-0.50	
M6PFDA	1241244	3.851417	1,173,486.00	3.851417	106	50 - 150	0.0000	+/-0.50	
M3PFBS	178342.5	1.978033	190,139.00	1.978033	94	50 - 150	0.0000	+/-0.50	
M7PFUnA	1402648	3.993983	1,524,213.00	4.001983	92	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	142808.6	3.493333	131,267.00	3.493333	109	50 - 150	0.0000	+/-0.50	
M5PFPeA	763302.2	1.791367	823,921.00	1.791367	93	50 - 150	0.0000	+/-0.50	
M5PFHxA	1051059	2.680533	1,131,820.00	2.680533	93	50 - 150	0.0000	+/-0.50	
M3PFHxS	128630.9	3.266817	141,124.00	3.266833	91	50 - 150	0.0000	+/-0.50	
M4PFHpA	1113492	3.2357	1,179,935.00	3.2357	94	50 - 150	0.0000	+/-0.50	
M8PFOA	1074125	3.51015	1,119,574.00	3.51015	96	50 - 150	0.0000	+/-0.50	
M8PFOS	152666.5	3.692083	163,358.00	3.692083	93	50 - 150	0.0000	+/-0.50	
M9PFNA	979508.9	3.693117	1,027,621.00	3.693117	95	50 - 150	0.0000	+/-0.50	
MPFDoA	1707174	4.136817	1,594,256.00	4.136817	107	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	306534.7	4.001467	294,893.00	4.001467	104	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	369695.6	3.929883	301,628.00	3.929883	123	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-8 (0-12) (21J1956-08)			Lab File ID: 21J1956-08.d			Analyzed: 11/11/21 16:14			
M8FOSA	452869.5	4.044517	451,140.00	4.044517	100	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	169625.4	2.58715	207,338.00	2.595367	82	50 - 150	-0.0082	+/-0.50	
M2PFTA	1882826	4.378417	1,799,881.00	4.378417	105	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	207430.7	3.850917	225,194.00	3.850917	92	50 - 150	0.0000	+/-0.50	
MPFBA	778681.9	1.108317	819,390.00	1.108317	95	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	223090.1	2.91295	298,883.00	2.921133	75	50 - 150	-0.0082	+/-0.50	
M6PFDA	1187181	3.851417	1,173,486.00	3.851417	101	50 - 150	0.0000	+/-0.50	
M3PFBS	184202.4	1.978033	190,139.00	1.978033	97	50 - 150	0.0000	+/-0.50	
M7PFUnA	1595081	3.993983	1,524,213.00	4.001983	105	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	114861.2	3.493333	131,267.00	3.493333	88	50 - 150	0.0000	+/-0.50	
M5PFPeA	797696.8	1.791367	823,921.00	1.791367	97	50 - 150	0.0000	+/-0.50	
M5PFHxA	1087548	2.672333	1,131,820.00	2.680533	96	50 - 150	-0.0082	+/-0.50	
M3PFHxS	136285.6	3.266817	141,124.00	3.266833	97	50 - 150	0.0000	+/-0.50	
M4PFHpA	1184553	3.2357	1,179,935.00	3.2357	100	50 - 150	0.0000	+/-0.50	
M8PFOA	1139350	3.50185	1,119,574.00	3.51015	102	50 - 150	-0.0083	+/-0.50	
M8PFOS	167053.5	3.692083	163,358.00	3.692083	102	50 - 150	0.0000	+/-0.50	
M9PFNA	999862.1	3.693117	1,027,621.00	3.693117	97	50 - 150	0.0000	+/-0.50	
MPFDoA	1593691	4.136817	1,594,256.00	4.136817	100	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	297800.4	4.00145	294,893.00	4.001467	101	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	331655.8	3.921883	301,628.00	3.929883	110	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-9 (0-12) (21J1956-09)			Lab File ID: 21J1956-09.d			Analyzed: 11/11/21 16:21			
M8FOSA	457592.3	4.044517	451,140.00	4.044517	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	158003.9	2.58715	207,338.00	2.595367	76	50 - 150	-0.0082	+/-0.50	
M2PFTA	1893230	4.378417	1,799,881.00	4.378417	105	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	281423.1	3.850917	225,194.00	3.850917	125	50 - 150	0.0000	+/-0.50	
MPFBA	778215.4	1.108317	819,390.00	1.108317	95	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	222433.6	2.91295	298,883.00	2.921133	74	50 - 150	-0.0082	+/-0.50	
M6PFDA	1268586	3.851417	1,173,486.00	3.851417	108	50 - 150	0.0000	+/-0.50	
M3PFBS	186641	1.978033	190,139.00	1.978033	98	50 - 150	0.0000	+/-0.50	
M7PFUnA	1685547	3.993983	1,524,213.00	4.001983	111	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	143096.3	3.493333	131,267.00	3.493333	109	50 - 150	0.0000	+/-0.50	
M5PFPeA	776831.1	1.791367	823,921.00	1.791367	94	50 - 150	0.0000	+/-0.50	
M5PFHxA	1080840	2.672333	1,131,820.00	2.680533	95	50 - 150	-0.0082	+/-0.50	
M3PFHxS	134908.3	3.266817	141,124.00	3.266833	96	50 - 150	0.0000	+/-0.50	
M4PFHpA	1166831	3.2357	1,179,935.00	3.2357	99	50 - 150	0.0000	+/-0.50	
M8PFOA	1129818	3.51015	1,119,574.00	3.51015	101	50 - 150	0.0000	+/-0.50	
M8PFOS	158465.9	3.692083	163,358.00	3.692083	97	50 - 150	0.0000	+/-0.50	
M9PFNA	1013504	3.693117	1,027,621.00	3.693117	99	50 - 150	0.0000	+/-0.50	
MPFDoA	1651222	4.136817	1,594,256.00	4.136817	104	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	340185.3	4.00145	294,893.00	4.001467	115	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	365387.1	3.921883	301,628.00	3.929883	121	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-10 (0-12) (21J1956-10)			Lab File ID: 21J1956-10.d			Analyzed: 11/11/21 16:30			
M8FOSA	444256.4	4.044517	451,140.00	4.044517	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	143959.5	2.58715	207,338.00	2.595367	69	50 - 150	-0.0082	+/-0.50	
M2PFtA	1687429	4.378417	1,799,881.00	4.378417	94	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	255319.8	3.850917	225,194.00	3.850917	113	50 - 150	0.0000	+/-0.50	
MPFBA	723158.9	1.108317	819,390.00	1.108317	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	190038.5	2.91295	298,883.00	2.921133	64	50 - 150	-0.0082	+/-0.50	
M6PFDA	1080507	3.851417	1,173,486.00	3.851417	92	50 - 150	0.0000	+/-0.50	
M3PFBS	172943.4	1.978033	190,139.00	1.978033	91	50 - 150	0.0000	+/-0.50	
M7PFUnA	1487604	3.993983	1,524,213.00	4.001983	98	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	122677.9	3.493333	131,267.00	3.493333	93	50 - 150	0.0000	+/-0.50	
M5PFPeA	725785.3	1.791367	823,921.00	1.791367	88	50 - 150	0.0000	+/-0.50	
M5PFHxA	990742.4	2.680533	1,131,820.00	2.680533	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	131245.5	3.266817	141,124.00	3.266833	93	50 - 150	0.0000	+/-0.50	
M4PFHpA	1073237	3.2357	1,179,935.00	3.2357	91	50 - 150	0.0000	+/-0.50	
M8PFOA	1033049	3.51015	1,119,574.00	3.51015	92	50 - 150	0.0000	+/-0.50	
M8PFOS	133980.1	3.692083	163,358.00	3.692083	82	50 - 150	0.0000	+/-0.50	
M9PFNA	895052.7	3.693117	1,027,621.00	3.693117	87	50 - 150	0.0000	+/-0.50	
MPFDoA	1560235	4.136817	1,594,256.00	4.136817	98	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	295216.7	4.00145	294,893.00	4.001467	100	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	353628.2	3.929883	301,628.00	3.929883	117	50 - 150	0.0000	+/-0.50	
30MTN S-10 (0-12) (21J1956-10RE1)			Lab File ID: 21J1956-10RE1.d			Analyzed: 11/15/21 19:41			
M8PFOS	151729.8	3.724217	107,190.00	3.724233	142	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-11 (0-12) (21J1956-11)			Lab File ID: 21J1956-11.d			Analyzed: 11/11/21 16:45			
M8FOSA	484106.3	4.044517	451,140.00	4.044517	107	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	160698.3	2.58715	207,338.00	2.58715	78	50 - 150	0.0000	+/-0.50	
M2PF _T A	1971387	4.378417	1,799,881.00	4.378417	110	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	251997.7	3.850917	225,194.00	3.850917	112	50 - 150	0.0000	+/-0.50	
MPF _B A	784776.8	1.108317	819,390.00	1.108317	96	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	224183.5	2.91295	298,883.00	2.91295	75	50 - 150	0.0000	+/-0.50	
M6PF _D A	1285171	3.851417	1,173,486.00	3.851417	110	50 - 150	0.0000	+/-0.50	
M3PF _B S	189545.7	1.978033	190,139.00	1.978033	100	50 - 150	0.0000	+/-0.50	
M7PF _U nA	1593984	3.993983	1,524,213.00	3.993983	105	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	133931.1	3.493333	131,267.00	3.493333	102	50 - 150	0.0000	+/-0.50	
M5PF _P eA	800354	1.791367	823,921.00	1.791367	97	50 - 150	0.0000	+/-0.50	
M5PF _H xA	1092588	2.672333	1,131,820.00	2.672333	97	50 - 150	0.0000	+/-0.50	
M3PF _H xS	146323.1	3.266817	141,124.00	3.266833	104	50 - 150	0.0000	+/-0.50	
M4PF _H pA	1183194	3.2357	1,179,935.00	3.2357	100	50 - 150	0.0000	+/-0.50	
M8PFOA	1167697	3.50185	1,119,574.00	3.51015	104	50 - 150	-0.0083	+/-0.50	
M8PFOS	160631.8	3.692067	163,358.00	3.692083	98	50 - 150	0.0000	+/-0.50	
M9PFNA	1057855	3.693117	1,027,621.00	3.693117	103	50 - 150	0.0000	+/-0.50	
MPF _D oA	1685170	4.136817	1,594,256.00	4.136817	106	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	337675.2	4.00145	294,893.00	4.001467	115	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	365024.8	3.921883	301,628.00	3.921883	121	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-11 (24-36) (21J1956-12)			Lab File ID: 21J1956-12.d			Analyzed: 11/11/21 16:52			
M8FOSA	485829.4	4.044517	451,140.00	4.044517	108	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	199306.3	2.57895	207,338.00	2.58715	96	50 - 150	-0.0082	+/-0.50	
M2PFTA	1909308	4.378417	1,799,881.00	4.378417	106	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	242830.8	3.850917	225,194.00	3.850917	108	50 - 150	0.0000	+/-0.50	
MPFBA	848698.1	1.108317	819,390.00	1.108317	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	223907	2.91295	298,883.00	2.91295	75	50 - 150	0.0000	+/-0.50	
M6PFDA	1260048	3.851417	1,173,486.00	3.851417	107	50 - 150	0.0000	+/-0.50	
M3PFBS	192714.3	1.969733	190,139.00	1.978033	101	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1560199	3.993983	1,524,213.00	3.993983	102	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	125740.3	3.493333	131,267.00	3.493333	96	50 - 150	0.0000	+/-0.50	
M5PFPeA	836041.4	1.7826	823,921.00	1.791367	101	50 - 150	-0.0088	+/-0.50	
M5PFHxA	1137439	2.672333	1,131,820.00	2.672333	100	50 - 150	0.0000	+/-0.50	
M3PFHxS	151340.4	3.266817	141,124.00	3.266833	107	50 - 150	0.0000	+/-0.50	
M4PFHpA	1254696	3.2357	1,179,935.00	3.2357	106	50 - 150	0.0000	+/-0.50	
M8PFOA	1146112	3.50185	1,119,574.00	3.51015	102	50 - 150	-0.0083	+/-0.50	
M8PFOS	173557.9	3.692083	163,358.00	3.692083	106	50 - 150	0.0000	+/-0.50	
M9PFNA	1036416	3.693117	1,027,621.00	3.693117	101	50 - 150	0.0000	+/-0.50	
MPFDoA	1717631	4.136817	1,594,256.00	4.136817	108	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	299203.5	4.00145	294,893.00	4.001467	101	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	297533.9	3.921883	301,628.00	3.921883	99	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-12 (0-12) (21J1956-13)			Lab File ID: 21J1956-13.d			Analyzed: 11/11/21 16:59			
M8FOSA	474639.7	4.044517	451,140.00	4.044517	105	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	172621.5	2.58715	207,338.00	2.58715	83	50 - 150	0.0000	+/-0.50	
M2PFtA	1962283	4.378417	1,799,881.00	4.378417	109	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	223141.1	3.850917	225,194.00	3.850917	99	50 - 150	0.0000	+/-0.50	
MPFBA	789705.6	1.108317	819,390.00	1.108317	96	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	229325.6	2.91295	298,883.00	2.91295	77	50 - 150	0.0000	+/-0.50	
M6PFDA	1214168	3.851417	1,173,486.00	3.851417	103	50 - 150	0.0000	+/-0.50	
M3PFBS	186103	1.969733	190,139.00	1.978033	98	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1560272	3.993983	1,524,213.00	3.993983	102	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	111057.8	3.493333	131,267.00	3.493333	85	50 - 150	0.0000	+/-0.50	
M5PFPeA	791536.8	1.791367	823,921.00	1.791367	96	50 - 150	0.0000	+/-0.50	
M5PFHxA	1111418	2.672333	1,131,820.00	2.672333	98	50 - 150	0.0000	+/-0.50	
M3PFHxS	141970	3.266833	141,124.00	3.266833	101	50 - 150	0.0000	+/-0.50	
M4PFHpA	1170156	3.2357	1,179,935.00	3.2357	99	50 - 150	0.0000	+/-0.50	
M8PFOA	1152937	3.50185	1,119,574.00	3.51015	103	50 - 150	-0.0083	+/-0.50	
M8PFOS	162945.1	3.692083	163,358.00	3.692083	100	50 - 150	0.0000	+/-0.50	
M9PFNA	991292.8	3.693117	1,027,621.00	3.693117	96	50 - 150	0.0000	+/-0.50	
MPFDoA	1632505	4.136817	1,594,256.00	4.136817	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	290320.7	4.00145	294,893.00	4.001467	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	338655.1	3.921883	301,628.00	3.921883	112	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-12 (12-24) (21J1956-14)			Lab File ID: 21J1956-14.d			Analyzed: 11/11/21 17:06			
M8FOSA	376337.6	4.044517	451,140.00	4.044517	83	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	152982.1	2.58715	207,338.00	2.58715	74	50 - 150	0.0000	+/-0.50	
M2PFTA	1525280	4.378417	1,799,881.00	4.378417	85	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	176625.6	3.850917	225,194.00	3.850917	78	50 - 150	0.0000	+/-0.50	
MPFBA	665674.9	1.108317	819,390.00	1.108317	81	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	194341.9	2.91295	298,883.00	2.91295	65	50 - 150	0.0000	+/-0.50	
M6PFDA	1059624	3.851417	1,173,486.00	3.851417	90	50 - 150	0.0000	+/-0.50	
M3PFBS	156145.3	1.978033	190,139.00	1.978033	82	50 - 150	0.0000	+/-0.50	
M7PFUnA	1298792	3.993983	1,524,213.00	3.993983	85	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	95855.3	3.493333	131,267.00	3.493333	73	50 - 150	0.0000	+/-0.50	
M5PFPeA	675211.3	1.791367	823,921.00	1.791367	82	50 - 150	0.0000	+/-0.50	
M5PFHxA	923184.7	2.672333	1,131,820.00	2.672333	82	50 - 150	0.0000	+/-0.50	
M3PFHxS	115656.3	3.266817	141,124.00	3.266833	82	50 - 150	0.0000	+/-0.50	
M4PFHpA	982914.6	3.2357	1,179,935.00	3.2357	83	50 - 150	0.0000	+/-0.50	
M8PFOA	968013.9	3.50185	1,119,574.00	3.51015	86	50 - 150	-0.0083	+/-0.50	
M8PFOS	133501.6	3.692083	163,358.00	3.692083	82	50 - 150	0.0000	+/-0.50	
M9PFNA	868888.7	3.693117	1,027,621.00	3.693117	85	50 - 150	0.0000	+/-0.50	
MPFDoA	1390873	4.136817	1,594,256.00	4.136817	87	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	258302.5	4.001467	294,893.00	4.001467	88	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	284678.4	3.921883	301,628.00	3.921883	94	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-13 (0-12) (21J1956-15)			Lab File ID: 21J1956-15.d			Analyzed: 11/11/21 17:13			
M8FOSA	447881.1	4.044517	451,140.00	4.044517	99	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	158854.9	2.58715	207,338.00	2.58715	77	50 - 150	0.0000	+/-0.50	
M2PFTA	1813499	4.378417	1,799,881.00	4.378417	101	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	249929.5	3.850917	225,194.00	3.850917	111	50 - 150	0.0000	+/-0.50	
MPFBA	765402.7	1.108317	819,390.00	1.108317	93	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	215408.5	2.91295	298,883.00	2.91295	72	50 - 150	0.0000	+/-0.50	
M6PFDA	1204123	3.851417	1,173,486.00	3.851417	103	50 - 150	0.0000	+/-0.50	
M3PFBS	176969.3	1.978033	190,139.00	1.978033	93	50 - 150	0.0000	+/-0.50	
M7PFUnA	1544081	3.993983	1,524,213.00	3.993983	101	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	118577	3.493333	131,267.00	3.493333	90	50 - 150	0.0000	+/-0.50	
M5PFPeA	767590.3	1.791367	823,921.00	1.791367	93	50 - 150	0.0000	+/-0.50	
M5PFHxA	1063232	2.672333	1,131,820.00	2.672333	94	50 - 150	0.0000	+/-0.50	
M3PFHxS	128939.2	3.266833	141,124.00	3.266833	91	50 - 150	0.0000	+/-0.50	
M4PFHpA	1135352	3.2357	1,179,935.00	3.2357	96	50 - 150	0.0000	+/-0.50	
M8PFOA	1110336	3.51015	1,119,574.00	3.51015	99	50 - 150	0.0000	+/-0.50	
M8PFOS	158902.4	3.692083	163,358.00	3.692083	97	50 - 150	0.0000	+/-0.50	
M9PFNA	970401.9	3.693117	1,027,621.00	3.693117	94	50 - 150	0.0000	+/-0.50	
MPFDoA	1650126	4.136817	1,594,256.00	4.136817	104	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	296944.2	4.001467	294,893.00	4.001467	101	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	352456	3.921883	301,628.00	3.921883	117	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-13 (12-24) (21J1956-16)			Lab File ID: 21J1956-16.d			Analyzed: 11/11/21 17:21			
M8FOSA	453776.7	4.044517	451,140.00	4.044517	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	164364.4	2.58715	207,338.00	2.58715	79	50 - 150	0.0000	+/-0.50	
M2PFTA	1827202	4.378417	1,799,881.00	4.378417	102	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	221423	3.850917	225,194.00	3.850917	98	50 - 150	0.0000	+/-0.50	
MPFBA	754889.3	1.108317	819,390.00	1.108317	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	215397.9	2.91295	298,883.00	2.91295	72	50 - 150	0.0000	+/-0.50	
M6PFDA	1157172	3.851417	1,173,486.00	3.851417	99	50 - 150	0.0000	+/-0.50	
M3PFBS	175004.9	1.969733	190,139.00	1.978033	92	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1578703	3.993983	1,524,213.00	3.993983	104	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	111356.4	3.493333	131,267.00	3.493333	85	50 - 150	0.0000	+/-0.50	
M5PFPeA	758558.1	1.791367	823,921.00	1.791367	92	50 - 150	0.0000	+/-0.50	
M5PFHxA	1037150	2.672333	1,131,820.00	2.672333	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	129651.5	3.266817	141,124.00	3.266833	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1084472	3.2357	1,179,935.00	3.2357	92	50 - 150	0.0000	+/-0.50	
M8PFOA	1060088	3.51015	1,119,574.00	3.51015	95	50 - 150	0.0000	+/-0.50	
M8PFOS	147923.8	3.692083	163,358.00	3.692083	91	50 - 150	0.0000	+/-0.50	
M9PFNA	977544.9	3.693117	1,027,621.00	3.693117	95	50 - 150	0.0000	+/-0.50	
MPFDoA	1555779	4.136817	1,594,256.00	4.136817	98	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	289618.5	4.00145	294,893.00	4.001467	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	347614.4	3.921883	301,628.00	3.921883	115	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-14 (0-12) (21J1956-17)			Lab File ID: 21J1956-17.d			Analyzed: 11/11/21 17:28			
M8FOSA	455708.5	4.044517	451,140.00	4.044517	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	160635	2.58715	207,338.00	2.58715	77	50 - 150	0.0000	+/-0.50	
M2PFTA	1953845	4.378417	1,799,881.00	4.378417	109	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	276181	3.850917	225,194.00	3.850917	123	50 - 150	0.0000	+/-0.50	
MPFBA	754950.8	1.108317	819,390.00	1.108317	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	209121.6	2.91295	298,883.00	2.91295	70	50 - 150	0.0000	+/-0.50	
M6PFDA	1225988	3.851417	1,173,486.00	3.851417	104	50 - 150	0.0000	+/-0.50	
M3PFBS	183708.5	1.969733	190,139.00	1.978033	97	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1571886	3.993983	1,524,213.00	3.993983	103	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	131856.6	3.493333	131,267.00	3.493333	100	50 - 150	0.0000	+/-0.50	
M5PFPeA	768699.4	1.791367	823,921.00	1.791367	93	50 - 150	0.0000	+/-0.50	
M5PFHxA	1057576	2.672333	1,131,820.00	2.672333	93	50 - 150	0.0000	+/-0.50	
M3PFHxS	134451.5	3.266817	141,124.00	3.266833	95	50 - 150	0.0000	+/-0.50	
M4PFHpA	1141337	3.2357	1,179,935.00	3.2357	97	50 - 150	0.0000	+/-0.50	
M8PFOA	1102608	3.50185	1,119,574.00	3.51015	98	50 - 150	-0.0083	+/-0.50	
M8PFOS	162612.5	3.692067	163,358.00	3.692083	100	50 - 150	0.0000	+/-0.50	
M9PFNA	1007498	3.693117	1,027,621.00	3.693117	98	50 - 150	0.0000	+/-0.50	
MPFDoA	1726254	4.136817	1,594,256.00	4.136817	108	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	356750.1	4.00145	294,893.00	4.001467	121	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	375912.1	3.921883	301,628.00	3.921883	125	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-14 (12-24) (21J1956-18)			Lab File ID: 21J1956-18.d			Analyzed: 11/11/21 17:35			
M8FOSA	442097.5	4.044517	451,140.00	4.044517	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	164635.4	2.58715	207,338.00	2.58715	79	50 - 150	0.0000	+/-0.50	
M2PFTA	2016438	4.378417	1,799,881.00	4.378417	112	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	246189.3	3.850917	225,194.00	3.850917	109	50 - 150	0.0000	+/-0.50	
MPFBA	765061.5	1.108317	819,390.00	1.108317	93	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	218974.1	2.91295	298,883.00	2.91295	73	50 - 150	0.0000	+/-0.50	
M6PFDA	1211749	3.851417	1,173,486.00	3.851417	103	50 - 150	0.0000	+/-0.50	
M3PFBS	186377.3	1.969733	190,139.00	1.978033	98	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1630879	3.993983	1,524,213.00	3.993983	107	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	127310.5	3.493333	131,267.00	3.493333	97	50 - 150	0.0000	+/-0.50	
M5PFPeA	767096.2	1.791367	823,921.00	1.791367	93	50 - 150	0.0000	+/-0.50	
M5PFHxA	1068973	2.672333	1,131,820.00	2.672333	94	50 - 150	0.0000	+/-0.50	
M3PFHxS	136860.4	3.266817	141,124.00	3.266833	97	50 - 150	0.0000	+/-0.50	
M4PFHpA	1109537	3.2357	1,179,935.00	3.2357	94	50 - 150	0.0000	+/-0.50	
M8PFOA	1117500	3.50185	1,119,574.00	3.51015	100	50 - 150	-0.0083	+/-0.50	
M8PFOS	157215.6	3.692083	163,358.00	3.692083	96	50 - 150	0.0000	+/-0.50	
M9PFNA	981029.1	3.693117	1,027,621.00	3.693117	95	50 - 150	0.0000	+/-0.50	
MPFDoA	1680807	4.136817	1,594,256.00	4.136817	105	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	316662.5	4.00145	294,893.00	4.001467	107	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	360221.2	3.921883	301,628.00	3.921883	119	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-15 (0-12) (21J1956-19)			Lab File ID: 21J1956-19.d		Analyzed: 11/11/21 17:42				
M8FOSA	491143.2	4.044517	451,140.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	167867.9	2.58715	207,338.00	2.58715	81	50 - 150	0.0000	+/-0.50	
M2PFTA	2039513	4.370283	1,799,881.00	4.378417	113	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	286102	3.850917	225,194.00	3.850917	127	50 - 150	0.0000	+/-0.50	
MPFBA	813975.9	1.108317	819,390.00	1.108317	99	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	227946.1	2.91295	298,883.00	2.91295	76	50 - 150	0.0000	+/-0.50	
M6PFDA	1285802	3.851417	1,173,486.00	3.851417	110	50 - 150	0.0000	+/-0.50	
M3PFBS	195855	1.969733	190,139.00	1.978033	103	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1686694	3.993983	1,524,213.00	3.993983	111	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	139680.4	3.493333	131,267.00	3.493333	106	50 - 150	0.0000	+/-0.50	
M5PFPeA	825599.9	1.791367	823,921.00	1.791367	100	50 - 150	0.0000	+/-0.50	
M5PFHxA	1145822	2.672333	1,131,820.00	2.672333	101	50 - 150	0.0000	+/-0.50	
M3PFHxS	145264.3	3.266817	141,124.00	3.266833	103	50 - 150	0.0000	+/-0.50	
M4PFHpA	1235120	3.2357	1,179,935.00	3.2357	105	50 - 150	0.0000	+/-0.50	
M8PFOA	1165221	3.50185	1,119,574.00	3.51015	104	50 - 150	-0.0083	+/-0.50	
M8PFOS	163323.4	3.692083	163,358.00	3.692083	100	50 - 150	0.0000	+/-0.50	
M9PFNA	1077894	3.693117	1,027,621.00	3.693117	105	50 - 150	0.0000	+/-0.50	
MPFDoA	1713026	4.136817	1,594,256.00	4.136817	107	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	342768.5	4.001467	294,893.00	4.001467	116	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	392264.2	3.921883	301,628.00	3.921883	130	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-15 (12-24) (21J1956-20)			Lab File ID: 21J1956-20.d			Analyzed: 11/11/21 17:49			
M8FOSA	507128.2	4.044517	451,140.00	4.044517	112	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	179780.1	2.58715	207,338.00	2.58715	87	50 - 150	0.0000	+/-0.50	
M2PF _T A	2191723	4.370283	1,799,881.00	4.378417	122	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	291218.2	3.850917	225,194.00	3.850917	129	50 - 150	0.0000	+/-0.50	
MPFBA	821166.8	1.108317	819,390.00	1.108317	100	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	241103.7	2.91295	298,883.00	2.91295	81	50 - 150	0.0000	+/-0.50	
M6PFDA	1411009	3.851417	1,173,486.00	3.851417	120	50 - 150	0.0000	+/-0.50	
M3PFBS	200881	1.969733	190,139.00	1.978033	106	50 - 150	-0.0083	+/-0.50	
M7PFU _n A	1866387	3.993983	1,524,213.00	3.993983	122	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	135193.2	3.493333	131,267.00	3.493333	103	50 - 150	0.0000	+/-0.50	
M5PFPeA	865061.4	1.791367	823,921.00	1.791367	105	50 - 150	0.0000	+/-0.50	
M5PFH _x A	1189702	2.672333	1,131,820.00	2.672333	105	50 - 150	0.0000	+/-0.50	
M3PFH _x S	155039.2	3.266817	141,124.00	3.266833	110	50 - 150	0.0000	+/-0.50	
M4PFH _p A	1296009	3.2357	1,179,935.00	3.2357	110	50 - 150	0.0000	+/-0.50	
M8PFOA	1240345	3.50185	1,119,574.00	3.51015	111	50 - 150	-0.0083	+/-0.50	
M8PFOS	171780.9	3.692083	163,358.00	3.692083	105	50 - 150	0.0000	+/-0.50	
M9PFNA	1126958	3.693117	1,027,621.00	3.693117	110	50 - 150	0.0000	+/-0.50	
MPFDoA	1775433	4.136817	1,594,256.00	4.136817	111	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	387436.4	4.001467	294,893.00	4.001467	131	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	394838.4	3.921883	301,628.00	3.921883	131	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
30MTN S-16 (0-12) (21J1956-21)			Lab File ID: 21J1956-21.d			Analyzed: 11/10/21 20:55			
M8FOSA	467515.1	4.036517	393,192.00	4.044517	119	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	156362.1	2.603583	160,692.00	2.636633	97	50 - 150	-0.0330	+/-0.50	
M2PFTA	1882358	4.386533	1,595,192.00	4.39465	118	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	243062.4	3.858883	226,739.00	3.866833	107	50 - 150	-0.0080	+/-0.50	
MPFBA	784594.8	1.116633	677,435.00	1.116633	116	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	269300.7	2.929717	230,491.00	2.945967	117	50 - 150	-0.0162	+/-0.50	
M6PFDA	1209772	3.851417	1,018,454.00	3.859367	119	50 - 150	-0.0080	+/-0.50	
M3PFBS	179240.8	1.986217	149,326.00	2.011067	120	50 - 150	-0.0249	+/-0.50	
M7PFUnA	1508326	4.001983	1,365,067.00	4.009984	110	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	133246.6	3.501317	118,861.00	3.509617	112	50 - 150	-0.0083	+/-0.50	
M5PFPeA	778681.9	1.80795	668,163.00	1.824517	117	50 - 150	-0.0166	+/-0.50	
M5PFHxA	1038447	2.696967	913,090.00	2.722683	114	50 - 150	-0.0257	+/-0.50	
M3PFHxS	136958.8	3.276217	123,606.00	3.28425	111	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1120979	3.243783	947,771.00	3.251867	118	50 - 150	-0.0081	+/-0.50	
M8PFOA	1133529	3.51015	1,002,525.00	3.51815	113	50 - 150	-0.0080	+/-0.50	
M8PFOS	156538.8	3.700067	132,723.00	3.708283	118	50 - 150	-0.0082	+/-0.50	
M9PFNA	966415.9	3.7011	902,256.00	3.709283	107	50 - 150	-0.0082	+/-0.50	
MPFDoA	1644900	4.144834	1,387,824.00	4.153117	119	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	321328.9	4.00945	302,650.00	4.01745	106	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	379333.4	3.929883	280,463.00	3.937867	135	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Rinsate (21J1956-22) Lab File ID: 21J1956-22R.d Analyzed: 11/09/21 17:22									
M8FOSA	400929.8	4.0525	365,630.00	4.0525	110	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	111025.9	2.62	176,034.00	2.6118	63	50 - 150	0.0082	+/-0.50	
M2PFTA	1382166	4.386533	1,459,197.00	4.386533	95	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	149715.7	3.858883	180,557.00	3.858883	83	50 - 150	0.0000	+/-0.50	
MPFBA	797704.1	1.116633	665,049.00	1.108317	120	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	340319.9	2.937833	305,122.00	2.929717	112	50 - 150	0.0081	+/-0.50	
M6PFDA	940653.9	3.851417	906,735.00	3.851417	104	50 - 150	0.0000	+/-0.50	
M3PFBS	175793.2	2.002783	160,570.00	1.9945	109	50 - 150	0.0083	+/-0.50	
M7PFUnA	1174366	4.001983	1,106,943.00	4.001983	106	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	81837.35	3.501317	113,759.00	3.501317	72	50 - 150	0.0000	+/-0.50	
M5PFPeA	759441.4	1.80795	686,897.00	1.80795	111	50 - 150	0.0000	+/-0.50	
M5PFHxA	1021354	2.706317	886,969.00	2.69695	115	50 - 150	0.0094	+/-0.50	
M3PFHxS	134963	3.2762	125,041.00	3.2762	108	50 - 150	0.0000	+/-0.50	
M4PFHpA	1078497	3.243767	931,364.00	3.243783	116	50 - 150	0.0000	+/-0.50	
M8PFOA	1013245	3.51015	889,744.00	3.51015	114	50 - 150	0.0000	+/-0.50	
M8PFOS	144835.8	3.70005	133,024.00	3.70005	109	50 - 150	0.0000	+/-0.50	
M9PFNA	942434.4	3.7011	809,610.00	3.7011	116	50 - 150	0.0000	+/-0.50	
MPFDoA	1232486	4.144834	1,183,580.00	4.144834	104	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	321566.3	4.00945	248,809.00	4.00945	129	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	268805.9	3.929867	276,127.00	3.929867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Trip Blank (21J1956-23)			Lab File ID: 21J1956-23R.d			Analyzed: 11/09/21 17:29			
M8FOSA	340741.2	4.0525	365,630.00	4.0525	93	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	135829.4	2.6118	176,034.00	2.6118	77	50 - 150	0.0000	+/-0.50	
M2PFTA	1176574	4.386533	1,459,197.00	4.386533	81	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	144277.5	3.858883	180,557.00	3.858883	80	50 - 150	0.0000	+/-0.50	
MPFBA	749983.8	1.108317	665,049.00	1.108317	113	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	306822.3	2.929717	305,122.00	2.929717	101	50 - 150	0.0000	+/-0.50	
M6PFDA	947028.4	3.851417	906,735.00	3.851417	104	50 - 150	0.0000	+/-0.50	
M3PFBS	159462.9	1.9945	160,570.00	1.9945	99	50 - 150	0.0000	+/-0.50	
M7PFUnA	1164217	4.001983	1,106,943.00	4.001983	105	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	83457.82	3.501317	113,759.00	3.501317	73	50 - 150	0.0000	+/-0.50	
M5PFPeA	699375.4	1.80795	686,897.00	1.80795	102	50 - 150	0.0000	+/-0.50	
M5PFHxA	920151.3	2.706317	886,969.00	2.69695	104	50 - 150	0.0094	+/-0.50	
M3PFHxS	122931.5	3.2762	125,041.00	3.2762	98	50 - 150	0.0000	+/-0.50	
M4PFHpA	963362.1	3.243767	931,364.00	3.243783	103	50 - 150	0.0000	+/-0.50	
M8PFOA	944542.4	3.51015	889,744.00	3.51015	106	50 - 150	0.0000	+/-0.50	
M8PFOS	127118.8	3.70005	133,024.00	3.70005	96	50 - 150	0.0000	+/-0.50	
M9PFNA	834182.1	3.7011	809,610.00	3.7011	103	50 - 150	0.0000	+/-0.50	
MPFDoA	1079623	4.144834	1,183,580.00	4.144834	91	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	222588.7	4.00945	248,809.00	4.00945	89	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	234278.3	3.929867	276,127.00	3.929867	85	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Field Blank (21J1956-24)									
			Lab File ID: 21J1956-24R.d			Analyzed: 11/09/21 17:36			
M8FOSA	339264.9	4.0525	365,630.00	4.0525	93	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	148174.9	2.6118	176,034.00	2.6118	84	50 - 150	0.0000	+/-0.50	
M2PFTA	1134336	4.386533	1,459,197.00	4.386533	78	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	143028.1	3.850917	180,557.00	3.858883	79	50 - 150	-0.0080	+/-0.50	
MPFBA	760092.3	1.116633	665,049.00	1.108317	114	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	343839.6	2.937833	305,122.00	2.929717	113	50 - 150	0.0081	+/-0.50	
M6PFDA	1028092	3.851417	906,735.00	3.851417	113	50 - 150	0.0000	+/-0.50	
M3PFBS	167608	1.9945	160,570.00	1.9945	104	50 - 150	0.0000	+/-0.50	
M7PFUnA	1189763	4.001983	1,106,943.00	4.001983	107	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	94602.17	3.501317	113,759.00	3.501317	83	50 - 150	0.0000	+/-0.50	
M5PFPeA	732102.5	1.80795	686,897.00	1.80795	107	50 - 150	0.0000	+/-0.50	
M5PFHxA	963471.1	2.706317	886,969.00	2.69695	109	50 - 150	0.0094	+/-0.50	
M3PFHxS	123520.6	3.2762	125,041.00	3.2762	99	50 - 150	0.0000	+/-0.50	
M4PFHpA	1036753	3.243767	931,364.00	3.243783	111	50 - 150	0.0000	+/-0.50	
M8PFOA	980893.4	3.51015	889,744.00	3.51015	110	50 - 150	0.0000	+/-0.50	
M8PFOS	137615.6	3.70005	133,024.00	3.70005	103	50 - 150	0.0000	+/-0.50	
M9PFNA	893490.8	3.7011	809,610.00	3.7011	110	50 - 150	0.0000	+/-0.50	
MPFDoA	1056991	4.144834	1,183,580.00	4.144834	89	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	211506.3	4.00945	248,809.00	4.00945	85	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	228144.5	3.929867	276,127.00	3.929867	83	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Equipment Blank (21J1956-25)			Lab File ID: 21J1956-25R.d			Analyzed: 11/09/21 17:44			
M8FOSA	378051	4.0525	365,630.00	4.0525	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	155424.7	2.6118	176,034.00	2.6118	88	50 - 150	0.0000	+/-0.50	
M2PFTA	1268109	4.3784	1,459,197.00	4.386533	87	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	163948.2	3.858883	180,557.00	3.858883	91	50 - 150	0.0000	+/-0.50	
MPFBA	783300.9	1.116633	665,049.00	1.108317	118	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	335275.5	2.937833	305,122.00	2.929717	110	50 - 150	0.0081	+/-0.50	
M6PFDA	982797.4	3.851417	906,735.00	3.851417	108	50 - 150	0.0000	+/-0.50	
M3PFBS	171763	1.9945	160,570.00	1.9945	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1143485	4.001983	1,106,943.00	4.001983	103	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	106502.1	3.501317	113,759.00	3.501317	94	50 - 150	0.0000	+/-0.50	
M5PFPeA	755970.5	1.80795	686,897.00	1.80795	110	50 - 150	0.0000	+/-0.50	
M5PFHxA	1007134	2.706317	886,969.00	2.69695	114	50 - 150	0.0094	+/-0.50	
M3PFHxS	133211.4	3.2762	125,041.00	3.2762	107	50 - 150	0.0000	+/-0.50	
M4PFHpA	1050795	3.243767	931,364.00	3.243783	113	50 - 150	0.0000	+/-0.50	
M8PFOA	979203.8	3.51015	889,744.00	3.51015	110	50 - 150	0.0000	+/-0.50	
M8PFOS	136748.9	3.70005	133,024.00	3.70005	103	50 - 150	0.0000	+/-0.50	
M9PFNA	880206.6	3.7011	809,610.00	3.7011	109	50 - 150	0.0000	+/-0.50	
MPFDoA	1170026	4.144834	1,183,580.00	4.144834	99	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	222769.6	4.00945	248,809.00	4.00945	90	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	252765.1	3.929867	276,127.00	3.929867	92	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B293915-BLK1)			Lab File ID: B293915-BLK1.d			Analyzed: 11/05/21 19:57			
M8FOSA	473461.6	4.052516	481,286.00	4.052533	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	207492	2.636633	215,862.00	2.636633	96	50 - 150	0.0000	+/-0.50	
M2PF _T A	1687124	4.394667	1,804,561.00	4.394667	93	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	220472.8	3.86685	220,923.00	3.86685	100	50 - 150	0.0000	+/-0.50	
MPFBA	954889.8	1.116633	811,332.00	1.116633	118	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	330879.8	2.954083	309,447.00	2.954083	107	50 - 150	0.0000	+/-0.50	
M6PFDA	1290881	3.867333	1,129,918.00	3.86735	114	50 - 150	0.0000	+/-0.50	
M3PFBS	199482.6	2.019367	184,758.00	2.011083	108	50 - 150	0.0083	+/-0.50	
M7PFU _n A	1568073	4.009984	1,546,286.00	4.01	101	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	128699.9	3.509617	126,713.00	3.509633	102	50 - 150	0.0000	+/-0.50	
M5PFPeA	903178.3	1.824517	823,261.00	1.824517	110	50 - 150	0.0000	+/-0.50	
M5PFH _x A	1234317	2.730867	1,135,918.00	2.730867	109	50 - 150	0.0000	+/-0.50	
M3PFH _x S	154725.5	3.2923	141,909.00	3.2923	109	50 - 150	0.0000	+/-0.50	
M4PFH _p A	1235323	3.25995	1,140,339.00	3.25995	108	50 - 150	0.0000	+/-0.50	
M8PFOA	1215850	3.526133	1,111,486.00	3.52615	109	50 - 150	0.0000	+/-0.50	
M8PFOS	168752	3.7083	157,825.00	3.7083	107	50 - 150	0.0000	+/-0.50	
M9PFNA	1238674	3.709283	1,084,617.00	3.7093	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1473479	4.153133	1,562,612.00	4.153133	94	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	271632.3	4.01745	278,916.00	4.017467	97	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	296787.3	3.937867	307,136.00	3.937883	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B293915-BS1) Lab File ID: B293915-BS1.d Analyzed: 11/05/21 19:43									
M8FOSA	487667.6	4.052533	481,286.00	4.052533	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	222092.3	2.636633	215,862.00	2.636633	103	50 - 150	0.0000	+/-0.50	
M2PFTA	1823129	4.394683	1,804,561.00	4.394667	101	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	233147.5	3.86685	220,923.00	3.86685	106	50 - 150	0.0000	+/-0.50	
MPFBA	1033599	1.116633	811,332.00	1.116633	127	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	300276.3	2.954083	309,447.00	2.954083	97	50 - 150	0.0000	+/-0.50	
M6PFDA	1421236	3.867333	1,129,918.00	3.86735	126	50 - 150	0.0000	+/-0.50	
M3PFBS	211199.7	2.019367	184,758.00	2.011083	114	50 - 150	0.0083	+/-0.50	
M7PFUnA	1650475	4.01	1,546,286.00	4.01	107	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	142118.9	3.509633	126,713.00	3.509633	112	50 - 150	0.0000	+/-0.50	
M5PFPeA	975241.5	1.824517	823,261.00	1.824517	118	50 - 150	0.0000	+/-0.50	
M5PFHxA	1320510	2.730867	1,135,918.00	2.730867	116	50 - 150	0.0000	+/-0.50	
M3PFHxS	167339.9	3.2923	141,909.00	3.2923	118	50 - 150	0.0000	+/-0.50	
M4PFHpA	1335216	3.25995	1,140,339.00	3.25995	117	50 - 150	0.0000	+/-0.50	
M8PFOA	1382607	3.52615	1,111,486.00	3.52615	124	50 - 150	0.0000	+/-0.50	
M8PFOS	184400.7	3.7083	157,825.00	3.7083	117	50 - 150	0.0000	+/-0.50	
M9PFNA	1328009	3.7093	1,084,617.00	3.7093	122	50 - 150	0.0000	+/-0.50	
MPFDoA	1736829	4.153133	1,562,612.00	4.153133	111	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	275734	4.017467	278,916.00	4.017467	99	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	324368.5	3.937883	307,136.00	3.937883	106	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B293915-BSD1)			Lab File ID: B293915-BSD1.d			Analyzed: 11/05/21 19:50			
M8FOSA	435788.5	4.052516	481,286.00	4.052533	91	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	192800.9	2.636633	215,862.00	2.636633	89	50 - 150	0.0000	+/-0.50	
M2PFTA	1744195	4.394667	1,804,561.00	4.394667	97	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	216087	3.86685	220,923.00	3.86685	98	50 - 150	0.0000	+/-0.50	
MPFBA	885518.1	1.116633	811,332.00	1.116633	109	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	301239.3	2.954083	309,447.00	2.954083	97	50 - 150	0.0000	+/-0.50	
M6PFDA	1172512	3.867333	1,129,918.00	3.86735	104	50 - 150	0.0000	+/-0.50	
M3PFBS	184934.7	2.019367	184,758.00	2.011083	100	50 - 150	0.0083	+/-0.50	
M7PFUnA	1504432	4.009984	1,546,286.00	4.01	97	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	119318.9	3.509617	126,713.00	3.509633	94	50 - 150	0.0000	+/-0.50	
M5PFPeA	840424.3	1.824517	823,261.00	1.824517	102	50 - 150	0.0000	+/-0.50	
M5PFHxA	1136480	2.730867	1,135,918.00	2.730867	100	50 - 150	0.0000	+/-0.50	
M3PFHxS	144116.9	3.2923	141,909.00	3.2923	102	50 - 150	0.0000	+/-0.50	
M4PFHpA	1149070	3.25995	1,140,339.00	3.25995	101	50 - 150	0.0000	+/-0.50	
M8PFOA	1130296	3.52615	1,111,486.00	3.52615	102	50 - 150	0.0000	+/-0.50	
M8PFOS	161194.4	3.7083	157,825.00	3.7083	102	50 - 150	0.0000	+/-0.50	
M9PFNA	1137706	3.709283	1,084,617.00	3.7093	105	50 - 150	0.0000	+/-0.50	
MPFDoA	1498372	4.153133	1,562,612.00	4.153133	96	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	274626.9	4.01745	278,916.00	4.017467	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	284675.4	3.937883	307,136.00	3.937883	93	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294033-BLK1)			Lab File ID: B294033-BLK1.d			Analyzed: 11/10/21 19:14			
M8FOSA	429016.3	4.044517	393,192.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	177817.3	2.636617	160,692.00	2.644867	111	50 - 150	-0.0082	+/-0.50	
M2PFTA	1578890	4.39465	1,595,192.00	4.39465	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205446.4	3.866833	226,739.00	3.866833	91	50 - 150	0.0000	+/-0.50	
MPFBA	706423.2	1.116633	677,435.00	1.116633	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	265918.4	2.954083	230,491.00	2.954083	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1102411	3.867333	1,018,454.00	3.867333	108	50 - 150	0.0000	+/-0.50	
M3PFBS	159121.3	2.019367	149,326.00	2.019367	107	50 - 150	0.0000	+/-0.50	
M7PFUnA	1385367	4.009984	1,365,067.00	4.017967	101	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117891.1	3.509617	118,861.00	3.509617	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	696645.8	1.824517	668,163.00	1.8328	104	50 - 150	-0.0083	+/-0.50	
M5PFHxA	974444.4	2.730867	913,090.00	2.730867	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	130763.8	3.28425	123,606.00	3.2923	106	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1002456	3.25995	947,771.00	3.25995	106	50 - 150	0.0000	+/-0.50	
M8PFOA	991618.7	3.526133	1,002,525.00	3.526133	99	50 - 150	0.0000	+/-0.50	
M8PFOS	149775.8	3.708283	132,723.00	3.708283	113	50 - 150	0.0000	+/-0.50	
M9PFNA	1028584	3.709283	902,256.00	3.709283	114	50 - 150	0.0000	+/-0.50	
MPFDoA	1414039	4.153117	1,387,824.00	4.153117	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	267962	4.01745	302,650.00	4.025434	89	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	271198.5	3.945867	280,463.00	3.945867	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294033-BS1)			Lab File ID: B294033-BS1.d			Analyzed: 11/10/21 19:07			
M8FOSA	507811.9	4.044517	393,192.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	201720	2.636633	160,692.00	2.644867	126	50 - 150	-0.0082	+/-0.50	
M2PFTA	1920522	4.394667	1,595,192.00	4.39465	120	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	228061	3.866833	226,739.00	3.866833	101	50 - 150	0.0000	+/-0.50	
MPFBA	819892.8	1.116633	677,435.00	1.116633	121	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	293902.4	2.954083	230,491.00	2.954083	128	50 - 150	0.0000	+/-0.50	
M6PFDA	1276603	3.867333	1,018,454.00	3.867333	125	50 - 150	0.0000	+/-0.50	
M3PFBS	195916.2	2.019367	149,326.00	2.019367	131	50 - 150	0.0000	+/-0.50	
M7PFUnA	1573698	4.009984	1,365,067.00	4.017967	115	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	137275.6	3.509617	118,861.00	3.509617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	812180	1.824517	668,163.00	1.8328	122	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1130201	2.730867	913,090.00	2.730867	124	50 - 150	0.0000	+/-0.50	
M3PFHxS	156806.5	3.2923	123,606.00	3.2923	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1173305	3.25995	947,771.00	3.25995	124	50 - 150	0.0000	+/-0.50	
M8PFOA	1213635	3.526133	1,002,525.00	3.526133	121	50 - 150	0.0000	+/-0.50	
M8PFOS	177309.4	3.708283	132,723.00	3.708283	134	50 - 150	0.0000	+/-0.50	
M9PFNA	1134643	3.709283	902,256.00	3.709283	126	50 - 150	0.0000	+/-0.50	
MPFDoA	1728049	4.153117	1,387,824.00	4.153117	125	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300634.3	4.01745	302,650.00	4.025434	99	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	318777.5	3.945867	280,463.00	3.945867	114	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294034-BLK1)									
			Lab File ID: B294034-BLK1.d			Analyzed: 11/11/21 15:02			
M8FOSA	464275.4	4.044517	451,140.00	4.044517	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	175119.4	2.595367	207,338.00	2.595367	84	50 - 150	0.0000	+/-0.50	
M2PFTA	1882375	4.378417	1,799,881.00	4.378417	105	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205608.8	3.850917	225,194.00	3.850917	91	50 - 150	0.0000	+/-0.50	
MPFBA	831358	1.108317	819,390.00	1.108317	101	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	248823.7	2.921133	298,883.00	2.921133	83	50 - 150	0.0000	+/-0.50	
M6PFDA	1298873	3.851417	1,173,486.00	3.851417	111	50 - 150	0.0000	+/-0.50	
M3PFBS	197197.8	1.986217	190,139.00	1.978033	104	50 - 150	0.0082	+/-0.50	
M7PFUnA	1569260	4.001983	1,524,213.00	4.001983	103	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	121362.6	3.493333	131,267.00	3.493333	92	50 - 150	0.0000	+/-0.50	
M5PFPeA	845317.7	1.79965	823,921.00	1.791367	103	50 - 150	0.0083	+/-0.50	
M5PFHxA	1170854	2.680533	1,131,820.00	2.680533	103	50 - 150	0.0000	+/-0.50	
M3PFHxS	149913.2	3.266817	141,124.00	3.266833	106	50 - 150	0.0000	+/-0.50	
M4PFHpA	1260995	3.2357	1,179,935.00	3.2357	107	50 - 150	0.0000	+/-0.50	
M8PFOA	1135770	3.51015	1,119,574.00	3.51015	101	50 - 150	0.0000	+/-0.50	
M8PFOS	176013.1	3.692083	163,358.00	3.692083	108	50 - 150	0.0000	+/-0.50	
M9PFNA	1092639	3.693117	1,027,621.00	3.693117	106	50 - 150	0.0000	+/-0.50	
MPFDoA	1646766	4.136817	1,594,256.00	4.136817	103	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	296149.7	4.00945	294,893.00	4.001467	100	50 - 150	0.0080	+/-0.50	
d3-NMeFOSAA	293473.2	3.929883	301,628.00	3.929883	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294034-BS1)									
			Lab File ID: B294034-BS1.d			Analyzed: 11/11/21 14:55			
M8FOSA	478732.2	4.044517	451,140.00	4.044517	106	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	172330.2	2.595367	207,338.00	2.595367	83	50 - 150	0.0000	+/-0.50	
M2PFTA	2061948	4.378417	1,799,881.00	4.378417	115	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	214688.6	3.850917	225,194.00	3.850917	95	50 - 150	0.0000	+/-0.50	
MPFBA	872012.7	1.108317	819,390.00	1.108317	106	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	259805.1	2.921133	298,883.00	2.921133	87	50 - 150	0.0000	+/-0.50	
M6PFDA	1290007	3.851417	1,173,486.00	3.851417	110	50 - 150	0.0000	+/-0.50	
M3PFBS	205992.5	1.978033	190,139.00	1.978033	108	50 - 150	0.0000	+/-0.50	
M7PFUnA	1702359	4.001983	1,524,213.00	4.001983	112	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	119222.8	3.493333	131,267.00	3.493333	91	50 - 150	0.0000	+/-0.50	
M5PFPeA	885906.7	1.79965	823,921.00	1.791367	108	50 - 150	0.0083	+/-0.50	
M5PFHxA	1232148	2.680533	1,131,820.00	2.680533	109	50 - 150	0.0000	+/-0.50	
M3PFHxS	153694.2	3.266833	141,124.00	3.266833	109	50 - 150	0.0000	+/-0.50	
M4PFHpA	1287061	3.2357	1,179,935.00	3.2357	109	50 - 150	0.0000	+/-0.50	
M8PFOA	1243128	3.51015	1,119,574.00	3.51015	111	50 - 150	0.0000	+/-0.50	
M8PFOS	174240.6	3.692083	163,358.00	3.692083	107	50 - 150	0.0000	+/-0.50	
M9PFNA	1109024	3.693117	1,027,621.00	3.693117	108	50 - 150	0.0000	+/-0.50	
MPFDoA	1741521	4.136817	1,594,256.00	4.136817	109	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	289329.7	4.00945	294,893.00	4.001467	98	50 - 150	0.0080	+/-0.50	
d3-NMeFOSAA	294036.4	3.929883	301,628.00	3.929883	97	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B294034-MS1)									
			Lab File ID: B294034-MS1.d			Analyzed: 11/11/21 15:09			
M8FOSA	438664.1	4.044517	451,140.00	4.044517	97	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	144048.4	2.595367	207,338.00	2.595367	69	50 - 150	0.0000	+/-0.50	
M2PFTA	1748276	4.378417	1,799,881.00	4.378417	97	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	200171.6	3.850917	225,194.00	3.850917	89	50 - 150	0.0000	+/-0.50	
MPFBA	706924.8	1.108317	819,390.00	1.108317	86	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	209958.9	2.921133	298,883.00	2.921133	70	50 - 150	0.0000	+/-0.50	
M6PFDA	1143065	3.851417	1,173,486.00	3.851417	97	50 - 150	0.0000	+/-0.50	
M3PFBS	175788.1	1.978033	190,139.00	1.978033	92	50 - 150	0.0000	+/-0.50	
M7PFUnA	1452975	4.001983	1,524,213.00	4.001983	95	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	104953	3.493333	131,267.00	3.493333	80	50 - 150	0.0000	+/-0.50	
M5PFPeA	747564.2	1.79965	823,921.00	1.791367	91	50 - 150	0.0083	+/-0.50	
M5PFHxA	1041713	2.680533	1,131,820.00	2.680533	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	126593.8	3.266833	141,124.00	3.266833	90	50 - 150	0.0000	+/-0.50	
M4PFHpA	1105582	3.2357	1,179,935.00	3.2357	94	50 - 150	0.0000	+/-0.50	
M8PFOA	1066548	3.51015	1,119,574.00	3.51015	95	50 - 150	0.0000	+/-0.50	
M8PFOS	126879.3	3.692083	163,358.00	3.692083	78	50 - 150	0.0000	+/-0.50	
M9PFNA	828727.8	3.693117	1,027,621.00	3.693117	81	50 - 150	0.0000	+/-0.50	
MPFDoA	1520724	4.136817	1,594,256.00	4.136817	95	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	279209.2	4.00945	294,893.00	4.001467	95	50 - 150	0.0080	+/-0.50	
d3-NMeFOSAA	338331.7	3.929883	301,628.00	3.929883	112	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B294034-MSD1)									
			Lab File ID: B294034-MSD1.d			Analyzed: 11/11/21 15:16			
M8FOSA	444071	4.044517	451,140.00	4.044517	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	156710.8	2.595367	207,338.00	2.595367	76	50 - 150	0.0000	+/-0.50	
M2PFTA	1812574	4.378417	1,799,881.00	4.378417	101	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	216073.1	3.850917	225,194.00	3.850917	96	50 - 150	0.0000	+/-0.50	
MPFBA	756292.9	1.108317	819,390.00	1.108317	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	234136.7	2.921133	298,883.00	2.921133	78	50 - 150	0.0000	+/-0.50	
M6PFDA	1202675	3.851417	1,173,486.00	3.851417	102	50 - 150	0.0000	+/-0.50	
M3PFBS	185095.6	1.978033	190,139.00	1.978033	97	50 - 150	0.0000	+/-0.50	
M7PFUnA	1528256	4.001983	1,524,213.00	4.001983	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	108907.6	3.493333	131,267.00	3.493333	83	50 - 150	0.0000	+/-0.50	
M5PFPeA	770192.4	1.791367	823,921.00	1.791367	93	50 - 150	0.0000	+/-0.50	
M5PFHxA	1066654	2.680533	1,131,820.00	2.680533	94	50 - 150	0.0000	+/-0.50	
M3PFHxS	135515.7	3.266833	141,124.00	3.266833	96	50 - 150	0.0000	+/-0.50	
M4PFHpA	1123983	3.2357	1,179,935.00	3.2357	95	50 - 150	0.0000	+/-0.50	
M8PFOA	1075653	3.51015	1,119,574.00	3.51015	96	50 - 150	0.0000	+/-0.50	
M8PFOS	126529.9	3.692083	163,358.00	3.692083	77	50 - 150	0.0000	+/-0.50	
M9PFNA	817698.3	3.693117	1,027,621.00	3.693117	80	50 - 150	0.0000	+/-0.50	
MPFDoA	1620186	4.136817	1,594,256.00	4.136817	102	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	293497.9	4.00945	294,893.00	4.001467	100	50 - 150	0.0080	+/-0.50	
d3-NMeFOSAA	338433.2	3.929883	301,628.00	3.929883	112	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294575-BLK1)			Lab File ID: B294575-BLK1.d			Analyzed: 11/15/21 18:58			
M8FOSA	407379.8	4.052516	311,249.00	4.052516	131	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	115365.3	2.678933	128,851.00	2.678933	90	50 - 150	0.0000	+/-0.50	
M2PFTA	1661229	4.4109	1,273,177.00	4.4109	130	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	141318.8	3.88305	145,046.00	3.88305	97	50 - 150	0.0000	+/-0.50	
MPFBA	678491	1.13325	515,200.00	1.13325	132	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	214410.4	2.978433	179,402.00	2.978433	120	50 - 150	0.0000	+/-0.50	
M6PFDA	1066047	3.883567	788,638.00	3.883567	135	50 - 150	0.0000	+/-0.50	
M3PFBS	153635.5	2.054933	117,778.00	2.044217	130	50 - 150	0.0107	+/-0.50	
M7PFUnA	1337448	4.03395	977,512.00	4.033967	137	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	77325.73	3.533583	83,394.00	3.5336	93	50 - 150	0.0000	+/-0.50	
M5PFPeA	676308.7	1.857667	516,196.00	1.857667	131	50 - 150	0.0000	+/-0.50	
M5PFHxA	957237.7	2.763583	711,163.00	2.763583	135	50 - 150	0.0000	+/-0.50	
M3PFHxS	128407.5	3.308383	92,621.00	3.308383	139	50 - 150	0.0000	+/-0.50	
M4PFHpA	994516	3.27725	719,839.00	3.27725	138	50 - 150	0.0000	+/-0.50	
M8PFOA	1014359	3.542117	739,739.00	3.542117	137	50 - 150	0.0000	+/-0.50	
M8PFOS	155679.5	3.724217	107,190.00	3.724233	145	50 - 150	0.0000	+/-0.50	
M9PFNA	1003805	3.725217	748,112.00	3.725217	134	50 - 150	0.0000	+/-0.50	
MPFDoA	1423902	4.169267	1,035,336.00	4.169267	138	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	225845.1	4.041433	196,430.00	4.041433	115	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	235990.4	3.96185	185,650.00	3.96185	127	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294575-BS1)									
			Lab File ID: B294575-BS1.d			Analyzed: 11/15/21 18:51			
M8FOSA	383667.2	4.052516	311,249.00	4.052516	123	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	103122.5	2.678933	128,851.00	2.678933	80	50 - 150	0.0000	+/-0.50	
M2PFTA	1641409	4.4109	1,273,177.00	4.4109	129	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	129779.3	3.88305	145,046.00	3.88305	89	50 - 150	0.0000	+/-0.50	
MPFBA	667425.6	1.13325	515,200.00	1.13325	130	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	200409.4	2.978433	179,402.00	2.978433	112	50 - 150	0.0000	+/-0.50	
M6PFDA	965228.1	3.883567	788,638.00	3.883567	122	50 - 150	0.0000	+/-0.50	
M3PFBS	144162.7	2.054933	117,778.00	2.044217	122	50 - 150	0.0107	+/-0.50	
M7PFUnA	1287194	4.033967	977,512.00	4.033967	132	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	78842.82	3.5336	83,394.00	3.5336	95	50 - 150	0.0000	+/-0.50	
M5PFPeA	649074.2	1.857667	516,196.00	1.857667	126	50 - 150	0.0000	+/-0.50	
M5PFHxA	902005.6	2.763583	711,163.00	2.763583	127	50 - 150	0.0000	+/-0.50	
M3PFHxS	123580	3.308383	92,621.00	3.308383	133	50 - 150	0.0000	+/-0.50	
M4PFHpA	932019.6	3.27725	719,839.00	3.27725	129	50 - 150	0.0000	+/-0.50	
M8PFOA	942549.8	3.542117	739,739.00	3.542117	127	50 - 150	0.0000	+/-0.50	
M8PFOS	134067.1	3.724233	107,190.00	3.724233	125	50 - 150	0.0000	+/-0.50	
M9PFNA	962039.8	3.725217	748,112.00	3.725217	129	50 - 150	0.0000	+/-0.50	
MPFDoA	1323406	4.169267	1,035,336.00	4.169267	128	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	218255.2	4.041433	196,430.00	4.041433	111	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	217418.1	3.96185	185,650.00	3.96185	117	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065097-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	430	0.8628989	0.81235		-14.0	30
Perfluorobutanesulfonic acid (PFBS)	A	444	381	0.9900012	0.9081413		-14.2	30
Perfluoropentanoic acid (PFPeA)	A	500	424	0.9353824	0.8669991		-15.2	30
Perfluorohexanoic acid (PFHxA)	A	500	428	0.86678	0.8235863		-14.5	30
11Cl-PF3OUdS (F53B Minor)	A	472	450	1.835659	1.769948		-4.7	30
9Cl-PF3ONS (F53B Major)	A	466	411	3.897292	3.435621		-11.7	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	399	1.602632	1.433889		-15.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	368	2.979159	0.1071095		-26.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	416	0.7665044	0.7407103		-13.3	30
Perfluorodecanoic acid (PFDA)	A	500	424	0.929213	0.877915		-15.2	30
Perfluorododecanoic acid (PFDoA)	A	500	391	0.9361562	0.7819657		-21.8	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	413	3.93233	3.57192		-7.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	484	0.4568315	0.4755796		1.7	30
N-EtFOSAA	A	500	462	0.9836556	0.9177034		-7.7	30
N-MeFOSAA	A	500	396	1.027301	0.9051421		-20.7	30
Perfluorotetradecanoic acid (PFTA)	A	500	436	0.8542676	0.8350097		-12.8	30
Perfluorotridecanoic acid (PFTrDA)	A	500	427	1.009812	0.970651		-14.6	30
Perfluorodecanesulfonic acid (PFDS)	A	482	433	0.6287667	0.583378		-10.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	446	1.061084	1.109772		-4.7	30
Perfluorooctanesulfonamide (FOSA)	A	500	403	0.8334166	0.7405949		-19.4	30
Perfluorononanesulfonic acid (PFNS)	A	481	542	0.319818	0.3643278		12.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	491	0.3462983	0.3243357		-1.8	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	430	0.3044628	0.2835496		-14.0	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	415	0.9652933	0.9387527		-9.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	468	0.495495	0.4631782		-6.5	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	459	0.5879048	0.5388719		-8.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.998727		-8.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	391	0.9760894	0.9026289		-16.8	30
Perfluoroundecanoic acid (PFUnA)	A	500	411	0.8528971	0.7690712		-17.9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	448	0.3237613	0.2933545		-10.3	30
Perfluoroheptanoic acid (PFHpA)	A	500	489	0.9139933	0.8961905		-2.3	30
Perfluorooctanoic acid (PFOA)	A	500	438	0.8653288	0.7618155		-12.3	30
Perfluorooctanesulfonic acid (PFOS)	A	464	489	0.9382121	1.055682		5.3	30
Perfluorononanoic acid (PFNA)	A	500	470	0.938444	0.9075832		-6.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065097-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2330	0.8628989	0.8804378		-6.8	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2190	0.9900012	1.043773		-1.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2330	0.9353824	0.9525622		-6.9	30
Perfluorohexanoic acid (PFHxA)	A	2500	2300	0.86678	0.8860011		-8.0	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2660	1.835659	2.114229		12.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.166254		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.658753		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2050	2.979159	0.1200984		-18.0	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9072743		7.5	30
Perfluorodecanoic acid (PFDA)	A	2500	2260	0.929213	0.9356467		-9.7	30
Perfluorododecanoic acid (PFDoA)	A	2500	2560	0.9361562	1.024395		2.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2270	3.93233	3.965439		2.1	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2760	0.4568315	0.5428543		16.0	30
N-EtFOSAA	A	2500	2530	0.9836556	1.012423		1.3	30
N-MeFOSAA	A	2500	2350	1.027301	1.074423		-5.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2540	0.8542676	0.9659105		1.5	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2390	1.009812	1.079797		-4.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2430	0.6287667	0.6533971		0.7	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.23898		7.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8404284		-8.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2790	0.319818	0.376577		16.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2650	0.3462983	0.3549101		6.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2440	0.3044628	0.3216921		-2.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9738934		-5.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2580	0.495495	0.5140906		3.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2580	0.5879048	0.609647		3.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2620	1.004025	1.185898		9.9	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2190	0.9760894	1.01223		-6.7	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8682173		-7.3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3375526		2.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.9266003		0.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2570	0.8653288	0.9019435		2.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2510	0.9382121	1.082453		8.0	30
Perfluorononanoic acid (PFNA)	A	2500	2480	0.938444	0.9611902		-0.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065097-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2320	0.8628989	0.8775319		-7.1	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2190	0.9900012	1.044232		-1.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2360	0.9353824	0.964994		-5.7	30
Perfluorohexanoic acid (PFHxA)	A	2500	2320	0.86678	0.8946529		-7.1	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2420	1.835659	1.920737		2.5	30
9Cl-PF3ONS (F53B Major)	A	2330	2370	3.897292	3.993202		1.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.65287		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2130	2.979159	0.1251296		-14.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2530	0.7665044	0.8919733		5.6	30
Perfluorodecanoic acid (PFDA)	A	2500	2160	0.929213	0.8961936		-13.5	30
Perfluorododecanoic acid (PFDoA)	A	2500	2480	0.9361562	0.9940885		-0.6	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2250	3.93233	3.938171		1.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2160	0.4568315	0.4245911		-9.3	30
N-EtFOSAA	A	2500	2620	0.9836556	1.046065		4.7	30
N-MeFOSAA	A	2500	2380	1.027301	1.085856		-4.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2540	0.8542676	0.9665023		1.6	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2470	1.009812	1.113366		-1.3	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2420	1.061084	1.189359		3.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2370	0.6287667	0.6392379		-1.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2300	0.8334166	0.8463212		-7.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2560	0.319818	0.3456415		6.8	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2660	0.3462983	0.3563994		6.5	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2440	0.3044628	0.3222368		-2.2	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2100	0.9652933	0.952316		-7.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2580	0.495495	0.5140982		3.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2590	0.5879048	0.6112138		3.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2430	1.004025	1.10295		2.1	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2060	0.9760894	0.9516514		-12.2	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2290	0.8528971	0.8588887		-8.3	30
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	A	2500	2580	0.3237613	0.339602		3.2	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2460	0.9139933	0.9076204		-1.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8936861		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2230	0.9382121	0.9641402		-3.8	30
Perfluorononanoic acid (PFNA)	A	2500	2400	0.938444	0.9318051		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	430	0.8628989	0.812246		-14.0	30
Perfluorobutanesulfonic acid (PFBS)	A	444	380	0.9900012	0.9057642		-14.5	30
Perfluoropentanoic acid (PFPeA)	A	500	432	0.9353824	0.8845059		-13.5	30
Perfluorohexanoic acid (PFHxA)	A	500	447	0.86678	0.8597585		-10.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	483	1.835659	1.901037		2.3	30
9Cl-PF3ONS (F53B Major)	A	466	425	3.897292	3.547621		-8.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	429	1.602632	1.540415		-9.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	366	2.979159	0.1066423		-26.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	548	0.7665044	0.9752743		14.2	30
Perfluorodecanoic acid (PFDA)	A	500	409	0.929213	0.8479211		-18.1	30
Perfluorododecanoic acid (PFDoA)	A	500	414	0.9361562	0.8288102		-17.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	416	3.93233	3.595173		-6.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	387	0.4568315	0.380312		-18.7	30
N-EtFOSAA	A	500	419	0.9836556	0.8329432		-16.2	30
N-MeFOSAA	A	500	390	1.027301	0.8896324		-22.1	30
Perfluorotetradecanoic acid (PFTA)	A	500	459	0.8542676	0.8795762		-8.2	30
Perfluorotridecanoic acid (PFTrDA)	A	500	390	1.009812	0.8874929		-21.9	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	428	1.061084	1.064296		-8.6	30
Perfluorodecanesulfonic acid (PFDS)	A	482	436	0.6287667	0.5875307		-9.5	30
Perfluorooctanesulfonamide (FOSA)	A	500	430	0.8334166	0.7903497		-14.0	30
Perfluorononanesulfonic acid (PFNS)	A	481	420	0.319818	0.2827318		-12.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	533	0.3462983	0.3522219		6.6	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	469	0.3044628	0.3092859		-6.2	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	426	0.9652933	0.9640774		-6.8	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	470	0.495495	0.4660075		-5.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	457	0.5879048	0.5364524		-8.6	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	423	1.004025	0.9719038		-11.0	30
Perfluoropetanesulfonic acid (PFPeS)	A	470	365	0.9760894	0.8429797		-22.3	30
Perfluoroundecanoic acid (PFUnA)	A	500	435	0.8528971	0.8148841		-13.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	480	0.3237613	0.3138713		-4.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	471	0.9139933	0.8638247		-5.8	30
Perfluorooctanoic acid (PFOA)	A	500	475	0.8653288	0.8251183		-5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	464	399	0.9382121	0.8624749		-14.0	30
Perfluorononanoic acid (PFNA)	A	500	446	0.938444	0.8610913		-10.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2380	0.8628989	0.8995787		-4.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2200	0.9900012	1.047284		-1.1	30
Perfluoropentanoic acid (PFPeA)	A	2500	2390	0.9353824	0.9759035		-4.6	30
Perfluorohexanoic acid (PFHxA)	A	2500	2380	0.86678	0.917677		-4.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2420	1.835659	1.92478		2.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2400	3.897292	4.05115		3.0	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.663269		-1.9	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1960	2.979159	0.1146334		-21.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2770	0.7665044	0.9750795		15.6	30
Perfluorodecanoic acid (PFDA)	A	2500	2360	0.929213	0.9788841		-5.5	30
Perfluorododecanoic acid (PFDoA)	A	2500	2320	0.9361562	0.9275358		-7.3	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2270	3.93233	3.969859		2.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2390	0.4568315	0.4700091		0.4	30
N-EtFOSAA	A	2500	2280	0.9836556	0.9100714		-8.9	30
N-MeFOSAA	A	2500	2420	1.027301	1.106819		-3.0	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2340	0.8542676	0.8906106		-6.5	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.009812	1.075504		-4.6	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2420	0.6287667	0.6530737		0.6	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2410	1.061084	1.18768		3.1	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2470	0.8334166	0.9066466		-1.4	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2500	0.319818	0.3373986		4.3	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2760	0.3462983	0.3693868		10.3	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2520	0.3044628	0.3318331		0.7	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.031588		-0.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2640	0.495495	0.5265402		5.5	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2620	0.5879048	0.6189643		4.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2820	1.004025	1.275926		18.4	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2270	0.9760894	1.047715		-3.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8702713		-7.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2710	0.3237613	0.3565569		8.3	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2580	0.9139933	0.9528248		3.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2580	0.8653288	0.9045224		3.2	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2130	0.9382121	0.9216298		-8.1	30
Perfluorononanoic acid (PFNA)	A	2500	2450	0.938444	0.9481167		-2.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2360	0.8628989	0.8930858		-5.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2190	0.9900012	1.043439		-1.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2370	0.9353824	0.9702235		-5.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2350	0.86678	0.9052124		-6.0	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2640	1.835659	2.095784		11.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2650	3.897292	4.473237		13.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2260	1.602632	1.624912		-4.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2020	2.979159	0.1183483		-19.2	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2720	0.7665044	0.9554875		13.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2100	0.929213	0.8704248		-16.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2520	0.9361562	1.010519		1.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2280	3.93233	3.991677		2.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2660	0.4568315	0.5221496		11.6	30
N-EtFOSAA	A	2500	2500	0.9836556	0.9998938		0.08	30
N-MeFOSAA	A	2500	2140	1.027301	0.9761852		-14.5	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2490	0.8542676	0.948065		-0.4	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2520	1.009812	1.135268		0.7	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2610	1.061084	1.28163		11.4	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2610	0.6287667	0.7023388		8.2	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2500	0.8334166	0.9196404		0.05	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2550	0.319818	0.3435179		6.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2470	0.3462983	0.3304193		-1.2	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2500	0.3044628	0.3293527		-0.08	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2210	0.9652933	1.000475		-3.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2650	0.495495	0.5297108		6.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2660	0.5879048	0.6296098		6.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.158248		7.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2270	0.9760894	1.047941		-3.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2280	0.8528971	0.8541395		-8.8	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2790	0.3237613	0.3680313		11.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2590	0.9139933	0.9576801		3.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2580	0.8653288	0.9048242		3.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2420	0.9382121	1.046347		4.4	30
Perfluorononanoic acid (PFNA)	A	2500	2460	0.938444	0.9553772		-1.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-454 PFAS

S065193-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2350	0.8628989	0.8860905		-6.2	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.019276		-3.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2330	0.9353824	0.9547375		-6.7	30
Perfluorohexanoic acid (PFHxA)	A	2500	2350	0.86678	0.903339		-6.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2290	1.835659	1.818587		-2.9	30
9Cl-PF3ONS (F53B Major)	A	2330	2320	3.897292	3.918012		-0.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2230	1.602632	1.600545		-5.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2060	2.979159	0.1205975		-17.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2590	0.7665044	0.911715		8.0	30
Perfluorodecanoic acid (PFDA)	A	2500	2280	0.929213	0.9451302		-8.8	30
Perfluorododecanoic acid (PFDoA)	A	2500	2500	0.9361562	0.9999374		-0.06	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2260	3.93233	3.950489		1.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2670	0.4568315	0.52528		12.2	30
N-EtFOSAA	A	2500	2310	0.9836556	0.9238697		-7.5	30
N-MeFOSAA	A	2500	2210	1.027301	1.010166		-11.5	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2350	0.8542676	0.8951266		-6.0	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2400	1.009812	1.083532		-3.9	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2470	0.6287667	0.6649487		2.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.183794		2.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2340	0.8334166	0.8600857		-6.4	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3345653		3.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3611759		7.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2520	0.3044628	0.3322971		0.8	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2260	0.9652933	1.026943		-0.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2610	0.495495	0.5202772		4.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2640	0.5879048	0.6236201		5.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2630	1.004025	1.190113		10.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2320	0.9760894	1.068538		-1.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2670	0.8528971	1.001401		6.9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2740	0.3237613	0.3604289		9.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2520	0.9139933	0.928855		0.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8922683		1.8	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.9834333		-1.9	30
Perfluorononanoic acid (PFNA)	A	2500	2510	0.938444	0.9722193		0.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV5

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2350	0.8628989	0.8883123		-5.9	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2230	0.9900012	1.064607		0.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2340	0.9353824	0.9563209		-6.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2320	0.86678	0.8914917		-7.4	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2450	1.835659	1.945374		3.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2340	3.897292	3.954361		0.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2360	1.602632	1.696537		0.02	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1920	2.979159	0.1121971		-23.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	3130	0.7665044	1.099453		30.6	30 *
Perfluorodecanoic acid (PFDA)	A	2500	2160	0.929213	0.894415		-13.6	30
Perfluorododecanoic acid (PFDoA)	A	2500	2350	0.9361562	0.9402406		-6.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2260	3.93233	3.952277		1.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2630	0.4568315	0.5165034		10.4	30
N-EtFOSAA	A	2500	2370	0.9836556	0.9454209		-5.3	30
N-MeFOSAA	A	2500	2280	1.027301	1.04137		-8.8	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2430	0.8542676	0.9234345		-3.0	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2480	1.009812	1.119939		-0.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2440	0.6287667	0.6575115		1.3	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2600	1.061084	1.276981		10.9	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2360	0.8334166	0.8681399		-5.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2400	0.319818	0.3233953		-0.06	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2770	0.3462983	0.3716528		11.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2420	0.3044628	0.3192537		-3.1	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.03158		-0.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2670	0.495495	0.5332471		6.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2640	0.5879048	0.6247573		5.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2520	1.004025	1.14429		6.0	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2290	0.9760894	1.058119		-2.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2540	0.8528971	0.9504971		1.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2720	0.3237613	0.3575407		8.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2530	0.9139933	0.9357188		1.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2670	0.8653288	0.9372367		6.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2260	0.9382121	0.9765217		-2.6	30
Perfluorononanoic acid (PFNA)	A	2500	2340	0.938444	0.9075274		-6.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	450	0.8628989	0.8489657		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	405	0.9900012	0.9656811		-8.8	30
Perfluoropentanoic acid (PFPeA)	A	500	443	0.9353824	0.9067352		-11.3	30
Perfluorohexanoic acid (PFHxA)	A	500	436	0.86678	0.8404228		-12.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	438	1.835659	1.72255		-7.3	30
9Cl-PF3ONS (F53B Major)	A	466	482	3.897292	4.025215		3.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	447	1.602632	1.605774		-5.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	352	2.979159	0.1023471		-29.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	504	0.7665044	0.8972762		5.1	30
Perfluorodecanoic acid (PFDA)	A	500	458	0.929213	0.9496842		-8.3	30
Perfluorododecanoic acid (PFDoA)	A	500	435	0.9361562	0.8696535		-13.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	431	3.93233	3.727938		-3.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	520	0.4568315	0.5108367		9.2	30
N-EtFOSAA	A	500	430	0.9836556	0.8555917		-13.9	30
N-MeFOSAA	A	500	457	1.027301	1.04289		-8.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	453	0.8542676	0.868046		-9.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	449	1.009812	1.021105		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	457	1.061084	1.137973		-2.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	495	0.6287667	0.6661969		2.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	476	0.8334166	0.8758551		-4.7	30
Perfluorononanesulfonic acid (PFNS)	A	481	479	0.319818	0.3223431		-0.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	478	0.3462983	0.3157572		-4.4	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	442	0.3044628	0.2916464		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	468	0.9652933	1.058429		2.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	484	0.495495	0.4789839		-3.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	486	0.5879048	0.5703637		-2.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	435	1.004025	0.9984949		-8.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	392	0.9760894	0.9038583		-16.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	444	0.8528971	0.8321599		-11.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	486	0.3237613	0.3176499		-2.9	30
Perfluoroheptanoic acid (PFHpA)	A	500	501	0.9139933	0.918039		0.1	30
Perfluorooctanoic acid (PFOA)	A	500	507	0.8653288	0.8815278		1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	485	0.9382121	1.048587		4.6	30
Perfluorononanoic acid (PFNA)	A	500	478	0.938444	0.9234035		-4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8628989	0.8618408		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.018693		-3.8	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9432757		-7.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.86678	0.8716131		-9.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.907195		1.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2280	3.897292	3.837298		-2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.659407		-2.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	2.979159	0.1219468		-16.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2640	0.7665044	0.927793		9.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2130	0.929213	0.8807296		-15.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2330	0.9361562	0.9308634		-7.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2210	3.93233	3.859621		-0.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2360	0.4568315	0.4644542		-0.8	30
N-EtFOSAA	A	2500	2130	0.9836556	0.8500816		-14.8	30
N-MeFOSAA	A	2500	2420	1.027301	1.106771		-3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.8542676	0.9497799		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2320	1.009812	1.048471		-7.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2340	0.6287667	0.630669		-2.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.18086		2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2180	0.8334166	0.7998474		-13.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3338849		3.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3612544		7.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3133032		-4.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2250	0.9652933	1.021989		-1.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5055786		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2520	0.5879048	0.5947084		0.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2710	1.004025	1.229334		14.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880106		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.8528971	0.8972853		-4.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3237613	0.331833		0.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8814377		-4.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.8653288	0.9226045		5.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9489291		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2410	0.938444	0.9321201		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8628989	0.8627174		-8.6	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.009674		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2300	0.9353824	0.9396125		-8.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2290	0.86678	0.8807092		-8.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.980942		5.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2360	3.897292	3.985572		1.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2300	1.602632	1.651563		-2.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2280	2.979159	0.1339799		-8.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2580	0.7665044	0.9063477		7.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8915286		-13.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2300	0.9361562	0.9185763		-8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.904836		0.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4568315	0.4978434		6.4	30
N-EtFOSAA	A	2500	2330	0.9836556	0.930092		-6.9	30
N-MeFOSAA	A	2500	2490	1.027301	1.137612		-0.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.8542676	0.8827306		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.009812	1.011825		-10.3	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2520	1.061084	1.239847		7.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2540	0.6287667	0.6851027		5.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2320	0.8334166	0.8529206		-7.2	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.3485505		7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2680	0.3462983	0.3586661		7.1	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2470	0.3044628	0.325184		-1.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2150	0.9652933	0.9774449		-5.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2560	0.495495	0.5097064		2.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5927361		0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2510	1.004025	1.139366		5.5	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2020	0.9760894	0.9342668		-13.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2370	0.8528971	0.8885365		-5.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3372505		2.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2510	0.9139933	0.928189		0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2520	0.8653288	0.8813973		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2390	0.9382121	1.03376		3.1	30
Perfluorononanoic acid (PFNA)	A	2500	2470	0.938444	0.9576319		-1.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065227-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.8628989	0.8686579		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.024446		-3.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9378871		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8576055		-10.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2550	1.835659	2.029106		8.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.164699		5.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.602632	1.56709		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2430	2.979159	0.1428931		-2.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2620	0.7665044	0.9229413		9.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2040	0.929213	0.8449366		-18.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2430	0.9361562	0.9731098		-2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2240	3.93233	3.910779		0.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2610	0.4568315	0.5133596		9.7	30
N-EtFOSAA	A	2500	2460	0.9836556	0.9846493		-1.4	30
N-MeFOSAA	A	2500	2230	1.027301	1.016687		-10.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2370	0.8542676	0.9031416		-5.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2410	1.009812	1.08576		-3.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6439266		-0.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.173226		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2290	0.8334166	0.8408944		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2670	0.319818	0.3605046		11.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2670	0.3462983	0.357133		6.7	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2410	0.3044628	0.3177454		-3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.029951		-0.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5056773		1.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5923859		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.154091		6.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	0.9760894	1.023935		-5.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8700407		-7.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401819		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9139933	0.9242896		0.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8934024		2.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.986571		-1.6	30
Perfluorononanoic acid (PFNA)	A	2500	2260	0.938444	0.8753864		-9.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065278-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	449	0.8628989	0.848643		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	424	0.9900012	1.012017		-4.4	30
Perfluoropentanoic acid (PFPeA)	A	500	432	0.9353824	0.8837209		-13.6	30
Perfluorohexanoic acid (PFHxA)	A	500	438	0.86678	0.8432275		-12.4	30
11Cl-PF3OUdS (F53B Minor)	A	472	448	1.835659	1.763132		-5.1	30
9Cl-PF3ONS (F53B Major)	A	466	509	3.897292	4.256666		9.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	428	1.602632	1.537735		-9.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	501	2.979159	0.1459983		0.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	455	0.7665044	0.8104586		-5.1	30
Perfluorodecanoic acid (PFDA)	A	500	436	0.929213	0.9038259		-12.7	30
Perfluorododecanoic acid (PFDoA)	A	500	423	0.9361562	0.8459062		-15.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	429	3.93233	3.7137		-3.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	525	0.4568315	0.5157542		10.3	30
N-EtFOSAA	A	500	414	0.9836556	0.822905		-17.2	30
N-MeFOSAA	A	500	444	1.027301	1.01487		-11.1	30
Perfluorotetradecanoic acid (PFTA)	A	500	483	0.8542676	0.926149		-3.3	30
Perfluorotridecanoic acid (PFTrDA)	A	500	479	1.009812	1.088363		-4.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	448	1.061084	1.115432		-4.2	30
Perfluorodecanesulfonic acid (PFDS)	A	482	463	0.6287667	0.6234222		-4.0	30
Perfluorooctanesulfonamide (FOSA)	A	500	457	0.8334166	0.8407193		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	481	444	0.319818	0.2987955		-7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	493	0.3462983	0.3256941		-1.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	438	0.3044628	0.2885749		-12.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	423	0.9652933	0.9566208		-7.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	490	0.495495	0.4850967		-2.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	485	0.5879048	0.5688902		-3.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	451	1.004025	1.034616		-5.3	30
Perfluoropetanesulfonic acid (PFPeS)	A	470	416	0.9760894	0.9592807		-11.5	30
Perfluoroundecanoic acid (PFUnA)	A	500	435	0.8528971	0.8151328		-13.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	475	0.3237613	0.3108248		-5.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	495	0.9139933	0.9084594		-0.9	30
Perfluorooctanoic acid (PFOA)	A	500	526	0.8653288	0.9136823		5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	464	450	0.9382121	0.9715991		-3.1	30
Perfluorononanoic acid (PFNA)	A	500	473	0.938444	0.9137429		-5.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S065278-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2270	0.8628989	0.8569449		-9.3	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.022381		-3.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2280	0.9353824	0.9326159		-8.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2230	0.86678	0.8592741		-10.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2430	1.835659	1.925459		2.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2230	3.897292	3.759747		-4.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2130	1.602632	1.530667		-9.8	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2210	2.979159	0.1296761		-11.5	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2310	0.7665044	0.8134445		-3.8	30
Perfluorodecanoic acid (PFDA)	A	2500	2120	0.929213	0.8782043		-15.2	30
Perfluorododecanoic acid (PFDoA)	A	2500	2320	0.9361562	0.9294003		-7.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2180	3.93233	3.818383		-1.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2540	0.4568315	0.5001821		6.9	30
N-EtFOSAA	A	2500	2360	0.9836556	0.9423621		-5.6	30
N-MeFOSAA	A	2500	2240	1.027301	1.024708		-10.2	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2380	0.8542676	0.90764		-4.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.009812	1.072982		-4.9	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2460	1.061084	1.211541		5.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2190	0.6287667	0.5895091		-9.2	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2260	0.8334166	0.8290979		-9.8	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2490	0.319818	0.3363633		3.9	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2570	0.3462983	0.3445535		3.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2320	0.3044628	0.3061642		-7.1	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2050	0.9652933	0.930524		-10.0	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2540	0.495495	0.5064435		1.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2530	0.5879048	0.5985496		1.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2670	1.004025	1.212122		12.4	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2120	0.9760894	0.9767056		-9.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2310	0.8528971	0.8637737		-7.8	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2600	0.3237613	0.3423758		4.0	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2430	0.9139933	0.8971193		-2.8	30
Perfluorooctanoic acid (PFOA)	A	2500	2620	0.8653288	0.9187646		4.8	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2250	0.9382121	0.973162		-2.9	30
Perfluorononanoic acid (PFNA)	A	2500	2350	0.938444	0.9107697		-6.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065278-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8628989	0.8619372		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.011174		-4.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2260	0.9353824	0.9232235		-9.7	30
Perfluorohexanoic acid (PFHxA)	A	2500	2240	0.86678	0.8642552		-10.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2520	1.835659	2.000097		6.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2380	3.897292	4.021682		2.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2230	1.602632	1.599671		-5.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2160	2.979159	0.1263908		-13.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2800	0.7665044	0.9830481		16.6	30
Perfluorodecanoic acid (PFDA)	A	2500	2370	0.929213	0.9806832		-5.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2340	0.9361562	0.9354149		-6.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2190	3.93233	3.82893		-1.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2810	0.4568315	0.5520193		17.9	30
N-EtFOSAA	A	2500	2450	0.9836556	0.9799076		-1.9	30
N-MeFOSAA	A	2500	2580	1.027301	1.177047		3.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2420	0.8542676	0.9232697		-3.0	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2360	1.009812	1.065835		-5.5	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2230	0.6287667	0.60123		-7.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2440	1.061084	1.199532		4.1	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2150	0.8334166	0.7911697		-13.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2580	0.319818	0.3481062		7.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2460	0.3462983	0.3285168		-1.7	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3144296		-4.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2230	0.9652933	1.013289		-2.0	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2520	0.495495	0.5027163		0.8	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.5918561		0.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2450	1.004025	1.112685		3.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2260	0.9760894	1.044986		-3.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2190	0.8528971	0.8206592		-12.4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2570	0.3237613	0.3383467		2.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2430	0.9139933	0.8959485		-2.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2400	0.8653288	0.8417851		-3.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2230	0.9382121	0.9642973		-3.8	30
Perfluorononanoic acid (PFNA)	A	2500	2320	0.938444	0.9008829		-7.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065278-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2290	0.8628989	0.863806		-8.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.019355		-3.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9388056		-8.2	30
Perfluorohexanoic acid (PFHxA)	A	2500	2280	0.86678	0.8783137		-8.8	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2530	1.835659	2.012635		7.4	30
9Cl-PF3ONS (F53B Major)	A	2330	2410	3.897292	4.074062		3.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2150	1.602632	1.548259		-8.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2340	2.979159	0.1374249		-6.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2540	0.7665044	0.8945817		5.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2310	0.929213	0.9580796		-7.5	30
Perfluorododecanoic acid (PFDoA)	A	2500	2360	0.9361562	0.9462964		-5.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2190	3.93233	3.823468		-1.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2540	0.4568315	0.4985244		6.5	30
N-EtFOSAA	A	2500	2390	0.9836556	0.9566018		-4.2	30
N-MeFOSAA	A	2500	2390	1.027301	1.090917		-4.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2340	0.8542676	0.8924961		-6.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2250	1.009812	1.01365		-10.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2270	0.6287667	0.6114191		-5.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2350	1.061084	1.15856		0.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2230	0.8334166	0.8180547		-11.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.348836		7.8	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2530	0.3462983	0.3378905		1.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3142952		-4.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2180	0.9652933	0.9911336		-4.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5045233		1.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2500	0.5879048	0.5914126		0.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2260	1.004025	1.025661		-5.1	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2200	0.9760894	1.014011		-6.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2390	0.8528971	0.8963776		-4.3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2620	0.3237613	0.3442339		4.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8831702		-4.3	30
Perfluorooctanoic acid (PFOA)	A	2500	2500	0.8653288	0.874566		-0.2	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2260	0.9382121	0.9755663		-2.7	30
Perfluorononanoic acid (PFNA)	A	2500	2420	0.938444	0.9364634		-3.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2570	0.9425179	1.011857		2.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2310	1.102869	1.175854		4.2	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9976624	1.078183		3.4	30
Perfluorohexanoic acid (PFHxA)	A	2500	2610	0.9419225	1.032034		4.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2670	1.989388	2.284809		13.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2890	4.109336	4.697106		24.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2400	1.848187	1.962565		1.8	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2540	0.1671191	0.1714838		1.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2480	0.8882675	0.9869106		3.4	30
Perfluorodecanoic acid (PFDA)	A	2500	2470	1.018422	1.090713		-1.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2630	1.020538	1.124969		5.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2360	4.320325	4.516334		6.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.4851688	0.5342313		4.4	30
N-EtFOSAA	A	2500	2480	1.041633	1.051849		-0.7	30
N-MeFOSAA	A	2500	2800	1.161219	1.332719		12.2	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2460	0.9728168	1.046993		-1.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2330	1.116887	1.194674		-6.9	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2570	1.197741	1.431409		10.0	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2810	0.7418148	0.8124729		16.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2490	0.9174711	0.9757214		-0.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2910	0.344215	0.3973688		21.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2520	0.3814328	0.3945368		1.0	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2710	0.3389618	0.3771353		8.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2480	1.118146	1.25817		8.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2630	0.5740932	0.6113184		5.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2630	0.6683914	0.7138265		5.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2850	1.148433	1.479325		19.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2360	1.102015	1.20024		0.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2550	0.9600985	1.031645		2.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2650	0.3650421	0.396832		6.1	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2570	1.016118	1.0509		2.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2620	0.9817944	1.026899		4.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2510	1.026673	1.141418		8.2	30
Perfluorononanoic acid (PFNA)	A	2500	2500	1.065202	1.104545		0.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	446	0.9425179	0.8789602		-10.8	30
Perfluorobutanesulfonic acid (PFBS)	A	444	402	1.102869	1.022925		-9.4	30
Perfluoropentanoic acid (PFPeA)	A	500	435	0.9976624	0.9074633		-12.9	30
Perfluorohexanoic acid (PFHxA)	A	500	449	0.9419225	0.8895279		-10.2	30
11Cl-PF3OUdS (F53B Minor)	A	472	504	1.989388	2.149439		6.9	30
9Cl-PF3ONS (F53B Major)	A	466	461	4.109336	3.690343		-1.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	413	1.848187	1.687261		-12.4	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	460	0.1671191	0.1556009		-8.0	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	440	0.8882675	0.8879173		-8.3	30
Perfluorodecanoic acid (PFDA)	A	500	420	1.018422	0.9281777		-16.0	30
Perfluorododecanoic acid (PFDoA)	A	500	479	1.020538	1.024659		-4.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	419	4.320325	3.974917		-5.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	416	0.4851688	0.4488362		-12.5	30
N-EtFOSAA	A	500	506	1.041633	1.070729		1.2	30
N-MeFOSAA	A	500	444	1.161219	1.055627		-11.2	30
Perfluorotetradecanoic acid (PFTA)	A	500	417	0.9728168	0.8937684		-16.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	414	1.116887	1.072322		-17.1	30
Perfluorodecanesulfonic acid (PFDS)	A	482	457	0.7418148	0.6594825		-5.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	427	1.197741	1.207059		-8.7	30
Perfluorooctanesulfonamide (FOSA)	A	500	431	0.9174711	0.8448865		-13.9	30
Perfluorononanesulfonic acid (PFNS)	A	481	474	0.344215	0.3232718		-1.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	457	0.3814328	0.3555244		-8.7	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	446	0.3389618	0.3101889		-10.8	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	412	1.118146	1.04135		-9.8	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	444	0.5740932	0.5126891		-11.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	447	0.6683914	0.6048896		-10.6	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	410	1.148433	1.081922		-13.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	387	1.102015	0.9826578		-17.7	30
Perfluoroundecanoic acid (PFUnA)	A	500	443	0.9600985	0.8955856		-11.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	443	0.3650421	0.3302945		-11.4	30
Perfluoroheptanoic acid (PFHpA)	A	500	472	1.016118	0.9595584		-5.6	30
Perfluorooctanoic acid (PFOA)	A	500	424	0.9817944	0.828537		-15.3	30
Perfluorooctanesulfonic acid (PFOS)	A	464	395	1.026673	0.8973727		-14.9	30
Perfluorononanoic acid (PFNA)	A	500	411	1.065202	0.9036428		-17.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065402-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2530	0.9425179	0.9977771		1.2	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2360	1.102869	1.200694		6.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2610	0.9976624	1.089428		4.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2540	0.9419225	1.007325		1.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2570	1.989388	2.193781		8.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2680	4.109336	4.351819		15.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2330	1.848187	1.898803		-1.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2620	0.1671191	0.1769447		4.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2940	0.8882675	1.167213		22.7	30
Perfluorodecanoic acid (PFDA)	A	2500	2450	1.018422	1.080597		-2.2	30
Perfluorododecanoic acid (PFDoA)	A	2500	2570	1.020538	1.098246		2.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2440	4.320325	4.685802		10.1	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2560	0.4851688	0.5513349		7.7	30
N-EtFOSAA	A	2500	2540	1.041633	1.077962		1.7	30
N-MeFOSAA	A	2500	2520	1.161219	1.198943		0.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2380	0.9728168	1.015122		-4.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2580	1.116887	1.321682		3.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2960	0.7418148	0.8545083		22.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2480	1.197741	1.381802		6.1	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2360	0.9174711	0.9252214		-5.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2530	0.344215	0.3454506		5.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2620	0.3814328	0.410242		5.0	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2680	0.3389618	0.3730186		7.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2240	1.118146	1.134301		-1.8	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2600	0.5740932	0.602609		3.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2600	0.6683914	0.7054736		3.9	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2460	1.148433	1.278571		3.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	1.102015	1.129944		-5.3	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2540	0.9600985	1.026172		1.4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2660	0.3650421	0.3976419		6.3	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2580	1.016118	1.052481		3.1	30
Perfluorooctanoic acid (PFOA)	A	2500	2600	0.9817944	1.019889		3.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2340	1.026673	1.065314		1.0	30
Perfluorononanoic acid (PFNA)	A	2500	2580	1.065202	1.135928		3.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S065402-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2560	0.9425179	1.009928		2.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2360	1.102869	1.200238		6.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2580	0.9976624	1.077524		3.4	30
Perfluorohexanoic acid (PFHxA)	A	2500	2540	0.9419225	1.006907		1.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2670	1.989388	2.27877		13.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2620	4.109336	4.243458		12.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2260	1.848187	1.848178		-4.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2500	0.1671191	0.169153		0.03	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2860	0.8882675	1.136286		19.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2370	1.018422	1.046007		-5.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2680	1.020538	1.147235		7.3	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2410	4.320325	4.610632		8.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2470	0.4851688	0.5302567		3.6	30
N-EtFOSAA	A	2500	3050	1.041633	1.294824		22.1	30
N-MeFOSAA	A	2500	2720	1.161219	1.291607		8.7	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2480	0.9728168	1.058837		-0.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2610	1.116887	1.340955		4.6	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2490	1.197741	1.383167		6.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2810	0.7418148	0.8109223		16.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2460	0.9174711	0.9641574		-1.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2860	0.344215	0.3914161		19.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2400	0.3814328	0.3750717		-4.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2670	0.3389618	0.3708676		6.7	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2230	1.118146	1.131498		-2.0	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2590	0.5740932	0.6010995		3.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2570	0.6683914	0.6991464		3.0	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2780	1.148433	1.440807		16.7	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2330	1.102015	1.181506		-1.0	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2550	0.9600985	1.0338		2.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2590	0.3650421	0.3873781		3.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2650	1.016118	1.083714		6.1	30
Perfluorooctanoic acid (PFOA)	A	2500	2580	0.9817944	1.011524		3.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2440	1.026673	1.1092		5.2	30
Perfluorononanoic acid (PFNA)	A	2500	2520	1.065202	1.112442		0.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SOP-466 PFAS in Soil	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022



Phone: 612-607-6400
Fax: 612-607-6344

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
Tighe & Bond
120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Princeton Soil Sampling - 30 Mountain
Princeton, MA
Project Location:
Project Number:
Project Manager: Jeff Arps/Michael Scherer
Pace Analytical Quote Name/Number: P-0534017
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

217 1956

Doc # 381 Rev 4_01/08/2020

CHAIN OF CUSTODY RECORD
1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 2

ANALYSIS REQUESTED

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS (isotope dilution method)
1	30MTN S-2 (6-12)	10/28/21	0800	GRAB	S	U						X
2	30MTN S-3 (6-12)		0830				1					X
3	30MTN S-3 (12-24)		0830				1					X
4	30MTN S-4 (6-12)		0900				1					X
5	30MTN S-5 (6-12)		0930				1					X
6	30MTN S-5 (12-24)		0930				1					X
7	30MTN S-7 (0-12)		1000				1					X
8	30MTN S-8 (0-12)		1030				1					X
9	30MTN S-9 (0-12)		1100				1					X
10	30MTN S-10 (0-12)		1130				1					X
11	30MTN S-11 (0-12)		1200				1					X
12	30MTN S-11 (24-36)		1200				1					X

Client Comments:

Retinquired by: (signature) *[Signature]* Date/Time: 10/29/21 1200
 Received by: (signature) *[Signature]* Date/Time: 10/29/21 1815
 Retinquired by: (signature) *[Signature]* Date/Time: 10/29/21 2035
 Received by: (signature) *[Signature]* Date/Time: 10/29/21 2035
 Retinquired by: (signature) *[Signature]* Date/Time:
 Received by: (signature) *[Signature]* Date/Time:
 Retinquired by: (signature) *[Signature]* Date/Time:
 Received by: (signature) *[Signature]* Date/Time:
 Comments:

Special Requirements

IAA MCP Required IAA MCP Certification Form Required
 ACP Certification Form Required CT RCP Required
 RCP Certification Form Required

MA State DW Required

Project Entity

Government Municipality WRTA
 Federal 21 J School MBTA
 City Brownfield

Other Chromatogram
 AIHA-LAP, LLC

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High, M - Medium, L - Low, C - Clean, U - Unknown

Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
 Address: Tighe & Bond
 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Project Location: Princeton Soil Sampling - 30 Mountain
 Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Arips/Michael Scherer
 Invoice Recipient: Tighe & Bond
 Sampled By: M Scherer

ANALYSIS REQUESTED

7-Day PFAS	10-Day (std)	Due Date:	Field Filtered	Lab to Filter	1-Day	3-Day	4-Day	Field Filtered	Lab to Filter
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ending Date/Time	COMP/OPAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1230	GRAB	S	U					
1230								
1300								
1300								
1330								
1330								
1400								
1400								
1430								
0800								
0800								
1000								

Client Comments:

Retinquired by: (signature) Date/Time: 10/24/21 12:00
 Received by: (signature) Date/Time: 10/29/21 19:15
 Retinquired by: (signature) Date/Time: 10/29/21 20:35
 Received by: (signature) Date/Time: 10/29/21 20:35
 Retinquired by: (signature) Date/Time: 10/29/21 20:35
 Received by: (signature) Date/Time: 10/29/21 20:35

MA MCP Required	MA State DW Required	MA State DW Requested	MA State DW Requested	MA State DW Requested
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Project Entity: Government Federal City Municipality 21 J Brownfield MBTA School WRTA Chromatogram Other AIMA-LAP, LLC

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B

Received By MA Date 10/29/11 Time 2035

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? MA Were Samples Tampered with? MA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? MA

Proper Media/Containers Used? T

Were trip blanks received? T

Do all samples have the proper pH? MA

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? T

Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

November 16, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

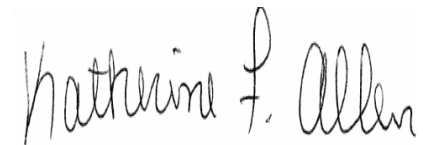
Project Location: 54 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1975

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 11/16/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1975

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 54 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
54MTN S-5A (0-12)	21J1975-01	Soil		SM 2540G SOP-466 PFAS	
54MTN S-6 (6-12)	21J1975-02	Soil		SM 2540G SOP-466 PFAS	
54MTN S-7 (0-12)	21J1975-03	Soil		SM 2540G SOP-466 PFAS	
54MTN S-7 (12-24)	21J1975-04	Soil		SM 2540G SOP-466 PFAS	
54MTN S-8 (0-12)	21J1975-05	Soil		SM 2540G SOP-466 PFAS	
54MTN S-9 (0-12)	21J1975-06	Soil		SM 2540G SOP-466 PFAS	
54MTN S-9 (12-24)	21J1975-07	Soil		SM 2540G SOP-466 PFAS	
54MTN S-10 (0-12)	21J1975-08	Soil		SM 2540G SOP-466 PFAS	
54MTN S-10 (12-24)	21J1975-09	Soil		SM 2540G SOP-466 PFAS	
54MTN S-11 (0-12)	21J1975-10	Soil		SM 2540G SOP-466 PFAS	
54MTN S-11 (12-24)	21J1975-11	Soil		SM 2540G SOP-466 PFAS	
54MTN S-12 (0-12)	21J1975-12	Soil		SM 2540G SOP-466 PFAS	
54MTN S-13 (0-12)	21J1975-14	Soil		SM 2540G SOP-466 PFAS	
54MTN S-13 (12-24)	21J1975-15	Soil		SM 2540G SOP-466 PFAS	
54MTN S-14 (0-6)	21J1975-16	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-466 PFAS

Qualifications:

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluorononanesulfonic acid (PFNS)

B294103-MS1

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-8:2FTS

21J1975-01[54MTN S-5A (0-12)], 21J1975-02[54MTN S-6 (6-12)], 21J1975-03[54MTN S-7 (0-12)], 21J1975-04[54MTN S-7 (12-24)], 21J1975-05[54MTN S-8 (0-12)], 21J1975-06[54MTN S-9 (0-12)], 21J1975-07[54MTN S-9 (12-24)], 21J1975-09[54MTN S-10 (12-24)], 21J1975-10[54MTN S-11 (0-12)], 21J1975-11[54MTN S-11 (12-24)], 21J1975-14[54MTN S-13 (0-12)], 21J1975-15[54MTN S-13 (12-24)]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-5A (0-12)

Sampled: 10/28/2021 12:00

Sample ID: 21J1975-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.48	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorobutanesulfonic acid (PFBS)	0.31	0.48	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoropentanoic acid (PFPeA)	0.12	0.48	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorohexanoic acid (PFHxA)	0.15	0.48	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorodecanoic acid (PFDA)	0.083	0.48	0.061	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
N-EtFOSAA	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
N-MeFOSAA	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.070	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluoroheptanoic acid (PFHpA)	0.11	0.48	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorooctanoic acid (PFOA)	0.23	0.48	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorooctanesulfonic acid (PFOS)	0.71	0.48	0.064	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH
Perfluorononanoic acid (PFNA)	ND	0.48	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:09	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-5A (0-12)

Sampled: 10/28/2021 12:00

Sample ID: 21J1975-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.7		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-6 (6-12)

Sampled: 10/28/2021 12:30

Sample ID: 21J1975-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.31	0.55	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoropentanoic acid (PFPeA)	0.57	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorohexanoic acid (PFHxA)	0.42	0.55	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
9Cl-PF3ONS (F53B Major)	ND	0.55	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.55	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.55	0.26	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.55	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorodecanoic acid (PFDA)	1.5	0.55	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.55	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.55	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
N-EtFOSAA	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
N-MeFOSAA	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.55	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.55	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorooctanesulfonamide (FOSA)	0.21	0.55	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.55	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.55	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.15	0.55	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.29	0.55	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.55	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.55	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluoroheptanoic acid (PFHpA)	0.69	0.55	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorooctanoic acid (PFOA)	1.3	0.55	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorooctanesulfonic acid (PFOS)	13	0.55	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH
Perfluorononanoic acid (PFNA)	0.55	0.55	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:16	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-6 (6-12)

Sampled: 10/28/2021 12:30

Sample ID: 21J1975-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-7 (0-12)

Sampled: 10/28/2021 13:00

Sample ID: 21J1975-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.52	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorodecanoic acid (PFDA)	ND	0.52	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.52	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.22	0.52	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.52	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorooctanoic acid (PFOA)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorooctanesulfonic acid (PFOS)	0.11	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH
Perfluorononanoic acid (PFNA)	ND	0.52	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:23	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-7 (0-12)

Sampled: 10/28/2021 13:00

Sample ID: 21J1975-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.6		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-7 (12-24)

Sampled: 10/28/2021 13:30

Sample ID: 21J1975-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.45	0.060	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.45	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.45	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.45	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.45	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
9Cl-PF3ONS (F53B Major)	ND	0.45	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.45	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.45	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorodecanoic acid (PFDA)	ND	0.45	0.058	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.45	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.45	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
N-EtFOSAA	ND	0.45	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
N-MeFOSAA	ND	0.45	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.45	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.45	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.45	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.45	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.45	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.45	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.45	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.45	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.45	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.45	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.45	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.45	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.45	0.070	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.45	0.065	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorooctanoic acid (PFOA)	ND	0.45	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.45	0.061	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH
Perfluorononanoic acid (PFNA)	ND	0.45	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:30	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-7 (12-24)

Sampled: 10/28/2021 13:30

Sample ID: 21J1975-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-8 (0-12)

Sampled: 10/28/2021 14:00

Sample ID: 21J1975-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.16	0.46	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.46	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
9Cl-PF3ONS (F53B Major)	ND	0.46	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.46	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.46	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.46	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorodecanoic acid (PFDA)	0.20	0.46	0.060	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorododecanoic acid (PFDoA)	0.094	0.46	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.46	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.46	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
N-EtFOSAA	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
N-MeFOSAA	ND	0.46	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.46	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.46	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.46	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.46	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.46	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.46	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.46	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.46	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.46	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.46	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.46	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.46	0.068	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoroundecanoic acid (PFUnA)	0.19	0.46	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.46	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.46	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorooctanoic acid (PFOA)	0.43	0.46	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorooctanesulfonic acid (PFOS)	0.64	0.46	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH
Perfluorononanoic acid (PFNA)	0.18	0.46	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:37	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-8 (0-12)

Sampled: 10/28/2021 14:00

Sample ID: 21J1975-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-9 (0-12)

Sampled: 10/28/2021 14:30

Sample ID: 21J1975-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.48	0.064	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorodecanoic acid (PFDA)	0.12	0.48	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
N-EtFOSAA	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
N-MeFOSAA	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.18	0.48	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluoroheptanoic acid (PFHpA)	0.13	0.48	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorooctanoic acid (PFOA)	0.47	0.48	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorooctanesulfonic acid (PFOS)	1.2	0.48	0.065	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH
Perfluorononanoic acid (PFNA)	0.13	0.48	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:44	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-9 (0-12)

Sampled: 10/28/2021 14:30

Sample ID: 21J1975-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.5		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-9 (12-24)

Sampled: 10/28/2021 15:00

Sample ID: 21J1975-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.52	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.52	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorodecanoic acid (PFDA)	ND	0.52	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
N-MeFOSAA	ND	0.52	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.52	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluoroheptanoic acid (PFHpA)	0.093	0.52	0.075	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorooctanoic acid (PFOA)	0.39	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorooctanesulfonic acid (PFOS)	0.29	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH
Perfluorononanoic acid (PFNA)	ND	0.52	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:52	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-9 (12-24)

Sampled: 10/28/2021 15:00

Sample ID: 21J1975-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-10 (0-12)

Sampled: 10/28/2021 15:30

Sample ID: 21J1975-08

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.43	0.057	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.43	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
9Cl-PF3ONS (F53B Major)	ND	0.43	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.43	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.43	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.43	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorodecanoic acid (PFDA)	0.089	0.43	0.055	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.43	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.43	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
N-EtFOSAA	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
N-MeFOSAA	ND	0.43	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.43	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.43	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.43	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.43	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.43	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.43	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.43	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.43	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.43	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.43	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.43	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.43	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.43	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.43	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluoroheptanoic acid (PFHpA)	0.12	0.43	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorooctanoic acid (PFOA)	0.43	0.43	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorooctanesulfonic acid (PFOS)	0.78	0.43	0.058	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH
Perfluorononanoic acid (PFNA)	0.27	0.43	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 12:59	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-10 (0-12)

Sampled: 10/28/2021 15:30

Sample ID: 21J1975-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-10 (12-24)

Sampled: 10/28/2021 16:00

Sample ID: 21J1975-09

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.47	0.50	0.066	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.50	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoropentanoic acid (PFPeA)	0.76	0.50	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorohexanoic acid (PFHxA)	0.99	0.50	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorodecanoic acid (PFDA)	ND	0.50	0.064	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
N-MeFOSAA	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.095	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.098	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.50	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.50	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluoroheptanoic acid (PFHpA)	1.9	0.50	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorooctanoic acid (PFOA)	5.0	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorooctanesulfonic acid (PFOS)	2.1	0.50	0.068	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH
Perfluorononanoic acid (PFNA)	0.68	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:06	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-10 (12-24)

Sampled: 10/28/2021 16:00

Sample ID: 21J1975-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-11 (0-12)

Sampled: 10/28/2021 16:30

Sample ID: 21J1975-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.064	0.43	0.058	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.43	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
9Cl-PF3ONS (F53B Major)	ND	0.43	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.43	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.43	0.21	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.43	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorodecanoic acid (PFDA)	ND	0.43	0.056	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.43	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.43	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.43	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
N-EtFOSAA	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
N-MeFOSAA	ND	0.43	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.43	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.43	0.097	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.43	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.43	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.43	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.43	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.43	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.43	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.43	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.43	0.082	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.43	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.43	0.099	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.43	0.064	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.43	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.43	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluoroheptanoic acid (PFHpA)	0.063	0.43	0.063	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorooctanoic acid (PFOA)	0.17	0.43	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorooctanesulfonic acid (PFOS)	0.17	0.43	0.059	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH
Perfluorononanoic acid (PFNA)	ND	0.43	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:13	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-11 (0-12)

Sampled: 10/28/2021 16:30

Sample ID: 21J1975-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.7		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-11 (12-24)

Sampled: 10/28/2021 17:00

Sample ID: 21J1975-11

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.45	0.061	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.45	0.070	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.45	0.070	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.45	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.45	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
9Cl-PF3ONS (F53B Major)	ND	0.45	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.45	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.45	0.22	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.45	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorodecanoic acid (PFDA)	ND	0.45	0.059	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.45	0.070	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.45	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
N-EtFOSAA	ND	0.45	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
N-MeFOSAA	ND	0.45	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.45	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.45	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.45	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.45	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.45	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.45	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.45	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.45	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.45	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.45	0.084	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.16	0.45	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.45	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.45	0.083	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.45	0.071	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.45	0.066	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorooctanoic acid (PFOA)	ND	0.45	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.45	0.062	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH
Perfluorononanoic acid (PFNA)	ND	0.45	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:28	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-11 (12-24)

Sampled: 10/28/2021 17:00

Sample ID: 21J1975-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-12 (0-12)

Sampled: 10/28/2021 17:30

Sample ID: 21J1975-12

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.48	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorodecanoic acid (PFDA)	ND	0.48	0.061	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
N-EtFOSAA	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
N-MeFOSAA	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.070	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.48	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorooctanoic acid (PFOA)	0.34	0.48	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorooctanesulfonic acid (PFOS)	0.19	0.48	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH
Perfluorononanoic acid (PFNA)	ND	0.48	0.078	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:35	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-12 (0-12)

Sampled: 10/28/2021 17:30

Sample ID: 21J1975-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.7		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-13 (0-12)

Sampled: 10/28/2021 18:30

Sample ID: 21J1975-14

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.19	0.49	0.066	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.49	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoropentanoic acid (PFPeA)	0.22	0.49	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorohexanoic acid (PFHxA)	0.11	0.49	0.092	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
9Cl-PF3ONS (F53B Major)	ND	0.49	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.49	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.49	0.24	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.49	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorodecanoic acid (PFDA)	0.39	0.49	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorododecanoic acid (PFDoA)	0.13	0.49	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.49	0.081	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
N-EtFOSAA	ND	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
N-MeFOSAA	ND	0.49	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.49	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.49	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.49	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.49	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.49	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.49	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.49	0.079	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.49	0.093	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.49	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.49	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoroundecanoic acid (PFUnA)	0.15	0.49	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.49	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluoroheptanoic acid (PFHpA)	0.12	0.49	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorooctanoic acid (PFOA)	0.34	0.49	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorooctanesulfonic acid (PFOS)	2.4	0.49	0.067	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH
Perfluorononanoic acid (PFNA)	0.17	0.49	0.081	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:42	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-13 (0-12)

Sampled: 10/28/2021 18:30

Sample ID: 21J1975-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	80.1		% Wt	1		SM 2540G	11/11/21	11/12/21 9:15	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-13 (12-24)

Sampled: 10/28/2021 19:00

Sample ID: 21J1975-15

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.21	0.47	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorobutanesulfonic acid (PFBS)	0.11	0.47	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoropentanoic acid (PFPeA)	0.25	0.47	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorohexanoic acid (PFHxA)	0.18	0.47	0.087	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
9Cl-PF3ONS (F53B Major)	ND	0.47	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.47	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.47	0.23	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.47	0.12	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorodecanoic acid (PFDA)	0.14	0.47	0.060	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.47	0.072	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.47	0.077	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.47	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
N-EtFOSAA	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
N-MeFOSAA	ND	0.47	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.47	0.089	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.47	0.10	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.47	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.47	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.47	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.47	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.47	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.47	0.075	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.47	0.088	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.47	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.47	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.47	0.069	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.47	0.085	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.47	0.073	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluoroheptanoic acid (PFHpA)	0.21	0.47	0.068	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorooctanoic acid (PFOA)	0.65	0.47	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorooctanesulfonic acid (PFOS)	2.4	0.47	0.063	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH
Perfluorononanoic acid (PFNA)	0.37	0.47	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:49	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-13 (12-24)

Sampled: 10/28/2021 19:00

Sample ID: 21J1975-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:15	WT

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-14 (0-6)

Sampled: 10/28/2021 19:30

Sample ID: 21J1975-16

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.38	0.59	0.078	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.59	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoropentanoic acid (PFPeA)	0.20	0.59	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorohexanoic acid (PFHxA)	0.29	0.59	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.59	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
9Cl-PF3ONS (F53B Major)	ND	0.59	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.59	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.59	0.28	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.59	0.15	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorodecanoic acid (PFDA)	ND	0.59	0.076	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.59	0.090	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.59	0.096	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.59	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
N-EtFOSAA	ND	0.59	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
N-MeFOSAA	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.59	0.13	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.59	0.14	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.59	0.16	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.59	0.18	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.59	0.19	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.59	0.094	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.22	0.59	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.59	0.086	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.59	0.11	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.59	0.091	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluoroheptanoic acid (PFHpA)	0.42	0.59	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorooctanoic acid (PFOA)	1.8	0.59	0.17	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorooctanesulfonic acid (PFOS)	1.0	0.59	0.080	µg/kg dry	1		SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH
Perfluorononanoic acid (PFNA)	0.30	0.59	0.096	µg/kg dry	1	J	SOP-466 PFAS	11/9/21	11/12/21 13:56	BLH

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1975

Date Received: 10/29/2021

Field Sample #: 54MTN S-14 (0-6)

Sampled: 10/28/2021 19:30

Sample ID: 21J1975-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	66.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:15	WT

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1975-01 [54MTN S-5A (0-12)]	B294465	11/11/21
21J1975-02 [54MTN S-6 (6-12)]	B294465	11/11/21
21J1975-03 [54MTN S-7 (0-12)]	B294465	11/11/21
21J1975-04 [54MTN S-7 (12-24)]	B294465	11/11/21
21J1975-05 [54MTN S-8 (0-12)]	B294465	11/11/21
21J1975-06 [54MTN S-9 (0-12)]	B294465	11/11/21
21J1975-07 [54MTN S-9 (12-24)]	B294465	11/11/21
21J1975-08 [54MTN S-10 (0-12)]	B294465	11/11/21
21J1975-09 [54MTN S-10 (12-24)]	B294465	11/11/21
21J1975-10 [54MTN S-11 (0-12)]	B294465	11/11/21
21J1975-11 [54MTN S-11 (12-24)]	B294465	11/11/21
21J1975-12 [54MTN S-12 (0-12)]	B294465	11/11/21
21J1975-14 [54MTN S-13 (0-12)]	B294465	11/11/21
21J1975-15 [54MTN S-13 (12-24)]	B294465	11/11/21
21J1975-16 [54MTN S-14 (0-6)]	B294465	11/11/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1975-01 [54MTN S-5A (0-12)]	B294103	5.93	5.00	11/09/21
21J1975-02 [54MTN S-6 (6-12)]	B294103	5.79	5.00	11/09/21
21J1975-03 [54MTN S-7 (0-12)]	B294103	5.89	5.00	11/09/21
21J1975-04 [54MTN S-7 (12-24)]	B294103	5.69	5.00	11/09/21
21J1975-05 [54MTN S-8 (0-12)]	B294103	5.75	5.00	11/09/21
21J1975-06 [54MTN S-9 (0-12)]	B294103	5.86	5.00	11/09/21
21J1975-07 [54MTN S-9 (12-24)]	B294103	5.79	5.00	11/09/21
21J1975-08 [54MTN S-10 (0-12)]	B294103	5.90	5.00	11/09/21
21J1975-09 [54MTN S-10 (12-24)]	B294103	5.76	5.00	11/09/21
21J1975-10 [54MTN S-11 (0-12)]	B294103	5.92	5.00	11/09/21
21J1975-11 [54MTN S-11 (12-24)]	B294103	5.92	5.00	11/09/21
21J1975-12 [54MTN S-12 (0-12)]	B294103	5.79	5.00	11/09/21
21J1975-14 [54MTN S-13 (0-12)]	B294103	5.70	5.00	11/09/21
21J1975-15 [54MTN S-13 (12-24)]	B294103	5.66	5.00	11/09/21
21J1975-16 [54MTN S-14 (0-6)]	B294103	5.81	5.00	11/09/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294103 - SOP 465-PFAAS

Blank (B294103-BLK1)

Prepared: 11/09/21 Analyzed: 11/12/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B294103-BS1)

Prepared: 11/09/21 Analyzed: 11/12/21

Perfluorobutanoic acid (PFBA)	2.15	0.38	µg/kg wet	2.14	101	71-135
Perfluorobutanesulfonic acid (PFBS)	2.02	0.38	µg/kg wet	1.89	107	72-128
Perfluoropentanoic acid (PFPeA)	2.17	0.38	µg/kg wet	2.14	102	69-132
Perfluorohexanoic acid (PFHxA)	2.13	0.38	µg/kg wet	2.14	99.8	70-132
11Cl-PF3OUdS (F53B Minor)	2.45	0.38	µg/kg wet	2.01	122	50-150
9Cl-PF3ONS (F53B Major)	2.35	0.38	µg/kg wet	1.99	118	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.10	0.38	µg/kg wet	2.01	104	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.42	0.38	µg/kg wet	2.14	113	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.47	0.38	µg/kg wet	2.05	120	65-137
Perfluorodecanoic acid (PFDA)	2.10	0.38	µg/kg wet	2.14	98.1	69-133
Perfluorododecanoic acid (PFDoA)	2.22	0.38	µg/kg wet	2.14	104	69-135
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.21	0.38	µg/kg wet	1.90	116	50-150

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294103 - SOP 465-PFAAS

LCS (B294103-BS1)

Prepared: 11/09/21 Analyzed: 11/12/21

Perfluoroheptanesulfonic acid (PFHpS)	2.15	0.38	µg/kg wet	2.04		105	70-132			
N-EtFOSAA	2.48	0.38	µg/kg wet	2.14		116	61-139			
N-MeFOSAA	2.32	0.38	µg/kg wet	2.14		109	63-144			
Perfluorotetradecanoic acid (PFTA)	2.08	0.38	µg/kg wet	2.14		97.7	69-133			
Perfluorotridecanoic acid (PFTTrDA)	2.15	0.38	µg/kg wet	2.14		101	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.20	0.38	µg/kg wet	2.00		110	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.10	0.38	µg/kg wet	2.06		102	59-134			
Perfluorooctanesulfonamide (FOSA)	2.08	0.38	µg/kg wet	2.14		97.3	67-137			
Perfluorononanesulfonic acid (PFNS)	2.46	0.38	µg/kg wet	2.05		120	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.57	0.38	µg/kg wet	2.14		120	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.23	0.38	µg/kg wet	2.14		105	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.94	0.38	µg/kg wet	1.94		100	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.44	0.38	µg/kg wet	2.14		114	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.32	0.38	µg/kg wet	2.14		109	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.40	0.38	µg/kg wet	2.03		118	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.96	0.38	µg/kg wet	2.01		97.7	73-123			
Perfluoroundecanoic acid (PFUnA)	2.19	0.38	µg/kg wet	2.14		103	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.53	0.38	µg/kg wet	2.14		119	50-150			
Perfluoroheptanoic acid (PFHpA)	2.36	0.38	µg/kg wet	2.14		111	71-131			
Perfluorooctanoic acid (PFOA)	2.43	0.38	µg/kg wet	2.14		114	69-133			
Perfluorooctanesulfonic acid (PFOS)	2.15	0.38	µg/kg wet	1.97		109	68-136			
Perfluorononanoic acid (PFNA)	2.27	0.38	µg/kg wet	2.14		106	72-129			

Matrix Spike (B294103-MS1)

Source: 21J1975-01

Prepared: 11/09/21 Analyzed: 11/12/21

Perfluorobutanoic acid (PFBA)	2.71	0.48	µg/kg dry	2.65	ND	102	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.79	0.48	µg/kg dry	2.34	0.311	106	72-128			
Perfluoropentanoic acid (PFPeA)	2.78	0.48	µg/kg dry	2.65	0.124	100	69-132			
Perfluorohexanoic acid (PFHxA)	2.80	0.48	µg/kg dry	2.65	0.146	100	70-132			
11Cl-PF3OUdS (F53B Minor)	2.74	0.48	µg/kg dry	2.49	ND	110	50-150			
9Cl-PF3ONS (F53B Major)	2.94	0.48	µg/kg dry	2.47	ND	119	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.53	0.48	µg/kg dry	2.49	ND	102	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	3.23	0.48	µg/kg dry	2.65	ND	122	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.98	0.48	µg/kg dry	2.54	ND	117	65-137			
Perfluorodecanoic acid (PFDA)	2.73	0.48	µg/kg dry	2.65	0.0833	100	69-133			
Perfluorododecanoic acid (PFDoA)	2.71	0.48	µg/kg dry	2.65	ND	102	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.76	0.48	µg/kg dry	2.36	ND	117	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.73	0.48	µg/kg dry	2.53	ND	108	70-132			
N-EtFOSAA	3.24	0.48	µg/kg dry	2.65	ND	122	61-139			
N-MeFOSAA	3.01	0.48	µg/kg dry	2.65	ND	114	63-144			
Perfluorotetradecanoic acid (PFTA)	2.70	0.48	µg/kg dry	2.65	ND	102	69-133			
Perfluorotridecanoic acid (PFTTrDA)	2.73	0.48	µg/kg dry	2.65	ND	103	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.78	0.48	µg/kg dry	2.48	ND	112	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.69	0.48	µg/kg dry	2.55	ND	105	59-134			
Perfluorooctanesulfonamide (FOSA)	2.64	0.48	µg/kg dry	2.65	ND	99.6	67-137			
Perfluorononanesulfonic acid (PFNS)	3.23	0.48	µg/kg dry	2.54	ND	127 *	69-125			MS-22
Perfluoro-1-hexanesulfonamide (FHxSA)	3.09	0.48	µg/kg dry	2.65	ND	117	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	2.91	0.48	µg/kg dry	2.65	ND	110	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.56	0.48	µg/kg dry	2.41	ND	106	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	3.12	0.48	µg/kg dry	2.65	ND	118	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.93	0.48	µg/kg dry	2.65	ND	111	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294103 - SOP 465-PFAAS

Matrix Spike (B294103-MS1)

Source: 21J1975-01

Prepared: 11/09/21 Analyzed: 11/12/21

6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.84	0.48	µg/kg dry	2.51	ND	113	64-140			
Perfluoropetanesulfonic acid (PFPeS)	2.52	0.48	µg/kg dry	2.49	ND	101	73-123			
Perfluoroundecanoic acid (PFUnA)	2.84	0.48	µg/kg dry	2.65	ND	107	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.17	0.48	µg/kg dry	2.65	ND	120	50-150			
Perfluoroheptanoic acid (PFHpA)	3.06	0.48	µg/kg dry	2.65	0.109	111	71-131			
Perfluorooctanoic acid (PFOA)	3.33	0.48	µg/kg dry	2.65	0.230	117	69-133			
Perfluorooctanesulfonic acid (PFOS)	3.38	0.48	µg/kg dry	2.45	0.711	109	68-136			
Perfluorononanoic acid (PFNA)	3.09	0.48	µg/kg dry	2.65	ND	117	72-129			

Matrix Spike Dup (B294103-MSD1)

Source: 21J1975-01

Prepared: 11/09/21 Analyzed: 11/12/21

Perfluorobutanoic acid (PFBA)	2.76	0.47	µg/kg dry	2.62	ND	106	71-135	1.95	30	
Perfluorobutanesulfonic acid (PFBS)	2.76	0.47	µg/kg dry	2.31	0.311	106	72-128	0.948	30	
Perfluoropentanoic acid (PFPeA)	2.71	0.47	µg/kg dry	2.62	0.124	98.8	69-132	2.61	30	
Perfluorohexanoic acid (PFHxA)	2.76	0.47	µg/kg dry	2.62	0.146	99.7	70-132	1.59	30	
11Cl-PF3OUdS (F53B Minor)	2.94	0.47	µg/kg dry	2.46	ND	119	50-150	6.98	30	
9Cl-PF3ONS (F53B Major)	2.85	0.47	µg/kg dry	2.44	ND	117	50-150	3.26	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.52	0.47	µg/kg dry	2.46	ND	102	50-150	0.343	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	3.25	0.47	µg/kg dry	2.62	ND	124	50-150	0.668	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.68	0.47	µg/kg dry	2.51	ND	107	65-137	10.6	30	
Perfluorodecanoic acid (PFDA)	2.64	0.47	µg/kg dry	2.62	0.0833	97.9	69-133	3.34	30	
Perfluorododecanoic acid (PFDoA)	2.84	0.47	µg/kg dry	2.62	ND	108	69-135	4.51	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.76	0.47	µg/kg dry	2.33	ND	118	50-150	0.292	30	
Perfluoroheptanesulfonic acid (PFHpS)	3.02	0.47	µg/kg dry	2.50	ND	121	70-132	9.92	30	
N-EtFOSAA	3.10	0.47	µg/kg dry	2.62	ND	118	61-139	4.49	30	
N-MeFOSAA	2.93	0.47	µg/kg dry	2.62	ND	112	63-144	2.70	30	
Perfluorotetradecanoic acid (PFTA)	2.67	0.47	µg/kg dry	2.62	ND	102	69-133	1.00	30	
Perfluorotridecanoic acid (PFTrDA)	2.71	0.47	µg/kg dry	2.62	ND	104	66-139	0.740	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.75	0.47	µg/kg dry	2.45	ND	112	62-145	1.29	30	
Perfluorodecanesulfonic acid (PFDS)	2.92	0.47	µg/kg dry	2.52	ND	116	59-134	8.12	30	
Perfluorooctanesulfonamide (FOSA)	2.83	0.47	µg/kg dry	2.62	ND	108	67-137	7.01	30	
Perfluoronananesulfonic acid (PFNS)	2.84	0.47	µg/kg dry	2.51	ND	113	69-125	12.8	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	3.11	0.47	µg/kg dry	2.62	ND	119	50-150	0.747	30	
Perfluoro-1-butanesulfonamide (FBSA)	2.93	0.47	µg/kg dry	2.62	ND	112	50-150	0.708	30	
Perfluorohexanesulfonic acid (PFHxS)	2.46	0.47	µg/kg dry	2.38	ND	103	67-130	4.18	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	3.09	0.47	µg/kg dry	2.62	ND	118	50-150	1.12	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	2.91	0.47	µg/kg dry	2.62	ND	111	50-150	0.844	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.76	0.47	µg/kg dry	2.49	ND	111	64-140	2.83	30	
Perfluoropetanesulfonic acid (PFPeS)	2.54	0.47	µg/kg dry	2.46	ND	103	73-123	0.640	30	
Perfluoroundecanoic acid (PFUnA)	2.69	0.47	µg/kg dry	2.62	ND	103	64-136	5.74	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.09	0.47	µg/kg dry	2.62	ND	118	50-150	2.58	30	
Perfluoroheptanoic acid (PFHpA)	2.90	0.47	µg/kg dry	2.62	0.109	107	71-131	5.13	30	
Perfluorooctanoic acid (PFOA)	3.22	0.47	µg/kg dry	2.62	0.230	114	69-133	3.22	30	
Perfluorooctanesulfonic acid (PFOS)	3.21	0.47	µg/kg dry	2.42	0.711	103	68-136	5.22	30	
Perfluorononanoic acid (PFNA)	2.87	0.47	µg/kg dry	2.62	ND	109	72-129	7.67	30	

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

ANALYST

RLF Rebecca Faust
STATION PDF Management Station
JFC James F. Constantino
JLH Jessica L. Hoffman
EGR Evett G Rivera
AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-5A (0-12) (21J1975-01)			Lab File ID: 21J1975-01.d			Analyzed: 11/12/21 12:09			
M8FOSA	365988.8	4.00455	434,290.00	4.036517	84	50 - 150	-0.0320	+/-0.50	
M2-4:2FTS	159005.3	2.52145	199,038.00	2.570733	80	50 - 150	-0.0493	+/-0.50	
M2PFTA	1593222	4.3378	1,748,768.00	4.362167	91	50 - 150	-0.0244	+/-0.50	
M2-8:2FTS	397952.9	3.818717	219,119.00	3.842967	182	50 - 150	-0.0242	+/-0.50	*
MPFBA	652837	1.116633	744,445.00	1.100017	88	50 - 150	0.0166	+/-0.50	
M3HFPO-DA	202693.8	2.855667	271,282.00	2.904767	75	50 - 150	-0.0491	+/-0.50	
M6PFDA	1042556	3.81925	1,013,901.00	3.84345	103	50 - 150	-0.0242	+/-0.50	
M3PFBS	158281.4	1.9364	170,351.00	1.96145	93	50 - 150	-0.0251	+/-0.50	
M7PFUnA	1318297	3.962017	1,405,982.00	3.986	94	50 - 150	-0.0240	+/-0.50	
M2-6:2FTS	139251.7	3.4614	123,278.00	3.48535	113	50 - 150	-0.0240	+/-0.50	
M5PFPeA	647297.9	1.766017	749,755.00	1.7826	86	50 - 150	-0.0166	+/-0.50	
M5PFHxA	885703.4	2.605183	999,321.00	2.663233	89	50 - 150	-0.0581	+/-0.50	
M3PFHxS	121113.8	3.226417	126,860.00	3.25875	95	50 - 150	-0.0323	+/-0.50	
M4PFHpA	902059.1	3.195017	1,062,495.00	3.227617	85	50 - 150	-0.0326	+/-0.50	
M8PFOA	901621.9	3.4779	1,022,909.00	3.493867	88	50 - 150	-0.0160	+/-0.50	
M8PFOS	133168.5	3.668117	147,936.00	3.684083	90	50 - 150	-0.0160	+/-0.50	
M9PFNA	780913.6	3.661167	891,883.00	3.685133	88	50 - 150	-0.0240	+/-0.50	
MPFDoA	1358013	4.096633	1,396,075.00	4.128783	97	50 - 150	-0.0322	+/-0.50	
d5-NEtFOSAA	278021.9	3.969483	289,504.00	3.993467	96	50 - 150	-0.0240	+/-0.50	
d3-NMeFOSAA	340147.4	3.889733	319,952.00	3.913883	106	50 - 150	-0.0241	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-6 (6-12) (21J1975-02)			Lab File ID: 21J1975-02.d			Analyzed: 11/12/21 12:16			
M8FOSA	377888	3.988567	434,290.00	4.036517	87	50 - 150	-0.0479	+/-0.50	
M2-4:2FTS	146883.9	2.4146	199,038.00	2.570733	74	50 - 150	-0.1561	+/-0.50	
M2PFTA	1580477	4.313416	1,748,768.00	4.362167	90	50 - 150	-0.0488	+/-0.50	
M2-8:2FTS	403473.2	3.794817	219,119.00	3.842967	184	50 - 150	-0.0481	+/-0.50	*
MPFBA	667990.8	1.066783	744,445.00	1.100017	90	50 - 150	-0.0332	+/-0.50	
M3HFPO-DA	204739.2	2.757467	271,282.00	2.904767	75	50 - 150	-0.1473	+/-0.50	
M6PFDA	1079654	3.795333	1,013,901.00	3.84345	106	50 - 150	-0.0481	+/-0.50	
M3PFBS	155077.6	1.828667	170,351.00	1.96145	91	50 - 150	-0.1328	+/-0.50	
M7PFUnA	1310772	3.938033	1,405,982.00	3.986	93	50 - 150	-0.0480	+/-0.50	
M2-6:2FTS	129930.2	3.4293	123,278.00	3.48535	105	50 - 150	-0.0560	+/-0.50	
M5PFPeA	666958.2	1.6652	749,755.00	1.7826	89	50 - 150	-0.1174	+/-0.50	
M5PFHxA	896783.2	2.490217	999,321.00	2.663233	90	50 - 150	-0.1730	+/-0.50	
M3PFHxS	113818.2	3.185733	126,860.00	3.25875	90	50 - 150	-0.0730	+/-0.50	
M4PFHpA	886914.8	3.14655	1,062,495.00	3.227617	83	50 - 150	-0.0811	+/-0.50	
M8PFOA	891305.1	3.437833	1,022,909.00	3.493867	87	50 - 150	-0.0560	+/-0.50	
M8PFOS	135320.2	3.644167	147,936.00	3.684083	91	50 - 150	-0.0399	+/-0.50	
M9PFNA	799163.3	3.637217	891,883.00	3.685133	90	50 - 150	-0.0479	+/-0.50	
MPFDoA	1340241	4.07265	1,396,075.00	4.128783	96	50 - 150	-0.0561	+/-0.50	
d5-NEtFOSAA	284659.4	3.9455	289,504.00	3.993467	98	50 - 150	-0.0480	+/-0.50	
d3-NMeFOSAA	360316.6	3.873767	319,952.00	3.913883	113	50 - 150	-0.0401	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-7 (0-12) (21J1975-03)			Lab File ID: 21J1975-03.d			Analyzed: 11/12/21 12:23			
M8FOSA	359925.8	3.988567	434,290.00	4.036517	83	50 - 150	-0.0479	+/-0.50	
M2-4:2FTS	140175.7	2.4146	199,038.00	2.570733	70	50 - 150	-0.1561	+/-0.50	
M2PFTA	1592863	4.32155	1,748,768.00	4.362167	91	50 - 150	-0.0406	+/-0.50	
M2-8:2FTS	340281.9	3.794817	219,119.00	3.842967	155	50 - 150	-0.0481	+/-0.50	*
MPFBA	647964.3	1.066783	744,445.00	1.100017	87	50 - 150	-0.0332	+/-0.50	
M3HFPO-DA	201279.8	2.757467	271,282.00	2.904767	74	50 - 150	-0.1473	+/-0.50	
M6PFDA	1037173	3.795333	1,013,901.00	3.84345	102	50 - 150	-0.0481	+/-0.50	
M3PFBS	151873.1	1.828667	170,351.00	1.96145	89	50 - 150	-0.1328	+/-0.50	
M7PFUnA	1237739	3.938033	1,405,982.00	3.986	88	50 - 150	-0.0480	+/-0.50	
M2-6:2FTS	106249.8	3.4293	123,278.00	3.48535	86	50 - 150	-0.0560	+/-0.50	
M5PFPeA	636904.1	1.6652	749,755.00	1.7826	85	50 - 150	-0.1174	+/-0.50	
M5PFHxA	852414.4	2.490217	999,321.00	2.663233	85	50 - 150	-0.1730	+/-0.50	
M3PFHxS	114028.6	3.185733	126,860.00	3.25875	90	50 - 150	-0.0730	+/-0.50	
M4PFHpA	875947.1	3.14655	1,062,495.00	3.227617	82	50 - 150	-0.0811	+/-0.50	
M8PFOA	884897.4	3.445817	1,022,909.00	3.493867	87	50 - 150	-0.0480	+/-0.50	
M8PFOS	129446.8	3.644167	147,936.00	3.684083	88	50 - 150	-0.0399	+/-0.50	
M9PFNA	746717.4	3.637217	891,883.00	3.685133	84	50 - 150	-0.0479	+/-0.50	
MPFDoA	1311473	4.08065	1,396,075.00	4.128783	94	50 - 150	-0.0481	+/-0.50	
d5-NEtFOSAA	266247.9	3.9455	289,504.00	3.993467	92	50 - 150	-0.0480	+/-0.50	
d3-NMeFOSAA	317423.1	3.873767	319,952.00	3.913883	99	50 - 150	-0.0401	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-7 (12-24) (21J1975-04)			Lab File ID: 21J1975-04.d			Analyzed: 11/12/21 12:30			
M8FOSA	402553.1	3.99655	434,290.00	4.036517	93	50 - 150	-0.0400	+/-0.50	
M2-4:2FTS	153784.6	2.4228	199,038.00	2.570733	77	50 - 150	-0.1479	+/-0.50	
M2PFTA	1584115	4.32155	1,748,768.00	4.362167	91	50 - 150	-0.0406	+/-0.50	
M2-8:2FTS	333632.3	3.802783	219,119.00	3.842967	152	50 - 150	-0.0402	+/-0.50	*
MPFBA	713505.6	1.066783	744,445.00	1.100017	96	50 - 150	-0.0332	+/-0.50	
M3HFPO-DA	231076.1	2.76565	271,282.00	2.904767	85	50 - 150	-0.1391	+/-0.50	
M6PFDA	1144405	3.803317	1,013,901.00	3.84345	113	50 - 150	-0.0401	+/-0.50	
M3PFBS	160281.9	1.83695	170,351.00	1.96145	94	50 - 150	-0.1245	+/-0.50	
M7PFUnA	1344748	3.946033	1,405,982.00	3.986	96	50 - 150	-0.0400	+/-0.50	
M2-6:2FTS	110450.9	3.437283	123,278.00	3.48535	90	50 - 150	-0.0481	+/-0.50	
M5PFPeA	700915.7	1.673467	749,755.00	1.7826	93	50 - 150	-0.1091	+/-0.50	
M5PFHxA	942661.7	2.498417	999,321.00	2.663233	94	50 - 150	-0.1648	+/-0.50	
M3PFHxS	122140.9	3.185733	126,860.00	3.25875	96	50 - 150	-0.0730	+/-0.50	
M4PFHpA	971248.1	3.14655	1,062,495.00	3.227617	91	50 - 150	-0.0811	+/-0.50	
M8PFOA	929656.4	3.445817	1,022,909.00	3.493867	91	50 - 150	-0.0480	+/-0.50	
M8PFOS	142716.3	3.644167	147,936.00	3.684083	96	50 - 150	-0.0399	+/-0.50	
M9PFNA	854634.4	3.6452	891,883.00	3.685133	96	50 - 150	-0.0399	+/-0.50	
MPFDoA	1411911	4.08065	1,396,075.00	4.128783	101	50 - 150	-0.0481	+/-0.50	
d5-NEtFOSAA	270357.9	3.9535	289,504.00	3.993467	93	50 - 150	-0.0400	+/-0.50	
d3-NMeFOSAA	291402.8	3.873767	319,952.00	3.913883	91	50 - 150	-0.0401	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-8 (0-12) (21J1975-05)			Lab File ID: 21J1975-05.d		Analyzed: 11/12/21 12:37				
M8FOSA	380862.7	3.948583	434,290.00	4.036517	88	50 - 150	-0.0879	+/-0.50	
M2-4:2FTS	154144.5	2.3326	199,038.00	2.570733	77	50 - 150	-0.2381	+/-0.50	
M2PFTA	1714952	4.289183	1,748,768.00	4.362167	98	50 - 150	-0.0730	+/-0.50	
M2-8:2FTS	351261.7	3.770917	219,119.00	3.842967	160	50 - 150	-0.0720	+/-0.50	*
MPFBA	702172.2	1.04185	744,445.00	1.100017	94	50 - 150	-0.0582	+/-0.50	
M3HFPO-DA	234198.1	2.6748	271,282.00	2.904767	86	50 - 150	-0.2300	+/-0.50	
M6PFDA	1134465	3.771433	1,013,901.00	3.84345	112	50 - 150	-0.0720	+/-0.50	
M3PFBS	159815.8	1.761267	170,351.00	1.96145	94	50 - 150	-0.2002	+/-0.50	
M7PFUnA	1367896	3.91405	1,405,982.00	3.986	97	50 - 150	-0.0720	+/-0.50	
M2-6:2FTS	130389.8	3.396333	123,278.00	3.48535	106	50 - 150	-0.0890	+/-0.50	
M5PFPeA	694476.6	1.615567	749,755.00	1.7826	93	50 - 150	-0.1670	+/-0.50	
M5PFHxA	943992.6	2.407867	999,321.00	2.663233	94	50 - 150	-0.2554	+/-0.50	
M3PFHxS	121905.6	3.137267	126,860.00	3.25875	96	50 - 150	-0.1215	+/-0.50	
M4PFHpA	953990.6	3.089033	1,062,495.00	3.227617	90	50 - 150	-0.1386	+/-0.50	
M8PFOA	940578.6	3.405067	1,022,909.00	3.493867	92	50 - 150	-0.0888	+/-0.50	
M8PFOS	134843.3	3.612217	147,936.00	3.684083	91	50 - 150	-0.0719	+/-0.50	
M9PFNA	852928.9	3.613267	891,883.00	3.685133	96	50 - 150	-0.0719	+/-0.50	
MPFDoA	1437229	4.048666	1,396,075.00	4.128783	103	50 - 150	-0.0801	+/-0.50	
d5-NEtFOSAA	305503.3	3.913533	289,504.00	3.993467	106	50 - 150	-0.0799	+/-0.50	
d3-NMeFOSAA	351980.8	3.841733	319,952.00	3.913883	110	50 - 150	-0.0721	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-9 (0-12) (21J1975-06)			Lab File ID: 21J1975-06.d			Analyzed: 11/12/21 12:44			
M8FOSA	356378.1	3.956583	434,290.00	4.036517	82	50 - 150	-0.0799	+/-0.50	
M2-4:2FTS	136202.4	2.349033	199,038.00	2.570733	68	50 - 150	-0.2217	+/-0.50	
M2PFTA	1452419	4.297266	1,748,768.00	4.362167	83	50 - 150	-0.0649	+/-0.50	
M2-8:2FTS	341962	3.778883	219,119.00	3.842967	156	50 - 150	-0.0641	+/-0.50	*
MPFBA	633614.4	1.050167	744,445.00	1.100017	85	50 - 150	-0.0499	+/-0.50	
M3HFPO-DA	189251.1	2.691233	271,282.00	2.904767	70	50 - 150	-0.2135	+/-0.50	
M6PFDA	992706.8	3.771433	1,013,901.00	3.84345	98	50 - 150	-0.0720	+/-0.50	
M3PFBS	144747.9	1.77785	170,351.00	1.96145	85	50 - 150	-0.1836	+/-0.50	
M7PFUnA	1233815	3.91405	1,405,982.00	3.986	88	50 - 150	-0.0720	+/-0.50	
M2-6:2FTS	111144	3.404383	123,278.00	3.48535	90	50 - 150	-0.0810	+/-0.50	
M5PFPeA	609256.4	1.623833	749,755.00	1.7826	81	50 - 150	-0.1588	+/-0.50	
M5PFHxA	828924.8	2.424267	999,321.00	2.663233	83	50 - 150	-0.2390	+/-0.50	
M3PFHxS	107563.6	3.153433	126,860.00	3.25875	85	50 - 150	-0.1053	+/-0.50	
M4PFHpA	838050.9	3.113417	1,062,495.00	3.227617	79	50 - 150	-0.1142	+/-0.50	
M8PFOA	842816.7	3.421167	1,022,909.00	3.493867	82	50 - 150	-0.0727	+/-0.50	
M8PFOS	126713	3.6202	147,936.00	3.684083	86	50 - 150	-0.0639	+/-0.50	
M9PFNA	748742	3.62125	891,883.00	3.685133	84	50 - 150	-0.0639	+/-0.50	
MPFDoA	1288802	4.056667	1,396,075.00	4.128783	92	50 - 150	-0.0721	+/-0.50	
d5-NEtFOSAA	258829.3	3.921517	289,504.00	3.993467	89	50 - 150	-0.0719	+/-0.50	
d3-NMeFOSAA	296477.6	3.841733	319,952.00	3.913883	93	50 - 150	-0.0721	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-9 (12-24) (21J1975-07)			Lab File ID: 21J1975-07.d			Analyzed: 11/12/21 12:52			
M8FOSA	389958.7	3.956583	434,290.00	4.036517	90	50 - 150	-0.0799	+/-0.50	
M2-4:2FTS	154154.5	2.349033	199,038.00	2.570733	77	50 - 150	-0.2217	+/-0.50	
M2PFTA	1738933	4.297266	1,748,768.00	4.362167	99	50 - 150	-0.0649	+/-0.50	
M2-8:2FTS	382920	3.770917	219,119.00	3.842967	175	50 - 150	-0.0720	+/-0.50	*
MPFBA	706392.8	1.050167	744,445.00	1.100017	95	50 - 150	-0.0499	+/-0.50	
M3HFPO-DA	228559.8	2.691233	271,282.00	2.904767	84	50 - 150	-0.2135	+/-0.50	
M6PFDA	1140109	3.771433	1,013,901.00	3.84345	112	50 - 150	-0.0720	+/-0.50	
M3PFBS	159144.1	1.787233	170,351.00	1.96145	93	50 - 150	-0.1742	+/-0.50	
M7PFUnA	1402379	3.91405	1,405,982.00	3.986	100	50 - 150	-0.0720	+/-0.50	
M2-6:2FTS	139080.3	3.404383	123,278.00	3.48535	113	50 - 150	-0.0810	+/-0.50	
M5PFPeA	692530.3	1.6321	749,755.00	1.7826	92	50 - 150	-0.1505	+/-0.50	
M5PFHxA	933275.5	2.432467	999,321.00	2.663233	93	50 - 150	-0.2308	+/-0.50	
M3PFHxS	123359.9	3.14535	126,860.00	3.25875	97	50 - 150	-0.1134	+/-0.50	
M4PFHpA	963328.4	3.105283	1,062,495.00	3.227617	91	50 - 150	-0.1223	+/-0.50	
M8PFOA	964746	3.413117	1,022,909.00	3.493867	94	50 - 150	-0.0807	+/-0.50	
M8PFOS	132288.8	3.620217	147,936.00	3.684083	89	50 - 150	-0.0639	+/-0.50	
M9PFNA	867830.8	3.613267	891,883.00	3.685133	97	50 - 150	-0.0719	+/-0.50	
MPFDoA	1439978	4.048666	1,396,075.00	4.128783	103	50 - 150	-0.0801	+/-0.50	
d5-NEtFOSAA	318390.4	3.921517	289,504.00	3.993467	110	50 - 150	-0.0719	+/-0.50	
d3-NMeFOSAA	354686.4	3.841733	319,952.00	3.913883	111	50 - 150	-0.0721	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-10 (0-12) (21J1975-08)									
			Lab File ID: 21J1975-08.d			Analyzed: 11/12/21 12:59			
M8FOSA	388542	3.956583	434,290.00	4.036517	89	50 - 150	-0.0799	+/-0.50	
M2-4:2FTS	161460.8	2.349033	199,038.00	2.570733	81	50 - 150	-0.2217	+/-0.50	
M2PFTA	1750213	4.297266	1,748,768.00	4.362167	100	50 - 150	-0.0649	+/-0.50	
M2-8:2FTS	328421.2	3.770917	219,119.00	3.842967	150	50 - 150	-0.0720	+/-0.50	
MPFBA	723158.6	1.050167	744,445.00	1.100017	97	50 - 150	-0.0499	+/-0.50	
M3HFPO-DA	225565.9	2.691233	271,282.00	2.904767	83	50 - 150	-0.2135	+/-0.50	
M6PFDA	1113398	3.771433	1,013,901.00	3.84345	110	50 - 150	-0.0720	+/-0.50	
M3PFBS	159063.1	1.787233	170,351.00	1.96145	93	50 - 150	-0.1742	+/-0.50	
M7PFUnA	1362440	3.92205	1,405,982.00	3.986	97	50 - 150	-0.0640	+/-0.50	
M2-6:2FTS	119922.1	3.4044	123,278.00	3.48535	97	50 - 150	-0.0810	+/-0.50	
M5PFPeA	689752.6	1.6321	749,755.00	1.7826	92	50 - 150	-0.1505	+/-0.50	
M5PFHxA	936521.3	2.432467	999,321.00	2.663233	94	50 - 150	-0.2308	+/-0.50	
M3PFHxS	121109.9	3.153433	126,860.00	3.25875	95	50 - 150	-0.1053	+/-0.50	
M4PFHpA	965898.6	3.105283	1,062,495.00	3.227617	91	50 - 150	-0.1223	+/-0.50	
M8PFOA	961326.1	3.413117	1,022,909.00	3.493867	94	50 - 150	-0.0807	+/-0.50	
M8PFOS	133176.3	3.620217	147,936.00	3.684083	90	50 - 150	-0.0639	+/-0.50	
M9PFNA	830511.8	3.62125	891,883.00	3.685133	93	50 - 150	-0.0639	+/-0.50	
MPFDoA	1404165	4.056667	1,396,075.00	4.128783	101	50 - 150	-0.0721	+/-0.50	
d5-NEtFOSAA	291936.1	3.921517	289,504.00	3.993467	101	50 - 150	-0.0719	+/-0.50	
d3-NMeFOSAA	330503.3	3.8497	319,952.00	3.913883	103	50 - 150	-0.0642	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-10 (12-24) (21J1975-09)			Lab File ID: 21J1975-09.d			Analyzed: 11/12/21 13:06			
M8FOSA	386493	3.956583	434,290.00	4.036517	89	50 - 150	-0.0799	+/-0.50	
M2-4:2FTS	147271.8	2.349033	199,038.00	2.570733	74	50 - 150	-0.2217	+/-0.50	
M2PFTA	1649314	4.297266	1,748,768.00	4.362167	94	50 - 150	-0.0649	+/-0.50	
M2-8:2FTS	360868	3.778883	219,119.00	3.842967	165	50 - 150	-0.0641	+/-0.50	*
MPFBA	673333.3	1.050167	744,445.00	1.100017	90	50 - 150	-0.0499	+/-0.50	
M3HFPO-DA	203832.6	2.699433	271,282.00	2.904767	75	50 - 150	-0.2053	+/-0.50	
M6PFDA	1082116	3.7794	1,013,901.00	3.84345	107	50 - 150	-0.0640	+/-0.50	
M3PFBS	150965.1	1.787233	170,351.00	1.96145	89	50 - 150	-0.1742	+/-0.50	
M7PFUnA	1328095	3.92205	1,405,982.00	3.986	94	50 - 150	-0.0640	+/-0.50	
M2-6:2FTS	124019.4	3.41245	123,278.00	3.48535	101	50 - 150	-0.0729	+/-0.50	
M5PFPeA	652848.9	1.6321	749,755.00	1.7826	87	50 - 150	-0.1505	+/-0.50	
M5PFHxA	875835.8	2.432467	999,321.00	2.663233	88	50 - 150	-0.2308	+/-0.50	
M3PFHxS	117956.1	3.153433	126,860.00	3.25875	93	50 - 150	-0.1053	+/-0.50	
M4PFHpA	902967.9	3.113417	1,062,495.00	3.227617	85	50 - 150	-0.1142	+/-0.50	
M8PFOA	913989.6	3.421167	1,022,909.00	3.493867	89	50 - 150	-0.0727	+/-0.50	
M8PFOS	130053	3.6202	147,936.00	3.684083	88	50 - 150	-0.0639	+/-0.50	
M9PFNA	804100.2	3.62125	891,883.00	3.685133	90	50 - 150	-0.0639	+/-0.50	
MPFDoA	1412210	4.056667	1,396,075.00	4.128783	101	50 - 150	-0.0721	+/-0.50	
d5-NEtFOSAA	290193.9	3.929517	289,504.00	3.993467	100	50 - 150	-0.0639	+/-0.50	
d3-NMeFOSAA	347261.3	3.849683	319,952.00	3.913883	109	50 - 150	-0.0642	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-11 (0-12) (21J1975-10)			Lab File ID: 21J1975-10.d			Analyzed: 11/12/21 13:13			
M8FOSA	381838.3	3.964583	434,290.00	4.036517	88	50 - 150	-0.0719	+/-0.50	
M2-4:2FTS	150247.2	2.357183	199,038.00	2.570733	75	50 - 150	-0.2136	+/-0.50	
M2PFTA	1636176	4.297266	1,748,768.00	4.362167	94	50 - 150	-0.0649	+/-0.50	
M2-8:2FTS	337705.3	3.778883	219,119.00	3.842967	154	50 - 150	-0.0641	+/-0.50	*
MPFBA	690894.3	1.050167	744,445.00	1.100017	93	50 - 150	-0.0499	+/-0.50	
M3HFPO-DA	204391.3	2.691233	271,282.00	2.904767	75	50 - 150	-0.2135	+/-0.50	
M6PFDA	1075528	3.7794	1,013,901.00	3.84345	106	50 - 150	-0.0640	+/-0.50	
M3PFBS	151850.1	1.787233	170,351.00	1.96145	89	50 - 150	-0.1742	+/-0.50	
M7PFUnA	1302697	3.92205	1,405,982.00	3.986	93	50 - 150	-0.0640	+/-0.50	
M2-6:2FTS	120563.9	3.404383	123,278.00	3.48535	98	50 - 150	-0.0810	+/-0.50	
M5PFPeA	657767.7	1.6321	749,755.00	1.7826	88	50 - 150	-0.1505	+/-0.50	
M5PFHxA	885888.8	2.432467	999,321.00	2.663233	89	50 - 150	-0.2308	+/-0.50	
M3PFHxS	113067.5	3.153433	126,860.00	3.25875	89	50 - 150	-0.1053	+/-0.50	
M4PFHpA	908234.9	3.113417	1,062,495.00	3.227617	85	50 - 150	-0.1142	+/-0.50	
M8PFOA	918110.1	3.421167	1,022,909.00	3.493867	90	50 - 150	-0.0727	+/-0.50	
M8PFOS	133905.2	3.6202	147,936.00	3.684083	91	50 - 150	-0.0639	+/-0.50	
M9PFNA	825200.4	3.62125	891,883.00	3.685133	93	50 - 150	-0.0639	+/-0.50	
MPFDoA	1404187	4.056667	1,396,075.00	4.128783	101	50 - 150	-0.0721	+/-0.50	
d5-NEtFOSAA	292628.6	3.929517	289,504.00	3.993467	101	50 - 150	-0.0639	+/-0.50	
d3-NMeFOSAA	336097.2	3.8497	319,952.00	3.913883	105	50 - 150	-0.0642	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-11 (12-24) (21J1975-11)									
			Lab File ID: 21J1975-11.d			Analyzed: 11/12/21 13:28			
M8FOSA	398887.5	3.956583	434,290.00	3.964583	92	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	157076.4	2.357183	199,038.00	2.357183	79	50 - 150	0.0000	+/-0.50	
M2PFTA	1639259	4.297266	1,748,768.00	4.297266	94	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	337945.3	3.770917	219,119.00	3.778883	154	50 - 150	-0.0080	+/-0.50	*
MPFBA	723486.2	1.058467	744,445.00	1.050167	97	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	206289	2.699433	271,282.00	2.699433	76	50 - 150	0.0000	+/-0.50	
M6PFDA	1118772	3.771433	1,013,901.00	3.7794	110	50 - 150	-0.0080	+/-0.50	
M3PFBS	158867.8	1.795517	170,351.00	1.787233	93	50 - 150	0.0083	+/-0.50	
M7PFUnA	1371719	3.91405	1,405,982.00	3.92205	98	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	118128.3	3.396333	123,278.00	3.4044	96	50 - 150	-0.0081	+/-0.50	
M5PFPeA	696074.5	1.640383	749,755.00	1.6321	93	50 - 150	0.0083	+/-0.50	
M5PFHxA	917740.2	2.440933	999,321.00	2.432467	92	50 - 150	0.0085	+/-0.50	
M3PFHxS	121500.3	3.153433	126,860.00	3.153433	96	50 - 150	0.0000	+/-0.50	
M4PFHpA	960142.4	3.105283	1,062,495.00	3.113417	90	50 - 150	-0.0081	+/-0.50	
M8PFOA	949193.4	3.413117	1,022,909.00	3.421167	93	50 - 150	-0.0080	+/-0.50	
M8PFOS	140734.4	3.6202	147,936.00	3.620217	95	50 - 150	0.0000	+/-0.50	
M9PFNA	866515.8	3.62125	891,883.00	3.62125	97	50 - 150	0.0000	+/-0.50	
MPFDoA	1373363	4.056667	1,396,075.00	4.056667	98	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	291153	3.921517	289,504.00	3.929517	101	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	334534.7	3.8497	319,952.00	3.8497	105	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-12 (0-12) (21J1975-12)									
			Lab File ID: 21J1975-12.d			Analyzed: 11/12/21 13:35			
M8FOSA	380025	3.964583	434,290.00	3.964583	88	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	137699.8	2.365383	199,038.00	2.357183	69	50 - 150	0.0082	+/-0.50	
M2PFTA	1428414	4.305333	1,748,768.00	4.297266	82	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	291370.6	3.778883	219,119.00	3.778883	133	50 - 150	0.0000	+/-0.50	
MPFBA	681227.1	1.050167	744,445.00	1.050167	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	208815.4	2.708367	271,282.00	2.699433	77	50 - 150	0.0089	+/-0.50	
M6PFDA	1063316	3.7794	1,013,901.00	3.7794	105	50 - 150	0.0000	+/-0.50	
M3PFBS	150513.9	1.795517	170,351.00	1.787233	88	50 - 150	0.0083	+/-0.50	
M7PFUnA	1288696	3.92205	1,405,982.00	3.92205	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	110114.2	3.41245	123,278.00	3.4044	89	50 - 150	0.0081	+/-0.50	
M5PFPeA	656022.8	1.640383	749,755.00	1.6321	87	50 - 150	0.0083	+/-0.50	
M5PFHxA	874448.1	2.440933	999,321.00	2.432467	88	50 - 150	0.0085	+/-0.50	
M3PFHxS	114674.5	3.1615	126,860.00	3.153433	90	50 - 150	0.0081	+/-0.50	
M4PFHpA	904716.9	3.113417	1,062,495.00	3.113417	85	50 - 150	0.0000	+/-0.50	
M8PFOA	886006.1	3.421167	1,022,909.00	3.421167	87	50 - 150	0.0000	+/-0.50	
M8PFOS	129146.7	3.6282	147,936.00	3.620217	87	50 - 150	0.0080	+/-0.50	
M9PFNA	801558.9	3.629233	891,883.00	3.62125	90	50 - 150	0.0080	+/-0.50	
MPFDoA	1267831	4.06465	1,396,075.00	4.056667	91	50 - 150	0.0080	+/-0.50	
d5-NEtFOSAA	241520.7	3.929517	289,504.00	3.929517	83	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	278929.3	3.85765	319,952.00	3.8497	87	50 - 150	0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-13 (0-12) (21J1975-14)									
			Lab File ID: 21J1975-14.d			Analyzed: 11/12/21 13:42			
M8FOSA	375116	3.964583	434,290.00	3.964583	86	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	146702.3	2.365383	199,038.00	2.357183	74	50 - 150	0.0082	+/-0.50	
M2PFTA	1606638	4.305333	1,748,768.00	4.297266	92	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	409063.1	3.78685	219,119.00	3.778883	187	50 - 150	0.0080	+/-0.50	*
MPFBA	668490.1	1.058467	744,445.00	1.050167	90	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	192485.5	2.708367	271,282.00	2.699433	71	50 - 150	0.0089	+/-0.50	
M6PFDA	1079840	3.7794	1,013,901.00	3.7794	107	50 - 150	0.0000	+/-0.50	
M3PFBS	148646.4	1.795517	170,351.00	1.787233	87	50 - 150	0.0083	+/-0.50	
M7PFUnA	1306655	3.92205	1,405,982.00	3.92205	93	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	143422.2	3.41245	123,278.00	3.4044	116	50 - 150	0.0081	+/-0.50	
M5PFPeA	648178.9	1.640383	749,755.00	1.6321	86	50 - 150	0.0083	+/-0.50	
M5PFHxA	874248.6	2.440933	999,321.00	2.432467	87	50 - 150	0.0085	+/-0.50	
M3PFHxS	112566.7	3.1615	126,860.00	3.153433	89	50 - 150	0.0081	+/-0.50	
M4PFHpA	907426.1	3.113417	1,062,495.00	3.113417	85	50 - 150	0.0000	+/-0.50	
M8PFOA	910321.1	3.421167	1,022,909.00	3.421167	89	50 - 150	0.0000	+/-0.50	
M8PFOS	132002.7	3.6282	147,936.00	3.620217	89	50 - 150	0.0080	+/-0.50	
M9PFNA	787379.3	3.629233	891,883.00	3.62125	88	50 - 150	0.0080	+/-0.50	
MPFDoA	1324634	4.06465	1,396,075.00	4.056667	95	50 - 150	0.0080	+/-0.50	
d5-NEtFOSAA	298404.6	3.929517	289,504.00	3.929517	103	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	339794.3	3.85765	319,952.00	3.8497	106	50 - 150	0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-13 (12-24) (21J1975-15)									
			Lab File ID: 21J1975-15.d			Analyzed: 11/12/21 13:49			
M8FOSA	369356.8	3.972567	434,290.00	3.964583	85	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	144611.3	2.357183	199,038.00	2.357183	73	50 - 150	0.0000	+/-0.50	
M2PFTA	1544102	4.305333	1,748,768.00	4.297266	88	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	335241.3	3.78685	219,119.00	3.778883	153	50 - 150	0.0080	+/-0.50	*
MPFBA	682158.8	1.050167	744,445.00	1.050167	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	203961.5	2.708367	271,282.00	2.699433	75	50 - 150	0.0089	+/-0.50	
M6PFDA	1077267	3.787367	1,013,901.00	3.7794	106	50 - 150	0.0080	+/-0.50	
M3PFBS	149598.7	1.795517	170,351.00	1.787233	88	50 - 150	0.0083	+/-0.50	
M7PFUnA	1251267	3.930033	1,405,982.00	3.92205	89	50 - 150	0.0080	+/-0.50	
M2-6:2FTS	123593.2	3.41245	123,278.00	3.4044	100	50 - 150	0.0081	+/-0.50	
M5PFPeA	655663.5	1.6321	749,755.00	1.6321	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	878653.5	2.440933	999,321.00	2.432467	88	50 - 150	0.0085	+/-0.50	
M3PFHxS	115233.9	3.1615	126,860.00	3.153433	91	50 - 150	0.0081	+/-0.50	
M4PFHpA	886857.8	3.122317	1,062,495.00	3.113417	83	50 - 150	0.0089	+/-0.50	
M8PFOA	894412.7	3.421167	1,022,909.00	3.421167	87	50 - 150	0.0000	+/-0.50	
M8PFOS	128222.8	3.6282	147,936.00	3.620217	87	50 - 150	0.0080	+/-0.50	
M9PFNA	782614.1	3.629233	891,883.00	3.62125	88	50 - 150	0.0080	+/-0.50	
MPFDoA	1330465	4.06465	1,396,075.00	4.056667	95	50 - 150	0.0080	+/-0.50	
d5-NEtFOSAA	290043.8	3.9375	289,504.00	3.929517	100	50 - 150	0.0080	+/-0.50	
d3-NMeFOSAA	329270.7	3.85765	319,952.00	3.8497	103	50 - 150	0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
54MTN S-14 (0-6) (21J1975-16)									
			Lab File ID: 21J1975-16.d			Analyzed: 11/12/21 13:56			
M8FOSA	329163.3	3.964583	434,290.00	3.964583	76	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	129254.7	2.349033	199,038.00	2.357183	65	50 - 150	-0.0082	+/-0.50	
M2PFTA	1329733	4.305333	1,748,768.00	4.297266	76	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	311658.5	3.778883	219,119.00	3.778883	142	50 - 150	0.0000	+/-0.50	
MPFBA	575293.6	1.050167	744,445.00	1.050167	77	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	190608.3	2.691233	271,282.00	2.699433	70	50 - 150	-0.0082	+/-0.50	
M6PFDA	898735.2	3.7794	1,013,901.00	3.7794	89	50 - 150	0.0000	+/-0.50	
M3PFBS	129546.8	1.787233	170,351.00	1.787233	76	50 - 150	0.0000	+/-0.50	
M7PFUnA	1121668	3.92205	1,405,982.00	3.92205	80	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	119077.8	3.404383	123,278.00	3.4044	97	50 - 150	0.0000	+/-0.50	
M5PFPeA	565755.4	1.6321	749,755.00	1.6321	75	50 - 150	0.0000	+/-0.50	
M5PFHxA	758263.6	2.432467	999,321.00	2.432467	76	50 - 150	0.0000	+/-0.50	
M3PFHxS	99911.16	3.153433	126,860.00	3.153433	79	50 - 150	0.0000	+/-0.50	
M4PFHpA	766774.6	3.113417	1,062,495.00	3.113417	72	50 - 150	0.0000	+/-0.50	
M8PFOA	779749.1	3.421167	1,022,909.00	3.421167	76	50 - 150	0.0000	+/-0.50	
M8PFOS	112269.2	3.6202	147,936.00	3.620217	76	50 - 150	0.0000	+/-0.50	
M9PFNA	729600	3.62125	891,883.00	3.62125	82	50 - 150	0.0000	+/-0.50	
MPFDoA	1195724	4.06465	1,396,075.00	4.056667	86	50 - 150	0.0080	+/-0.50	
d5-NEtFOSAA	230429.3	3.929517	289,504.00	3.929517	80	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	265370.2	3.8497	319,952.00	3.8497	83	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294103-BLK1)									
			Lab File ID: B294103-BLK1.d			Analyzed: 11/12/21 11:47			
M8FOSA	446696.6	4.036517	434,290.00	4.036517	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	204693.9	2.570733	199,038.00	2.570733	103	50 - 150	0.0000	+/-0.50	
M2PFTA	1803721	4.362167	1,748,768.00	4.362167	103	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	226876.5	3.842967	219,119.00	3.842967	104	50 - 150	0.0000	+/-0.50	
MPFBA	801209.3	1.100017	744,445.00	1.100017	108	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	268384.3	2.904767	271,282.00	2.904767	99	50 - 150	0.0000	+/-0.50	
M6PFDA	1153765	3.84345	1,013,901.00	3.84345	114	50 - 150	0.0000	+/-0.50	
M3PFBS	181029.1	1.96145	170,351.00	1.96145	106	50 - 150	0.0000	+/-0.50	
M7PFUnA	1540729	3.986	1,405,982.00	3.986	110	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	131766.7	3.48535	123,278.00	3.48535	107	50 - 150	0.0000	+/-0.50	
M5PFPeA	788534	1.7826	749,755.00	1.7826	105	50 - 150	0.0000	+/-0.50	
M5PFHxA	1075116	2.663233	999,321.00	2.663233	108	50 - 150	0.0000	+/-0.50	
M3PFHxS	137621.2	3.258733	126,860.00	3.25875	108	50 - 150	0.0000	+/-0.50	
M4PFHpA	1111543	3.227617	1,062,495.00	3.227617	105	50 - 150	0.0000	+/-0.50	
M8PFOA	1072593	3.493867	1,022,909.00	3.493867	105	50 - 150	0.0000	+/-0.50	
M8PFOS	154497.3	3.684083	147,936.00	3.684083	104	50 - 150	0.0000	+/-0.50	
M9PFNA	974969.2	3.685133	891,883.00	3.685133	109	50 - 150	0.0000	+/-0.50	
MPFDoA	1562602	4.128783	1,396,075.00	4.128783	112	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300771.8	3.993467	289,504.00	3.993467	104	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	318412.5	3.913883	319,952.00	3.913883	100	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294103-BS1)									
			Lab File ID: B294103-BS1.d			Analyzed: 11/12/21 11:40			
M8FOSA	443317.7	4.036517	434,290.00	4.036517	102	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	203794.8	2.57895	199,038.00	2.570733	102	50 - 150	0.0082	+/-0.50	
M2PFTA	1820121	4.362167	1,748,768.00	4.362167	104	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	225196.6	3.842967	219,119.00	3.842967	103	50 - 150	0.0000	+/-0.50	
MPFBA	789011.4	1.108317	744,445.00	1.100017	106	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	251147.2	2.904767	271,282.00	2.904767	93	50 - 150	0.0000	+/-0.50	
M6PFDA	1128130	3.84345	1,013,901.00	3.84345	111	50 - 150	0.0000	+/-0.50	
M3PFBS	177220.8	1.969733	170,351.00	1.96145	104	50 - 150	0.0083	+/-0.50	
M7PFUnA	1441433	3.986	1,405,982.00	3.986	103	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	130527.7	3.48535	123,278.00	3.48535	106	50 - 150	0.0000	+/-0.50	
M5PFPeA	777922.6	1.7826	749,755.00	1.7826	104	50 - 150	0.0000	+/-0.50	
M5PFHxA	1055833	2.663233	999,321.00	2.663233	106	50 - 150	0.0000	+/-0.50	
M3PFHxS	139101	3.25875	126,860.00	3.25875	110	50 - 150	0.0000	+/-0.50	
M4PFHpA	1092543	3.227617	1,062,495.00	3.227617	103	50 - 150	0.0000	+/-0.50	
M8PFOA	1024824	3.493867	1,022,909.00	3.493867	100	50 - 150	0.0000	+/-0.50	
M8PFOS	151764.5	3.684083	147,936.00	3.684083	103	50 - 150	0.0000	+/-0.50	
M9PFNA	939160	3.685133	891,883.00	3.685133	105	50 - 150	0.0000	+/-0.50	
MPFDoA	1452871	4.128783	1,396,075.00	4.128783	104	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	281643.7	3.993467	289,504.00	3.993467	97	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	320319.6	3.913883	319,952.00	3.913883	100	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B294103-MS1)									
			Lab File ID: B294103-MS1.d			Analyzed: 11/12/21 11:54			
M8FOSA	384627.9	4.036517	434,290.00	4.036517	89	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	144784.1	2.570733	199,038.00	2.570733	73	50 - 150	0.0000	+/-0.50	
M2PFTA	1774678	4.362167	1,748,768.00	4.362167	101	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	265639.7	3.842967	219,119.00	3.842967	121	50 - 150	0.0000	+/-0.50	
MPFBA	652125.1	1.100017	744,445.00	1.100017	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	212198.8	2.896583	271,282.00	2.904767	78	50 - 150	-0.0082	+/-0.50	
M6PFDA	1015350	3.84345	1,013,901.00	3.84345	100	50 - 150	0.0000	+/-0.50	
M3PFBS	160280.9	1.96145	170,351.00	1.96145	94	50 - 150	0.0000	+/-0.50	
M7PFUnA	1344148	3.986	1,405,982.00	3.986	96	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	132841.5	3.48535	123,278.00	3.48535	108	50 - 150	0.0000	+/-0.50	
M5PFPeA	665504.9	1.7826	749,755.00	1.7826	89	50 - 150	0.0000	+/-0.50	
M5PFHxA	893843	2.655	999,321.00	2.663233	89	50 - 150	-0.0082	+/-0.50	
M3PFHxS	120794.1	3.25875	126,860.00	3.25875	95	50 - 150	0.0000	+/-0.50	
M4PFHpA	946110.3	3.227617	1,062,495.00	3.227617	89	50 - 150	0.0000	+/-0.50	
M8PFOA	905159.7	3.493867	1,022,909.00	3.493867	88	50 - 150	0.0000	+/-0.50	
M8PFOS	137803.1	3.684083	147,936.00	3.684083	93	50 - 150	0.0000	+/-0.50	
M9PFNA	783764.8	3.685133	891,883.00	3.685133	88	50 - 150	0.0000	+/-0.50	
MPFDoA	1440925	4.120767	1,396,075.00	4.128783	103	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	296931.8	3.993467	289,504.00	3.993467	103	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	344221.4	3.913883	319,952.00	3.913883	108	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B294103-MSD1)			Lab File ID: B294103-MSD1.d			Analyzed: 11/12/21 12:01			
M8FOSA	361441.7	4.036517	434,290.00	4.036517	83	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	149280.9	2.570733	199,038.00	2.570733	75	50 - 150	0.0000	+/-0.50	
M2PFTA	1736789	4.362167	1,748,768.00	4.362167	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	301804.4	3.842967	219,119.00	3.842967	138	50 - 150	0.0000	+/-0.50	
MPFBA	651382.1	1.100017	744,445.00	1.100017	87	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	203431.7	2.896583	271,282.00	2.904767	75	50 - 150	-0.0082	+/-0.50	
M6PFDA	1019711	3.8355	1,013,901.00	3.84345	101	50 - 150	-0.0079	+/-0.50	
M3PFBS	162714.3	1.96145	170,351.00	1.96145	96	50 - 150	0.0000	+/-0.50	
M7PFUnA	1384524	3.986	1,405,982.00	3.986	98	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	136793.6	3.48535	123,278.00	3.48535	111	50 - 150	0.0000	+/-0.50	
M5PFPeA	656887.6	1.7743	749,755.00	1.7826	88	50 - 150	-0.0083	+/-0.50	
M5PFHxA	887361.9	2.655	999,321.00	2.663233	89	50 - 150	-0.0082	+/-0.50	
M3PFHxS	121085.5	3.25875	126,860.00	3.25875	95	50 - 150	0.0000	+/-0.50	
M4PFHpA	946815.5	3.219533	1,062,495.00	3.227617	89	50 - 150	-0.0081	+/-0.50	
M8PFOA	906641.1	3.493867	1,022,909.00	3.493867	89	50 - 150	0.0000	+/-0.50	
M8PFOS	136798.9	3.684083	147,936.00	3.684083	92	50 - 150	0.0000	+/-0.50	
M9PFNA	826447.8	3.685133	891,883.00	3.685133	93	50 - 150	0.0000	+/-0.50	
MPFDoA	1414706	4.120767	1,396,075.00	4.128783	101	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	306390.5	3.993467	289,504.00	3.993467	106	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	360291.5	3.913883	319,952.00	3.913883	113	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065408-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	411	0.8628989	0.7767966		-17.7	30
Perfluorobutanesulfonic acid (PFBS)	A	444	376	0.9900012	0.8964929		-15.3	30
Perfluoropentanoic acid (PFPeA)	A	500	416	0.9353824	0.8516842		-16.7	30
Perfluorohexanoic acid (PFHxA)	A	500	405	0.86678	0.7790904		-19.1	30
11Cl-PF3OUdS (F53B Minor)	A	472	453	1.835659	1.784002		-4.0	30
9Cl-PF3ONS (F53B Major)	A	466	414	3.897292	3.461266		-11.1	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	382	1.602632	1.371496		-19.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	446	2.979159	0.1298651		-10.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	469	0.7665044	0.8350472		-2.2	30
Perfluorodecanoic acid (PFDA)	A	500	447	0.929213	0.9249802		-10.7	30
Perfluorododecanoic acid (PFDoA)	A	500	428	0.9361562	0.8564361		-14.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	397	3.93233	3.43245		-10.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	444	0.4568315	0.4364572		-6.7	30
N-EtFOSAA	A	500	423	0.9836556	0.8401595		-15.5	30
N-MeFOSAA	A	500	357	1.027301	0.8140062		-28.7	30
Perfluorotetradecanoic acid (PFTA)	A	500	407	0.8542676	0.7801978		-18.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	404	1.009812	0.9179308		-19.3	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	392	1.061084	0.9770584		-16.1	30
Perfluorodecanesulfonic acid (PFDS)	A	482	441	0.6287667	0.594456		-8.4	30
Perfluorooctanesulfonamide (FOSA)	A	500	421	0.8334166	0.7733729		-15.9	30
Perfluorononanesulfonic acid (PFNS)	A	481	445	0.319818	0.2991542		-7.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	485	0.3462983	0.320464		-3.0	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	443	0.3044628	0.2918565		-11.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	410	0.9652933	0.9274793		-10.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	452	0.495495	0.4480754		-9.5	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	427	0.5879048	0.5012978		-14.6	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	415	1.004025	0.9515162		-12.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	409	0.9760894	0.9428846		-13.0	30
Perfluoroundecanoic acid (PFUnA)	A	500	384	0.8528971	0.7198819		-23.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	459	0.3237613	0.3001851		-8.2	30
Perfluoroheptanoic acid (PFHpA)	A	500	447	0.9139933	0.8204578		-10.5	30
Perfluorooctanoic acid (PFOA)	A	500	467	0.8653288	0.8117122		-6.6	30
Perfluorooctanesulfonic acid (PFOS)	A	464	374	0.9382121	0.8073275		-19.5	30
Perfluorononanoic acid (PFNA)	A	500	422	0.938444	0.8150103		-15.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065408-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.8628989	0.8691334		-8.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2080	0.9900012	0.9907277		-6.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2260	0.9353824	0.9249798		-9.6	30
Perfluorohexanoic acid (PFHxA)	A	2500	2310	0.86678	0.8913512		-7.4	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2490	1.835659	1.973944		5.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2470	3.897292	4.161085		5.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2200	1.602632	1.583869		-6.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2710	2.979159	0.1591452		8.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2360	0.7665044	0.8324362		-1.5	30
Perfluorodecanoic acid (PFDA)	A	2500	2150	0.929213	0.8897039		-14.1	30
Perfluorododecanoic acid (PFDoA)	A	2500	2250	0.9361562	0.9001838		-10.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2250	3.93233	3.930817		1.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2500	0.4568315	0.4909055		4.9	30
N-EtFOSAA	A	2500	2300	0.9836556	0.9185776		-8.0	30
N-MeFOSAA	A	2500	1910	1.027301	0.8741689		-23.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2230	0.8542676	0.8513289		-10.6	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2350	1.009812	1.06165		-5.9	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2300	0.6287667	0.6205874		-4.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2360	1.061084	1.163887		1.0	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2160	0.8334166	0.7924931		-13.8	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2550	0.319818	0.3442334		6.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2490	0.3462983	0.3332652		-0.3	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2260	0.3044628	0.2985782		-9.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	1650	0.9652933	0.7484342		-27.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2460	0.495495	0.4909987		-1.5	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2440	0.5879048	0.576857		-2.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2520	1.004025	1.141102		5.7	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2040	0.9760894	0.9420425		-13.1	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2220	0.8528971	0.8325959		-11.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2590	0.3237613	0.3414761		3.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2410	0.9139933	0.888773		-3.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2510	0.8653288	0.881016		0.6	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2360	0.9382121	1.017665		1.5	30
Perfluorononanoic acid (PFNA)	A	2500	2450	0.938444	0.9476693		-2.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065408-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2300	0.8628989	0.8677844		-8.1	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2100	0.9900012	1.000094		-5.6	30
Perfluoropentanoic acid (PFPeA)	A	2500	2260	0.9353824	0.9257279		-9.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2240	0.86678	0.8612096		-10.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2560	1.835659	2.036757		8.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2450	3.897292	4.130858		5.0	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2200	1.602632	1.582513		-6.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2580	2.979159	0.1517355		3.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2450	0.7665044	0.8635585		2.2	30
Perfluorodecanoic acid (PFDA)	A	2500	2180	0.929213	0.9044307		-12.7	30
Perfluorododecanoic acid (PFDoA)	A	2500	2270	0.9361562	0.9093539		-9.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2290	3.93233	3.999284		2.9	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2330	0.4568315	0.4574979		-2.2	30
N-EtFOSAA	A	2500	2240	0.9836556	0.8962744		-10.2	30
N-MeFOSAA	A	2500	2110	1.027301	0.964184		-15.5	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2230	0.8542676	0.8479232		-11.0	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2350	1.009812	1.059295		-6.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2300	0.6287667	0.6197956		-4.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.061084	1.172965		1.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2230	0.8334166	0.8205943		-10.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2420	0.319818	0.3258002		0.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2460	0.3462983	0.3286325		-1.7	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2200	0.3044628	0.2903457		-11.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	1610	0.9652933	0.7325575		-29.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2440	0.495495	0.4856665		-2.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2470	0.5879048	0.5843681		-1.0	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2330	1.004025	1.056201		-2.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	1960	0.9760894	0.9064954		-16.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2270	0.8528971	0.8488035		-9.4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2560	0.3237613	0.3367714		2.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2490	0.9139933	0.9198631		-0.3	30
Perfluorooctanoic acid (PFOA)	A	2500	2500	0.8653288	0.8778018		0.2	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2240	0.9382121	0.9681817		-3.4	30
Perfluorononanoic acid (PFNA)	A	2500	2340	0.938444	0.9057678		-6.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

2151975

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Location: Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps/Michael Scherer
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

Retention Time
7-Day 10-Day
PFAS 10-Day (std) Due Date: _____

Matrix Approval Required
1-Day 3-Day
2-Day 4-Day

Data Delivery
Format: PDF EXCEL
Other: _____
CLP Like Data Pkg Required:
Email To: mjscherer@tighebond.com
Fax To #: _____

Analysis Requested
Dissolved Metals Samples:
 Field Filtered
 Lab to Filter

Orthophosphate Samples:
 Field Filtered
 Lab to Filter

PCB ONLY
SOXHLET
NON SOXHLET

PFAS (isotope dilution method)

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	54MTN S-5A (0-12)	10/28/21	1200	GRAB	S	U			1		
2	54MTN S-6 (6-12)		1230						1		
3	54MTN S-7 (0-12)		1300						1		
4	54MTN S-7 (12-24)		1330						1		
5	54MTN S-8 (0-12)		1400						1		
6	54MTN S-9 (0-12)		1430						1		
7	54 MTN S-9 (12-24)		1500						1		
8	54MTN S-10 (0-12)		1530						1		
9	54MTN S-10 (12-24)		1600						1		
10	54MTN S-11 (0-12)		1630						1		
11	54MTN S-11 (12-24)		1700						1		
	54MTN S-12 (0-12)		1730						1		

2 Preservation Code
Courier Use Only
Total Number Of:
VIALS _____
GLASS _____
PLASTIC _____
BACTERIA _____
ENCORE _____

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

- 1 Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 1200
Received by: (signature) *[Signature]* Date/Time: 10/29/21 1815
Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 2035
Received by: (signature) *[Signature]* Date/Time: 10/29/21 2035
Relinquished by: (signature) _____ Date/Time: _____
Received by: (signature) _____ Date/Time: _____
Relinquished by: (signature) _____ Date/Time: _____
Received by: (signature) _____ Date/Time: _____

Detection Limit Requirements
MA AM-1 S-1

Special Requirements
MA HCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State DW Required
PWSID # _____

Project Entity
Government Municipality MWRA WRTA
Federal 21 J School
City Brownfield MBTA

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

- 2 Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Comments: client confirmed sample 13 is a repeat of sample 12. JLH 11/1/2021

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

Pace Analytical
 Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
 Address: 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Project Location: Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Arps/Michael Scherer
 Invoice Recipient: Tighe & Bond
 Sampled By: M Scherer

CHAIN OF CUSTODY RECORD
 1800 Elm Street SE
 Minneapolis, MN 55414

7-Day PFAS 10-Day (std) 10-Day Due Date: Field Filtered Lab to Filter

1-Day 3-Day 3-Day 4-Day 4-Day Due Date: Field Filtered Lab to Filter

Format: PDF EXCEL
 Other: SOXHLET
 CLP Like Data Pkg Required: NON SOXHLET
 Email To: mjscherer@tighebond.com

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
13	54MTN S-12 (0-12)	1800	1800	GRAB	S	U	1				
14	54MTN S-13 (0-12)	1830	1830	GRAB	S	U	1				
15	54MTN S-13 (12-24)	1900	1900	GRAB	S	U	1				
16	54MTN S-14 (0-6)	1930	1930	GRAB	S	U	1				

ANALYSIS REQUESTED

1 Preservation Code: Iced HCL Methanol Nitric Acid Sulfuric Acid Sodium Bisulfate Sodium Hydroxide Sodium Thiosulfate Other (please define)

2 Preservation Codes: Iced HCL Methanol Nitric Acid Sulfuric Acid Sodium Bisulfate Sodium Hydroxide Sodium Thiosulfate Other (please define)

3 Matrix Codes: GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)

4 Glassware in the fridge? Y/N

5 Glassware in freezer? Y/N

6 Prepackaged Cooler? Y/N

7 Pace Analytical is not responsible for missing samples from prepacked coolers

8 Total Number Of: VIALS GLASS PLASTIC BACTERIA ENCORE

9 Please use the following codes to indicate possible sample concentration within the Conc Code column above: H - High; M - Medium; L - Low; C - Clean; U - Unknown

10 MA HCLP Required MA MCP Certification Form Required MA CT RCP Required MA RCP Certification Form Required MA State DWP Required

11 PWSID #

12 Project Entity: Government Federal City

13 Municipality: WRTA AWRA School MBTA Other: Chromatogram AIHA-LAP, LLC

Retinquished by (signature): *[Signature]* Date/Time: 10/29/21 12:00
 Received by (signature): *[Signature]* Date/Time: 10/29/21 18:15
 Retinquished by (signature): *[Signature]* Date/Time: 10/29/21 20:35
 Received by (signature): *[Signature]* Date/Time: 10/29/21 20:55
 Retinquished by (signature): *[Signature]* Date/Time:
 Received by (signature): *[Signature]* Date/Time:
 Retinquished by (signature): *[Signature]* Date/Time:
 Received by (signature): *[Signature]* Date/Time:
 Comments:
 Client Comments:
 Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T 13

Received By MA Date 10/29/11 Time 2035

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp -3.0
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F

Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	15	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

Sample S-12 (O-12) may be repeated on chain twice

November 15, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

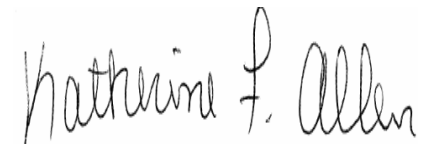
Project Location: 22 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21J1976

Enclosed are results of analyses for samples as received by the laboratory on October 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 11/15/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21J1976

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 22 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
22MTN S-1 (6-12)	21J1976-01	Soil		SM 2540G SOP-466 PFAS	
22MTN S-1 (12-24)	21J1976-02	Soil		SM 2540G SOP-466 PFAS	
22MTN S-3 (6-12)	21J1976-03	Soil		SM 2540G SOP-466 PFAS	
22MTN S-4 (6-12)	21J1976-04	Soil		SM 2540G SOP-466 PFAS	
22MTN S-4 (12-18)	21J1976-05	Soil		SM 2540G SOP-466 PFAS	
22MTN S-5 (6-12)	21J1976-06	Soil		SM 2540G SOP-466 PFAS	
22MTN S-5 (12-18)	21J1976-07	Soil		SM 2540G SOP-466 PFAS	
22MTN S-6 (6-12)	21J1976-08	Soil		SM 2540G SOP-466 PFAS	
22MTN S-7 (6-12)	21J1976-09	Soil		SM 2540G SOP-466 PFAS	
22MTN S-8 (6-12)	21J1976-10	Soil		SM 2540G SOP-466 PFAS	
22MTN S-8 (12-18)	21J1976-11	Soil		SM 2540G SOP-466 PFAS	
22MTN S-10 (0-6)	21J1976-12	Soil		SM 2540G SOP-466 PFAS	
22MTN S-11 (0-12)	21J1976-13	Soil		SM 2540G SOP-466 PFAS	
22MTN S-12 (0-12)	21J1976-14	Soil		SM 2540G SOP-466 PFAS	
22MTN S-13 (0-12)	21J1976-15	Soil		SM 2540G SOP-466 PFAS	
22MTN S-13 (12-24)	21J1976-16	Soil		SM 2540G SOP-466 PFAS	
Trip Blank	21J1976-17	Water		SOP-454 PFAS	
Field Blank	21J1976-18	Water		SOP-454 PFAS	
Equipment Blank	21J1976-19	Water		SOP-454 PFAS	
Rinsate	21J1976-20	Water		SOP-454 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-454 PFAS

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluorodecanoic acid (PFDA)
B293895-BSD1

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M7PFUnA, MPFBA
21J1976-18[Field Blank], 21J1976-20[Rinsate]

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

8:2 Fluorotelomersulfonic acid (8:2FTS A)
S065193-CCV5

SOP-466 PFAS

Qualifications:

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
21J1976-01[22MTN S-1 (6-12)], B294243-MS1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-1 (6-12)

Sampled: 10/27/2021 08:00

Sample ID: 21J1976-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.21	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoropentanoic acid (PFPeA)	0.13	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorohexanoic acid (PFHxA)	0.27	0.52	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorodecanoic acid (PFDA)	ND	0.52	0.068	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
N-MeFOSAA	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorohexanesulfonic acid (PFHxS)	1.3	0.52	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.32	0.52	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluoroheptanoic acid (PFHpA)	0.13	0.52	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorooctanoic acid (PFOA)	0.34	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorooctanesulfonic acid (PFOS)	4.3	0.52	0.071	µg/kg dry	1	MS-22	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH
Perfluorononanoic acid (PFNA)	0.11	0.52	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:33	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-1 (6-12)

Sampled: 10/27/2021 08:00

Sample ID: 21J1976-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	77.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-1 (12-24)

Sampled: 10/27/2021 08:00

Sample ID: 21J1976-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.25	0.51	0.068	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.51	0.078	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoropentanoic acid (PFPeA)	0.22	0.51	0.078	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorohexanoic acid (PFHxA)	0.48	0.51	0.095	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
9Cl-PF3ONS (F53B Major)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.51	0.25	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorodecanoic acid (PFDA)	ND	0.51	0.066	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.51	0.078	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
N-EtFOSAA	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
N-MeFOSAA	ND	0.51	0.093	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.51	0.098	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.51	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.51	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorohexanesulfonic acid (PFHxS)	2.8	0.51	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.51	0.096	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.72	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.51	0.075	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.51	0.093	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluoroheptanoic acid (PFHpA)	0.21	0.51	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorooctanoic acid (PFOA)	0.45	0.51	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorooctanesulfonic acid (PFOS)	4.0	0.51	0.069	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH
Perfluorononanoic acid (PFNA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:40	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-1 (12-24)

Sampled: 10/27/2021 08:00

Sample ID: 21J1976-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.3		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-3 (6-12)

Sampled: 10/27/2021 08:30

Sample ID: 21J1976-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.23	0.68	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorobutanesulfonic acid (PFBS)	0.11	0.68	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoropentanoic acid (PFPeA)	0.13	0.68	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorohexanoic acid (PFHxA)	0.15	0.68	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.68	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
9Cl-PF3ONS (F53B Major)	ND	0.68	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.68	0.22	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.68	0.33	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.68	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorodecanoic acid (PFDA)	ND	0.68	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.68	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.68	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.68	0.20	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
N-EtFOSAA	ND	0.68	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
N-MeFOSAA	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.68	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.68	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.68	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.68	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.68	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.68	0.20	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.68	0.21	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.33	0.68	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.68	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.28	0.68	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.68	0.099	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.68	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluoroheptanoic acid (PFHpA)	0.15	0.68	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorooctanoic acid (PFOA)	0.71	0.68	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorooctanesulfonic acid (PFOS)	0.71	0.68	0.092	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH
Perfluorononanoic acid (PFNA)	0.14	0.68	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:47	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-3 (6-12)

Sampled: 10/27/2021 08:30

Sample ID: 21J1976-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	60.5		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-4 (6-12)

Sampled: 10/27/2021 08:50

Sample ID: 21J1976-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.18	0.57	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
9Cl-PF3ONS (F53B Major)	ND	0.57	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.57	0.27	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorodecanoic acid (PFDA)	ND	0.57	0.073	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.57	0.093	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
N-EtFOSAA	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
N-MeFOSAA	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.57	0.091	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.57	0.083	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.57	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluoroheptanoic acid (PFHpA)	0.088	0.57	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorooctanoic acid (PFOA)	0.36	0.57	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorooctanesulfonic acid (PFOS)	0.54	0.57	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH
Perfluorononanoic acid (PFNA)	0.18	0.57	0.093	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 18:54	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-4 (6-12)

Sampled: 10/27/2021 08:50

Sample ID: 21J1976-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.6		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-4 (12-18)

Sampled: 10/27/2021 08:50

Sample ID: 21J1976-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.55	0.073	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
9Cl-PF3ONS (F53B Major)	ND	0.55	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.55	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.55	0.26	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.55	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorodecanoic acid (PFDA)	ND	0.55	0.071	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.55	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.55	0.090	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.55	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
N-EtFOSAA	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
N-MeFOSAA	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.55	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.55	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.55	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.55	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.55	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.55	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.13	0.55	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.55	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.55	0.080	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.55	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.55	0.085	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.55	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorooctanoic acid (PFOA)	0.17	0.55	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorooctanesulfonic acid (PFOS)	0.33	0.55	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH
Perfluorononanoic acid (PFNA)	0.13	0.55	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:01	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-4 (12-18)

Sampled: 10/27/2021 08:50

Sample ID: 21J1976-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.7		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-5 (6-12)

Sampled: 10/27/2021 09:00

Sample ID: 21J1976-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.39	0.052	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	0.060	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.39	0.060	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.39	0.073	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.39	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
9Cl-PF3ONS (F53B Major)	ND	0.39	0.098	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorodecanoic acid (PFDA)	ND	0.39	0.050	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.39	0.060	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.064	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
N-EtFOSAA	ND	0.39	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
N-MeFOSAA	ND	0.39	0.071	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.39	0.075	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.39	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	0.072	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	0.091	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.39	0.076	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.39	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.17	0.39	0.063	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	0.072	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.18	0.39	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	0.057	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.39	0.071	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.061	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.39	0.056	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorooctanoic acid (PFOA)	ND	0.39	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorooctanesulfonic acid (PFOS)	0.12	0.39	0.053	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH
Perfluorononanoic acid (PFNA)	ND	0.39	0.064	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:08	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-5 (6-12)

Sampled: 10/27/2021 09:00

Sample ID: 21J1976-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:17	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-5 (12-18)

Sampled: 10/27/2021 09:00

Sample ID: 21J1976-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.40	0.054	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.40	0.062	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.40	0.062	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.40	0.076	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.40	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
9Cl-PF3ONS (F53B Major)	ND	0.40	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.40	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.40	0.20	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.40	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorodecanoic acid (PFDA)	ND	0.40	0.052	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.40	0.062	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.067	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.40	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
N-EtFOSAA	ND	0.40	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
N-MeFOSAA	ND	0.40	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.40	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.40	0.091	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.40	0.075	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.40	0.094	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.40	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.40	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.40	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.40	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.35	0.40	0.065	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.40	0.076	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.40	0.075	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.16	0.40	0.093	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.40	0.059	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.40	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.063	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.40	0.058	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorooctanoic acid (PFOA)	ND	0.40	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.40	0.055	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH
Perfluorononanoic acid (PFNA)	ND	0.40	0.067	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:16	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-5 (12-18)

Sampled: 10/27/2021 09:00

Sample ID: 21J1976-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.6		% Wt	1		SM 2540G	11/11/21	11/12/21 9:17	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-6 (6-12)

Sampled: 10/27/2021 09:30

Sample ID: 21J1976-08

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.44	0.059	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.44	0.068	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.44	0.068	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.44	0.083	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
9Cl-PF3ONS (F53B Major)	ND	0.44	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.44	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.44	0.21	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.44	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorodecanoic acid (PFDA)	ND	0.44	0.057	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.44	0.068	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.44	0.073	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.44	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
N-EtFOSAA	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
N-MeFOSAA	ND	0.44	0.081	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.44	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.44	0.099	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.44	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.44	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.44	0.086	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.44	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.44	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.44	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.21	0.44	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.44	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.44	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.44	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.44	0.065	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.44	0.081	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.44	0.069	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluoroheptanoic acid (PFHpA)	0.066	0.44	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorooctanoic acid (PFOA)	0.22	0.44	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorooctanesulfonic acid (PFOS)	0.37	0.44	0.060	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH
Perfluorononanoic acid (PFNA)	ND	0.44	0.073	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:23	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-6 (6-12)

Sampled: 10/27/2021 09:30

Sample ID: 21J1976-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:17	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-7 (6-12)

Sampled: 10/27/2021 10:00

Sample ID: 21J1976-09

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.58	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorobutanesulfonic acid (PFBS)	0.25	0.58	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.58	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.58	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
9Cl-PF3ONS (F53B Major)	ND	0.58	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.58	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.58	0.28	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.58	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorodecanoic acid (PFDA)	0.23	0.58	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.58	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.58	0.095	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.58	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
N-EtFOSAA	ND	0.58	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
N-MeFOSAA	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.58	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.58	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.58	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.58	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.58	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.33	0.58	0.092	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.58	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoropentanesulfonic acid (PFPeS)	0.18	0.58	0.085	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoroundecanoic acid (PFUnA)	0.19	0.58	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.58	0.090	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluoroheptanoic acid (PFHpA)	0.17	0.58	0.083	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorooctanoic acid (PFOA)	0.57	0.58	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorooctanesulfonic acid (PFOS)	2.1	0.58	0.078	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH
Perfluorononanoic acid (PFNA)	0.45	0.58	0.095	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:30	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-7 (6-12)

Sampled: 10/27/2021 10:00

Sample ID: 21J1976-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:17	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-8 (6-12)

Sampled: 10/27/2021 10:30

Sample ID: 21J1976-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.51	0.068	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.51	0.096	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
9Cl-PF3ONS (F53B Major)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.51	0.25	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.51	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorodecanoic acid (PFDA)	ND	0.51	0.066	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.51	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.51	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
N-EtFOSAA	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
N-MeFOSAA	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.51	0.098	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.51	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.51	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.51	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.095	0.51	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.51	0.097	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.51	0.095	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.51	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.51	0.075	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.51	0.094	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.51	0.080	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.51	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorooctanoic acid (PFOA)	0.25	0.51	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorooctanesulfonic acid (PFOS)	0.26	0.51	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH
Perfluorononanoic acid (PFNA)	ND	0.51	0.084	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:37	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-8 (6-12)

Sampled: 10/27/2021 10:30

Sample ID: 21J1976-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:17	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-8 (12-18)

Sampled: 10/27/2021 10:30

Sample ID: 21J1976-11

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.50	0.067	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.50	0.093	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorodecanoic acid (PFDA)	ND	0.50	0.065	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
N-MeFOSAA	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.096	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.098	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.50	0.080	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.095	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.20	0.50	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.50	0.073	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.078	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.50	0.072	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorooctanoic acid (PFOA)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	0.50	0.068	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH
Perfluorononanoic acid (PFNA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:52	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-8 (12-18)

Sampled: 10/27/2021 10:30

Sample ID: 21J1976-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:18	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-10 (0-6)

Sampled: 10/27/2021 11:00

Sample ID: 21J1976-12

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.62	0.68	0.090	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorobutanesulfonic acid (PFBS)	0.12	0.68	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoropentanoic acid (PFPeA)	0.30	0.68	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorohexanoic acid (PFHxA)	0.29	0.68	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.68	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
9Cl-PF3ONS (F53B Major)	ND	0.68	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.68	0.22	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.68	0.33	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.68	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorodecanoic acid (PFDA)	ND	0.68	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.68	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.68	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.68	0.20	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
N-EtFOSAA	ND	0.68	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
N-MeFOSAA	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.68	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.68	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.68	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.68	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.68	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.68	0.20	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.68	0.21	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.11	0.68	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.68	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.68	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.68	0.099	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.68	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.68	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluoroheptanoic acid (PFHpA)	0.29	0.68	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorooctanoic acid (PFOA)	0.86	0.68	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorooctanesulfonic acid (PFOS)	1.1	0.68	0.092	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH
Perfluorononanoic acid (PFNA)	0.20	0.68	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 19:59	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-10 (0-6)

Sampled: 10/27/2021 11:00

Sample ID: 21J1976-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	59.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:18	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-11 (0-12)

Sampled: 10/27/2021 11:30

Sample ID: 21J1976-13

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.36	0.57	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoropentanoic acid (PFPeA)	0.17	0.57	0.087	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorohexanoic acid (PFHxA)	0.17	0.57	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
9Cl-PF3ONS (F53B Major)	ND	0.57	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.57	0.27	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorodecanoic acid (PFDA)	0.11	0.57	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.57	0.093	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
N-EtFOSAA	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
N-MeFOSAA	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.16	0.57	0.091	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.57	0.083	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.57	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluoroheptanoic acid (PFHpA)	0.25	0.57	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorooctanoic acid (PFOA)	0.91	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorooctanesulfonic acid (PFOS)	1.0	0.57	0.077	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH
Perfluorononanoic acid (PFNA)	0.25	0.57	0.093	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:06	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-11 (0-12)

Sampled: 10/27/2021 11:30

Sample ID: 21J1976-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	69.0		% Wt	1		SM 2540G	11/11/21	11/12/21 9:19	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-12 (0-12)

Sampled: 10/27/2021 12:00

Sample ID: 21J1976-14

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	1.4	0.77	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.77	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoropentanoic acid (PFPeA)	0.50	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorohexanoic acid (PFHxA)	0.43	0.77	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.77	0.22	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
9Cl-PF3ONS (F53B Major)	ND	0.77	0.19	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.77	0.25	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.77	0.37	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.77	0.20	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorodecanoic acid (PFDA)	0.25	0.77	0.099	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorododecanoic acid (PFDoA)	0.13	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.77	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.77	0.23	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
N-EtFOSAA	ND	0.77	0.22	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
N-MeFOSAA	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.77	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.77	0.18	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.77	0.21	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.77	0.23	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.77	0.24	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.16	0.77	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.77	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.77	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.25	0.77	0.18	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.77	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoroundecanoic acid (PFUnA)	0.22	0.77	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.77	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluoroheptanoic acid (PFHpA)	0.66	0.77	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorooctanoic acid (PFOA)	1.4	0.77	0.22	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorooctanesulfonic acid (PFOS)	1.7	0.77	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH
Perfluorononanoic acid (PFNA)	0.46	0.77	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:14	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-12 (0-12)

Sampled: 10/27/2021 12:00

Sample ID: 21J1976-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	51.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:19	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-13 (0-12)

Sampled: 10/27/2021 12:30

Sample ID: 21J1976-15

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.082	0.53	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoropentanoic acid (PFPeA)	0.086	0.53	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
9Cl-PF3ONS (F53B Major)	ND	0.53	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.53	0.26	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorodecanoic acid (PFDA)	0.21	0.53	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorododecanoic acid (PFDoA)	0.11	0.53	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.53	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
N-EtFOSAA	0.29	0.53	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
N-MeFOSAA	ND	0.53	0.097	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.53	0.098	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorodecanesulfonic acid (PFDS)	0.13	0.53	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.53	0.085	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.53	0.098	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	0.45	0.53	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.53	0.078	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoroundecanoic acid (PFUnA)	0.18	0.53	0.097	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.53	0.083	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluoroheptanoic acid (PFHpA)	0.13	0.53	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorooctanoic acid (PFOA)	0.58	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorooctanesulfonic acid (PFOS)	3.9	0.53	0.072	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH
Perfluorononanoic acid (PFNA)	0.15	0.53	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:21	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-13 (0-12)

Sampled: 10/27/2021 12:30

Sample ID: 21J1976-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.3		% Wt	1		SM 2540G	11/11/21	11/12/21 9:19	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-13 (12-24)

Sampled: 10/27/2021 12:30

Sample ID: 21J1976-16

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.089	0.48	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorodecanoic acid (PFDA)	ND	0.48	0.062	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
N-EtFOSAA	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
N-MeFOSAA	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.092	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.094	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.086	0.48	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.071	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.075	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluoroheptanoic acid (PFHpA)	0.10	0.48	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorooctanoic acid (PFOA)	0.64	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorooctanesulfonic acid (PFOS)	0.53	0.48	0.065	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH
Perfluorononanoic acid (PFNA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/10/21	11/11/21 20:28	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: 22MTN S-13 (12-24)

Sampled: 10/27/2021 12:30

Sample ID: 21J1976-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:19	WT

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: Trip Blank

Sampled: 10/27/2021 00:00

Sample ID: 21J1976-17

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.69	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.60	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.57	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.46	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.88	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
N-EtFOSAA	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
N-MeFOSAA	ND	1.9	0.71	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	0.18	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.24	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.64	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH
Perfluorononanoic acid (PFNA)	0.43	1.9	0.32	ng/L	1	J	SOP-454 PFAS	11/4/21	11/9/21 18:27	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: Field Blank

Sampled: 10/27/2021 08:00

Sample ID: 21J1976-18

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0	0.73	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.0	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.63	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.23	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.48	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.43	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.23	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	0.92	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
N-EtFOSAA	ND	2.0	0.62	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
N-MeFOSAA	ND	2.0	0.74	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorooctanesulfonamide (FOSA)	ND	2.0	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorononanesulfonic acid (PFNS)	ND	2.0	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.0	0.19	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.25	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0	0.67	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH
Perfluorononanoic acid (PFNA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:48	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: Equipment Blank

Sampled: 10/27/2021 12:00

Sample ID: 21J1976-19

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.71	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.62	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.23	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.58	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.47	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.42	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.90	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
N-EtFOSAA	ND	1.9	0.60	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
N-MeFOSAA	ND	1.9	0.73	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.31	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.40	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	0.18	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.40	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.25	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.65	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.58	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 18:56	BLH

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21J1976

Date Received: 10/29/2021

Field Sample #: Rinsate

Sampled: 10/27/2021 08:00

Sample ID: 21J1976-20

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.73	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorohexanoic acid (PFHxA)	0.75	1.9	0.38	ng/L	1	J	SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.63	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.38	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.23	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.48	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.43	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.23	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.92	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
N-EtFOSAA	ND	1.9	0.61	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
N-MeFOSAA	ND	1.9	0.74	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	1.9	0.19	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.25	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.66	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	11/4/21	11/9/21 19:03	BLH

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21J1976-01 [22MTN S-1 (6-12)]	B294465	11/11/21
21J1976-02 [22MTN S-1 (12-24)]	B294465	11/11/21
21J1976-03 [22MTN S-3 (6-12)]	B294465	11/11/21
21J1976-04 [22MTN S-4 (6-12)]	B294465	11/11/21
21J1976-05 [22MTN S-4 (12-18)]	B294465	11/11/21
21J1976-06 [22MTN S-5 (6-12)]	B294465	11/11/21
21J1976-07 [22MTN S-5 (12-18)]	B294465	11/11/21
21J1976-08 [22MTN S-6 (6-12)]	B294465	11/11/21
21J1976-09 [22MTN S-7 (6-12)]	B294465	11/11/21
21J1976-10 [22MTN S-8 (6-12)]	B294465	11/11/21
21J1976-11 [22MTN S-8 (12-18)]	B294465	11/11/21
21J1976-12 [22MTN S-10 (0-6)]	B294465	11/11/21
21J1976-13 [22MTN S-11 (0-12)]	B294465	11/11/21
21J1976-14 [22MTN S-12 (0-12)]	B294465	11/11/21
21J1976-15 [22MTN S-13 (0-12)]	B294465	11/11/21
21J1976-16 [22MTN S-13 (12-24)]	B294465	11/11/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21J1976-17 [Trip Blank]	B293895	268	1.00	11/04/21
21J1976-18 [Field Blank]	B293895	256	1.00	11/04/21
21J1976-19 [Equipment Blank]	B293895	261	1.00	11/04/21
21J1976-20 [Rinsate]	B293895	257	1.00	11/04/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21J1976-01 [22MTN S-1 (6-12)]	B294243	5.51	5.00	11/10/21
21J1976-02 [22MTN S-1 (12-24)]	B294243	5.85	5.00	11/10/21
21J1976-03 [22MTN S-3 (6-12)]	B294243	5.51	5.00	11/10/21
21J1976-04 [22MTN S-4 (6-12)]	B294243	5.79	5.00	11/10/21
21J1976-05 [22MTN S-4 (12-18)]	B294243	5.97	5.00	11/10/21
21J1976-06 [22MTN S-5 (6-12)]	B294243	5.99	5.00	11/10/21
21J1976-07 [22MTN S-5 (12-18)]	B294243	5.94	5.00	11/10/21
21J1976-08 [22MTN S-6 (6-12)]	B294243	5.71	5.00	11/10/21
21J1976-09 [22MTN S-7 (6-12)]	B294243	5.66	5.00	11/10/21
21J1976-10 [22MTN S-8 (6-12)]	B294243	5.84	5.00	11/10/21
21J1976-11 [22MTN S-8 (12-18)]	B294243	5.99	5.00	11/10/21
21J1976-12 [22MTN S-10 (0-6)]	B294243	5.61	5.00	11/10/21
21J1976-13 [22MTN S-11 (0-12)]	B294243	5.74	5.00	11/10/21
21J1976-14 [22MTN S-12 (0-12)]	B294243	5.65	5.00	11/10/21
21J1976-15 [22MTN S-13 (0-12)]	B294243	5.60	5.00	11/10/21
21J1976-16 [22MTN S-13 (12-24)]	B294243	5.91	5.00	11/10/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B293895 - SOP 454-PFAAS

Blank (B293895-BLK1)

Prepared: 11/04/21 Analyzed: 11/08/21

Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L
11Cl-PF3OUdS (F53B Minor)	ND	1.9	ng/L
9Cl-PF3ONS (F53B Major)	ND	1.9	ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L
N-EtFOSAA	ND	1.9	ng/L
N-MeFOSAA	ND	1.9	ng/L
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L

LCS (B293895-BS1)

Prepared: 11/04/21 Analyzed: 11/08/21

Perfluorobutanoic acid (PFBA)	7.39	1.9	ng/L	9.74	75.8	73-129
Perfluorobutanesulfonic acid (PFBS)	6.89	1.9	ng/L	8.62	79.9	72-130
Perfluoropentanoic acid (PFPeA)	7.12	1.9	ng/L	9.74	73.0	72-129
Perfluorohexanoic acid (PFHxA)	7.15	1.9	ng/L	9.74	73.4	72-129
11Cl-PF3OUdS (F53B Minor)	6.59	1.9	ng/L	9.18	71.8	50-150
9Cl-PF3ONS (F53B Major)	7.38	1.9	ng/L	9.08	81.3	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	6.93	1.9	ng/L	9.18	75.5	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.74	1.9	ng/L	9.74	79.4	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	7.71	1.9	ng/L	9.35	82.4	67-138
Perfluorodecanoic acid (PFDA)	7.07	1.9	ng/L	9.74	72.6	71-129
Perfluorododecanoic acid (PFDoA)	7.73	1.9	ng/L	9.74	79.4	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	7.09	1.9	ng/L	8.67	81.8	50-150

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B293895 - SOP 454-PFAAS

LCS (B293895-BS1)

Prepared: 11/04/21 Analyzed: 11/08/21

Perfluoroheptanesulfonic acid (PFHpS)	7.94	1.9	ng/L	9.31		85.3	69-134			
N-EtFOSAA	9.42	1.9	ng/L	9.74		96.6	61-135			
N-MeFOSAA	9.03	1.9	ng/L	9.74		92.7	65-136			
Perfluorotetradecanoic acid (PFTA)	7.63	1.9	ng/L	9.74		78.3	71-132			
Perfluorotridecanoic acid (PFTTrDA)	9.07	1.9	ng/L	9.74		93.0	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	7.84	1.9	ng/L	9.11		86.0	63-143			
Perfluorodecanesulfonic acid (PFDS)	7.63	1.9	ng/L	9.40		81.2	53-142			
Perfluorooctanesulfonamide (FOSA)	7.38	1.9	ng/L	9.74		75.8	67-137			
Perfluorononanesulfonic acid (PFNS)	7.40	1.9	ng/L	9.35		79.1	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	7.97	1.9	ng/L	9.74		81.8	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	7.39	1.9	ng/L	9.74		75.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	6.84	1.9	ng/L	8.87		77.2	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	8.79	1.9	ng/L	9.74		90.2	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	7.96	1.9	ng/L	9.74		81.7	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.00	1.9	ng/L	9.26		86.5	64-140			
Perfluoropetanesulfonic acid (PFPeS)	6.92	1.9	ng/L	9.16		75.6	71-127			
Perfluoroundecanoic acid (PFUnA)	7.28	1.9	ng/L	9.74		74.7	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.25	1.9	ng/L	9.74		84.7	50-150			
Perfluoroheptanoic acid (PFHpA)	7.66	1.9	ng/L	9.74		78.6	72-130			
Perfluorooctanoic acid (PFOA)	7.91	1.9	ng/L	9.74		81.2	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.56	1.9	ng/L	9.01		83.9	65-140			
Perfluorononanoic acid (PFNA)	7.55	1.9	ng/L	9.74		77.4	69-130			

LCS Dup (B293895-BSD1)

Prepared: 11/04/21 Analyzed: 11/08/21

Perfluorobutanoic acid (PFBA)	7.44	1.9	ng/L	9.74		76.4	73-129	0.680	30	
Perfluorobutanesulfonic acid (PFBS)	6.99	1.9	ng/L	8.62		81.1	72-130	1.32	30	
Perfluoropentanoic acid (PFPeA)	7.19	1.9	ng/L	9.74		73.9	72-129	1.08	30	
Perfluorohexanoic acid (PFHxA)	7.07	1.9	ng/L	9.74		72.6	72-129	1.12	30	
11Cl-PF3OUdS (F53B Minor)	6.98	1.9	ng/L	9.17		76.1	50-150	5.69	30	
9Cl-PF3ONS (F53B Major)	7.55	1.9	ng/L	9.08		83.2	50-150	2.25	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	7.22	1.9	ng/L	9.17		78.7	50-150	4.05	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.64	1.9	ng/L	9.74		78.5	50-150	1.23	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	8.11	1.9	ng/L	9.35		86.7	67-138	5.10	30	
Perfluorodecanoic acid (PFDA)	6.81	1.9	ng/L	9.74		69.9	* 71-129	3.81	30	L-07
Perfluorododecanoic acid (PFDoA)	7.64	1.9	ng/L	9.74		78.5	72-134	1.18	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	7.34	1.9	ng/L	8.67		84.7	50-150	3.47	30	
Perfluoroheptanesulfonic acid (PFHpS)	7.39	1.9	ng/L	9.30		79.4	69-134	7.18	30	
N-EtFOSAA	8.81	1.9	ng/L	9.74		90.5	61-135	6.62	30	
N-MeFOSAA	8.65	1.9	ng/L	9.74		88.8	65-136	4.29	30	
Perfluorotetradecanoic acid (PFTA)	7.78	1.9	ng/L	9.74		79.9	71-132	1.92	30	
Perfluorotridecanoic acid (PFTTrDA)	8.61	1.9	ng/L	9.74		88.4	65-144	5.15	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	7.79	1.9	ng/L	9.10		85.5	63-143	0.645	30	
Perfluorodecanesulfonic acid (PFDS)	8.07	1.9	ng/L	9.40		85.9	53-142	5.63	30	
Perfluorooctanesulfonamide (FOSA)	7.59	1.9	ng/L	9.74		77.9	67-137	2.74	30	
Perfluorononanesulfonic acid (PFNS)	7.77	1.9	ng/L	9.35		83.2	69-127	4.96	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	8.24	1.9	ng/L	9.74		84.6	50-150	3.32	30	
Perfluoro-1-butanefulfonamide (FBSA)	7.16	1.9	ng/L	9.74		73.5	50-150	3.12	30	
Perfluorohexanesulfonic acid (PFHxS)	7.34	1.9	ng/L	8.86		82.9	68-131	7.07	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	8.64	1.9	ng/L	9.74		88.7	50-150	1.73	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	8.00	1.9	ng/L	9.74		82.2	50-150	0.543	30	

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B293895 - SOP 454-PFAAS

LCS Dup (B293895-BS1)

Prepared: 11/04/21 Analyzed: 11/08/21

6:2 Fluorotelomersulfonic acid (6:2FTS A)	7.72	1.9	ng/L	9.25		83.5	64-140	3.58	30	
Perfluoropentanesulfonic acid (PFPeS)	7.22	1.9	ng/L	9.15		78.9	71-127	4.27	30	
Perfluoroundecanoic acid (PFUnA)	7.79	1.9	ng/L	9.74		80.0	69-133	6.73	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.19	1.9	ng/L	9.74		84.1	50-150	0.763	30	
Perfluoroheptanoic acid (PFHpA)	7.89	1.9	ng/L	9.74		81.0	72-130	3.02	30	
Perfluorooctanoic acid (PFOA)	8.16	1.9	ng/L	9.74		83.8	71-133	3.10	30	
Perfluorooctanesulfonic acid (PFOS)	7.49	1.9	ng/L	9.01		83.2	65-140	0.910	30	
Perfluorononanoic acid (PFNA)	7.39	1.9	ng/L	9.74		75.9	69-130	2.03	30	

Batch B294243 - SOP 465-PFAAS

Blank (B294243-BLK1)

Prepared: 11/10/21 Analyzed: 11/11/21

Perfluorobutanoic acid (PFBA)	ND	0.40	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.40	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.40	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.40	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.40	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.40	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.40	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.40	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.40	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.40	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.40	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.40	µg/kg wet							
N-EtFOSAA	ND	0.40	µg/kg wet							
N-MeFOSAA	ND	0.40	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.40	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.40	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.40	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.40	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.40	µg/kg wet							
Perfluoronanesulfonic acid (PFNS)	ND	0.40	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.40	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.40	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.40	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.40	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.40	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.40	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.40	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.40	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.40	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.40	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.40	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.40	µg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294243 - SOP 465-PFAAS

LCS (B294243-BS1)

Prepared: 11/10/21 Analyzed: 11/11/21

Perfluorobutanoic acid (PFBA)	1.95	0.38	µg/kg wet	2.12		92.0	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.81	0.38	µg/kg wet	1.88		96.6	72-128			
Perfluoropentanoic acid (PFPeA)	1.93	0.38	µg/kg wet	2.12		90.7	69-132			
Perfluorohexanoic acid (PFHxA)	1.87	0.38	µg/kg wet	2.12		87.9	70-132			
11Cl-PF3OUdS (F53B Minor)	2.14	0.38	µg/kg wet	2.00		107	50-150			
9Cl-PF3ONS (F53B Major)	2.11	0.38	µg/kg wet	1.98		106	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.83	0.38	µg/kg wet	2.00		91.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.97	0.38	µg/kg wet	2.12		92.8	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	1.92	0.38	µg/kg wet	2.04		94.0	65-137			
Perfluorodecanoic acid (PFDA)	1.89	0.38	µg/kg wet	2.12		89.1	69-133			
Perfluorododecanoic acid (PFDoA)	1.86	0.38	µg/kg wet	2.12		87.4	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.93	0.38	µg/kg wet	1.89		102	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.22	0.38	µg/kg wet	2.03		109	70-132			
N-EtFOSAA	1.95	0.38	µg/kg wet	2.12		91.9	61-139			
N-MeFOSAA	1.81	0.38	µg/kg wet	2.12		85.1	63-144			
Perfluorotetradecanoic acid (PFTA)	2.01	0.38	µg/kg wet	2.12		94.6	69-133			
Perfluorotridecanoic acid (PFTrDA)	1.89	0.38	µg/kg wet	2.12		89.2	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.02	0.38	µg/kg wet	1.99		101	62-145			
Perfluorodecanesulfonic acid (PFDS)	1.89	0.38	µg/kg wet	2.05		92.5	59-134			
Perfluorooctanesulfonamide (FOSA)	1.82	0.38	µg/kg wet	2.12		85.9	67-137			
Perfluorononanesulfonic acid (PFNS)	2.49	0.38	µg/kg wet	2.04		122	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.13	0.38	µg/kg wet	2.12		100	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	1.92	0.38	µg/kg wet	2.12		90.5	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.88	0.38	µg/kg wet	1.93		97.1	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.14	0.38	µg/kg wet	2.12		101	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.14	0.38	µg/kg wet	2.12		101	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.06	0.38	µg/kg wet	2.02		102	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.89	0.38	µg/kg wet	2.00		94.5	73-123			
Perfluoroundecanoic acid (PFUnA)	1.91	0.38	µg/kg wet	2.12		90.2	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.15	0.38	µg/kg wet	2.12		101	50-150			
Perfluoroheptanoic acid (PFHpA)	2.11	0.38	µg/kg wet	2.12		99.4	71-131			
Perfluorooctanoic acid (PFOA)	2.20	0.38	µg/kg wet	2.12		103	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.98	0.38	µg/kg wet	1.96		101	68-136			
Perfluorononanoic acid (PFNA)	2.00	0.38	µg/kg wet	2.12		94.1	72-129			

Matrix Spike (B294243-MS1)

Source: 21J1976-01

Prepared: 11/10/21 Analyzed: 11/11/21

Perfluorobutanoic acid (PFBA)	2.97	0.50	µg/kg dry	2.77	0.215	99.6	71-135			
Perfluorobutanesulfonic acid (PFBS)	2.69	0.50	µg/kg dry	2.45	ND	110	72-128			
Perfluoropentanoic acid (PFPeA)	2.85	0.50	µg/kg dry	2.77	0.133	98.0	69-132			
Perfluorohexanoic acid (PFHxA)	3.00	0.50	µg/kg dry	2.77	0.270	98.5	70-132			
11Cl-PF3OUdS (F53B Minor)	2.92	0.50	µg/kg dry	2.61	ND	112	50-150			
9Cl-PF3ONS (F53B Major)	2.89	0.50	µg/kg dry	2.58	ND	112	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.76	0.50	µg/kg dry	2.61	ND	106	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	3.14	0.50	µg/kg dry	2.77	ND	113	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	3.11	0.50	µg/kg dry	2.66	ND	117	65-137			
Perfluorodecanoic acid (PFDA)	2.64	0.50	µg/kg dry	2.77	ND	95.4	69-133			
Perfluorododecanoic acid (PFDoA)	2.87	0.50	µg/kg dry	2.77	ND	104	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.82	0.50	µg/kg dry	2.46	ND	114	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294243 - SOP 465-PFAAS

Matrix Spike (B294243-MS1)	Source: 21J1976-01			Prepared: 11/10/21 Analyzed: 11/11/21					
Perfluoroheptanesulfonic acid (PFHpS)	3.12	0.50	µg/kg dry	2.65	ND 118	70-132			
N-EtFOSAA	3.37	0.50	µg/kg dry	2.77	ND 122	61-139			
N-MeFOSAA	3.27	0.50	µg/kg dry	2.77	ND 118	63-144			
Perfluorotetradecanoic acid (PFTA)	2.57	0.50	µg/kg dry	2.77	ND 92.9	69-133			
Perfluorotridecanoic acid (PFTTrDA)	2.71	0.50	µg/kg dry	2.77	ND 98.0	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.90	0.50	µg/kg dry	2.59	ND 112	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.93	0.50	µg/kg dry	2.67	ND 110	59-134			
Perfluorooctanesulfonamide (FOSA)	2.70	0.50	µg/kg dry	2.77	ND 97.5	67-137			
Perfluorononanesulfonic acid (PFNS)	2.92	0.50	µg/kg dry	2.66	ND 110	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	3.24	0.50	µg/kg dry	2.77	ND 117	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	3.00	0.50	µg/kg dry	2.77	ND 108	50-150			
Perfluorohexanesulfonic acid (PFHxS)	3.47	0.50	µg/kg dry	2.52	1.25 88.1	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	3.25	0.50	µg/kg dry	2.77	ND 117	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	3.01	0.50	µg/kg dry	2.77	ND 109	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	3.32	0.50	µg/kg dry	2.63	0.317 114	64-140			
Perfluoropetanesulfonic acid (PFPeS)	2.60	0.50	µg/kg dry	2.60	ND 100	73-123			
Perfluoroundecanoic acid (PFUnA)	2.87	0.50	µg/kg dry	2.77	ND 104	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.27	0.50	µg/kg dry	2.77	ND 118	50-150			
Perfluoroheptanoic acid (PFHpA)	3.13	0.50	µg/kg dry	2.77	0.126 108	71-131			
Perfluorooctanoic acid (PFOA)	3.21	0.50	µg/kg dry	2.77	0.342 103	69-133			
Perfluorooctanesulfonic acid (PFOS)	8.07	0.50	µg/kg dry	2.56	4.32 147 *	68-136			MS-22
Perfluorononanoic acid (PFNA)	2.95	0.50	µg/kg dry	2.77	0.105 103	72-129			

Matrix Spike Dup (B294243-MSD1)	Source: 21J1976-01			Prepared: 11/10/21 Analyzed: 11/11/21					
Perfluorobutanoic acid (PFBA)	2.93	0.49	µg/kg dry	2.73	0.215 99.4	71-135	1.48	30	
Perfluorobutanesulfonic acid (PFBS)	2.55	0.49	µg/kg dry	2.42	ND 106	72-128	5.37	30	
Perfluoropentanoic acid (PFPeA)	2.78	0.49	µg/kg dry	2.73	0.133 96.7	69-132	2.46	30	
Perfluorohexanoic acid (PFHxA)	2.81	0.49	µg/kg dry	2.73	0.270 92.8	70-132	6.63	30	
11Cl-PF3OUdS (F53B Minor)	2.84	0.49	µg/kg dry	2.57	ND 111	50-150	2.52	30	
9Cl-PF3ONS (F53B Major)	2.81	0.49	µg/kg dry	2.55	ND 110	50-150	2.93	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.58	0.49	µg/kg dry	2.57	ND 100	50-150	6.49	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	3.29	0.49	µg/kg dry	2.73	ND 121	50-150	4.77	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	3.23	0.49	µg/kg dry	2.62	ND 123	65-137	3.54	30	
Perfluorodecanoic acid (PFDA)	2.76	0.49	µg/kg dry	2.73	ND 101	69-133	4.27	30	
Perfluorododecanoic acid (PFDoA)	2.63	0.49	µg/kg dry	2.73	ND 96.4	69-135	8.52	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.70	0.49	µg/kg dry	2.43	ND 111	50-150	4.15	30	
Perfluoroheptanesulfonic acid (PFHpS)	2.89	0.49	µg/kg dry	2.61	ND 111	70-132	7.64	30	
N-EtFOSAA	3.43	0.49	µg/kg dry	2.73	ND 126	61-139	1.61	30	
N-MeFOSAA	3.27	0.49	µg/kg dry	2.73	ND 120	63-144	0.100	30	
Perfluorotetradecanoic acid (PFTA)	2.71	0.49	µg/kg dry	2.73	ND 99.4	69-133	5.45	30	
Perfluorotridecanoic acid (PFTTrDA)	2.85	0.49	µg/kg dry	2.73	ND 104	66-139	4.89	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.79	0.49	µg/kg dry	2.56	ND 109	62-145	3.91	30	
Perfluorodecanesulfonic acid (PFDS)	2.91	0.49	µg/kg dry	2.63	ND 110	59-134	0.670	30	
Perfluorooctanesulfonamide (FOSA)	2.62	0.49	µg/kg dry	2.73	ND 96.0	67-137	2.89	30	
Perfluorononanesulfonic acid (PFNS)	2.78	0.49	µg/kg dry	2.62	ND 106	69-125	4.67	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	3.16	0.49	µg/kg dry	2.73	ND 116	50-150	2.50	30	
Perfluoro-1-butanesulfonamide (FBSA)	2.90	0.49	µg/kg dry	2.73	ND 106	50-150	3.34	30	
Perfluorohexanesulfonic acid (PFHxS)	3.63	0.49	µg/kg dry	2.49	1.25 95.8	67-130	4.57	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	3.22	0.49	µg/kg dry	2.73	ND 118	50-150	1.10	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	2.93	0.49	µg/kg dry	2.73	ND 107	50-150	2.62	30	

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B294243 - SOP 465-PFAAS

Matrix Spike Dup (B294243-MSD1)

Source: 21J1976-01

Prepared: 11/10/21 Analyzed: 11/11/21

6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.88	0.49	µg/kg dry	2.60	0.317	98.9	64-140	14.0	30	
Perfluoropetanesulfonic acid (PFPeS)	2.60	0.49	µg/kg dry	2.57	ND	101	73-123	0.190	30	
Perfluoroundecanoic acid (PFUnA)	2.69	0.49	µg/kg dry	2.73	ND	98.3	64-136	6.61	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.16	0.49	µg/kg dry	2.73	ND	116	50-150	3.32	30	
Perfluoroheptanoic acid (PFHpA)	2.95	0.49	µg/kg dry	2.73	0.126	103	71-131	5.81	30	
Perfluorooctanoic acid (PFOA)	2.99	0.49	µg/kg dry	2.73	0.342	97.0	69-133	6.91	30	
Perfluorooctanesulfonic acid (PFOS)	7.56	0.49	µg/kg dry	2.52	4.32	128	68-136	6.50	30	
Perfluorononanoic acid (PFNA)	2.71	0.49	µg/kg dry	2.73	0.105	95.2	72-129	8.47	30	

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

ANALYST

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JLH Jessica L. Hoffman
EGR Evett G Rivera
BAA Bonita A. Abanulo
AP Alan Pienkowski

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-1 (6-12) (21J1976-01)									
			Lab File ID: 21J1976-01.d			Analyzed: 11/11/21 18:33			
M8FOSA	422061.8	4.044517	451,140.00	4.044517	94	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	172273.5	2.58715	207,338.00	2.58715	83	50 - 150	0.0000	+/-0.50	
M2PFTA	1786281	4.370283	1,799,881.00	4.378417	99	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	204505.1	3.850917	225,194.00	3.850917	91	50 - 150	0.0000	+/-0.50	
MPFBA	723574.4	1.108317	819,390.00	1.108317	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	218762.9	2.91295	298,883.00	2.91295	73	50 - 150	0.0000	+/-0.50	
M6PFDA	1136380	3.851417	1,173,486.00	3.851417	97	50 - 150	0.0000	+/-0.50	
M3PFBS	170245.2	1.969733	190,139.00	1.969733	90	50 - 150	0.0000	+/-0.50	
M7PFUnA	1503090	3.993983	1,524,213.00	3.993983	99	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	116942	3.493333	131,267.00	3.493333	89	50 - 150	0.0000	+/-0.50	
M5PFPeA	724136.6	1.791367	823,921.00	1.791367	88	50 - 150	0.0000	+/-0.50	
M5PFHxA	994378.3	2.672333	1,131,820.00	2.672333	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	129440.3	3.266833	141,124.00	3.266833	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1044384	3.2357	1,179,935.00	3.2357	89	50 - 150	0.0000	+/-0.50	
M8PFOA	1045362	3.50185	1,119,574.00	3.50185	93	50 - 150	0.0000	+/-0.50	
M8PFOS	150058.4	3.692083	163,358.00	3.692083	92	50 - 150	0.0000	+/-0.50	
M9PFNA	916042.4	3.693117	1,027,621.00	3.693117	89	50 - 150	0.0000	+/-0.50	
MPFDoA	1505574	4.128783	1,594,256.00	4.136817	94	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	254428	4.001467	294,893.00	4.001467	86	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	302538	3.921883	301,628.00	3.921883	100	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-1 (12-24) (21J1976-02)			Lab File ID: 21J1976-02.d			Analyzed: 11/11/21 18:40			
M8FOSA	421245.6	4.036517	451,140.00	4.044517	93	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	170584.3	2.57895	207,338.00	2.58715	82	50 - 150	-0.0082	+/-0.50	
M2PFTA	1783452	4.370283	1,799,881.00	4.378417	99	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	178390.1	3.850917	225,194.00	3.850917	79	50 - 150	0.0000	+/-0.50	
MPFBA	734417.8	1.108317	819,390.00	1.108317	90	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	214413.4	2.904767	298,883.00	2.91295	72	50 - 150	-0.0082	+/-0.50	
M6PFDA	1082784	3.84345	1,173,486.00	3.851417	92	50 - 150	-0.0080	+/-0.50	
M3PFBS	168274.7	1.969733	190,139.00	1.969733	89	50 - 150	0.0000	+/-0.50	
M7PFUnA	1462859	3.993983	1,524,213.00	3.993983	96	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	108791.1	3.493333	131,267.00	3.493333	83	50 - 150	0.0000	+/-0.50	
M5PFPeA	727173	1.7826	823,921.00	1.791367	88	50 - 150	-0.0088	+/-0.50	
M5PFHxA	996969.1	2.672333	1,131,820.00	2.672333	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	121489.4	3.266817	141,124.00	3.266833	86	50 - 150	0.0000	+/-0.50	
M4PFHpA	1070864	3.227617	1,179,935.00	3.2357	91	50 - 150	-0.0081	+/-0.50	
M8PFOA	1034314	3.50185	1,119,574.00	3.50185	92	50 - 150	0.0000	+/-0.50	
M8PFOS	142055	3.692083	163,358.00	3.692083	87	50 - 150	0.0000	+/-0.50	
M9PFNA	925263	3.693117	1,027,621.00	3.693117	90	50 - 150	0.0000	+/-0.50	
MPFDoA	1499928	4.128783	1,594,256.00	4.136817	94	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	281015.1	4.00145	294,893.00	4.001467	95	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	288051.4	3.921883	301,628.00	3.921883	95	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-3 (6-12) (21J1976-03)			Lab File ID: 21J1976-03.d			Analyzed: 11/11/21 18:47			
M8FOSA	419211	4.036517	451,140.00	4.044517	93	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	139286.8	2.57895	207,338.00	2.58715	67	50 - 150	-0.0082	+/-0.50	
M2PFTA	1800500	4.370283	1,799,881.00	4.378417	100	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	221329.7	3.850917	225,194.00	3.850917	98	50 - 150	0.0000	+/-0.50	
MPFBA	717212.5	1.108317	819,390.00	1.108317	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	203791.3	2.91295	298,883.00	2.91295	68	50 - 150	0.0000	+/-0.50	
M6PFDA	1174345	3.84345	1,173,486.00	3.851417	100	50 - 150	-0.0080	+/-0.50	
M3PFBS	167447.8	1.969733	190,139.00	1.969733	88	50 - 150	0.0000	+/-0.50	
M7PFUnA	1561098	3.993983	1,524,213.00	3.993983	102	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	152802.4	3.493333	131,267.00	3.493333	116	50 - 150	0.0000	+/-0.50	
M5PFPeA	707174.3	1.7826	823,921.00	1.791367	86	50 - 150	-0.0088	+/-0.50	
M5PFHxA	975872.3	2.672333	1,131,820.00	2.672333	86	50 - 150	0.0000	+/-0.50	
M3PFHxS	129127.2	3.266817	141,124.00	3.266833	91	50 - 150	0.0000	+/-0.50	
M4PFHpA	1069471	3.2357	1,179,935.00	3.2357	91	50 - 150	0.0000	+/-0.50	
M8PFOA	1011779	3.50185	1,119,574.00	3.50185	90	50 - 150	0.0000	+/-0.50	
M8PFOS	147331	3.692067	163,358.00	3.692083	90	50 - 150	0.0000	+/-0.50	
M9PFNA	928541.6	3.693117	1,027,621.00	3.693117	90	50 - 150	0.0000	+/-0.50	
MPFDoA	1625867	4.128783	1,594,256.00	4.136817	102	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	275121.8	4.00145	294,893.00	4.001467	93	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	337002.6	3.921883	301,628.00	3.921883	112	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-4 (6-12) (21J1976-04)			Lab File ID: 21J1976-04.d			Analyzed: 11/11/21 18:54			
M8FOSA	387797	4.044517	451,140.00	4.044517	86	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	117561.4	2.57895	207,338.00	2.58715	57	50 - 150	-0.0082	+/-0.50	
M2PFTA	1563076	4.370283	1,799,881.00	4.378417	87	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	214924.5	3.850917	225,194.00	3.850917	95	50 - 150	0.0000	+/-0.50	
MPFBA	664655.2	1.108317	819,390.00	1.108317	81	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	187225.9	2.91295	298,883.00	2.91295	63	50 - 150	0.0000	+/-0.50	
M6PFDA	1081162	3.851417	1,173,486.00	3.851417	92	50 - 150	0.0000	+/-0.50	
M3PFBS	154457.5	1.969733	190,139.00	1.969733	81	50 - 150	0.0000	+/-0.50	
M7PFUnA	1340548	3.993983	1,524,213.00	3.993983	88	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	123343.6	3.493333	131,267.00	3.493333	94	50 - 150	0.0000	+/-0.50	
M5PFPeA	657611.1	1.791367	823,921.00	1.791367	80	50 - 150	0.0000	+/-0.50	
M5PFHxA	908011.6	2.672333	1,131,820.00	2.672333	80	50 - 150	0.0000	+/-0.50	
M3PFHxS	118185.6	3.266817	141,124.00	3.266833	84	50 - 150	0.0000	+/-0.50	
M4PFHpA	988219.1	3.2357	1,179,935.00	3.2357	84	50 - 150	0.0000	+/-0.50	
M8PFOA	952454	3.50185	1,119,574.00	3.50185	85	50 - 150	0.0000	+/-0.50	
M8PFOS	134907.4	3.692083	163,358.00	3.692083	83	50 - 150	0.0000	+/-0.50	
M9PFNA	804371.2	3.693117	1,027,621.00	3.693117	78	50 - 150	0.0000	+/-0.50	
MPFDoA	1377249	4.128783	1,594,256.00	4.136817	86	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	261749.2	4.00145	294,893.00	4.001467	89	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	306578	3.921883	301,628.00	3.921883	102	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-4 (12-18) (21J1976-05)									
			Lab File ID: 21J1976-05.d			Analyzed: 11/11/21 19:01			
M8FOSA	383375.9	4.036517	451,140.00	4.044517	85	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	126238.4	2.57895	207,338.00	2.58715	61	50 - 150	-0.0082	+/-0.50	
M2PFTA	1588009	4.370283	1,799,881.00	4.378417	88	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	213301.6	3.850917	225,194.00	3.850917	95	50 - 150	0.0000	+/-0.50	
MPFBA	666706.6	1.108317	819,390.00	1.108317	81	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	186489.3	2.904767	298,883.00	2.91295	62	50 - 150	-0.0082	+/-0.50	
M6PFDA	1064543	3.84345	1,173,486.00	3.851417	91	50 - 150	-0.0080	+/-0.50	
M3PFBS	157315.4	1.969733	190,139.00	1.969733	83	50 - 150	0.0000	+/-0.50	
M7PFUnA	1310478	3.993983	1,524,213.00	3.993983	86	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	108545.7	3.493333	131,267.00	3.493333	83	50 - 150	0.0000	+/-0.50	
M5PFPeA	657817.8	1.7826	823,921.00	1.791367	80	50 - 150	-0.0088	+/-0.50	
M5PFHxA	912459.3	2.663233	1,131,820.00	2.672333	81	50 - 150	-0.0091	+/-0.50	
M3PFHxS	122659.1	3.266817	141,124.00	3.266833	87	50 - 150	0.0000	+/-0.50	
M4PFHpA	975282.1	3.227617	1,179,935.00	3.2357	83	50 - 150	-0.0081	+/-0.50	
M8PFOA	917365.1	3.50185	1,119,574.00	3.50185	82	50 - 150	0.0000	+/-0.50	
M8PFOS	140545.1	3.692067	163,358.00	3.692083	86	50 - 150	0.0000	+/-0.50	
M9PFNA	821053.3	3.693117	1,027,621.00	3.693117	80	50 - 150	0.0000	+/-0.50	
MPFDoA	1349795	4.128783	1,594,256.00	4.136817	85	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	247444.3	4.00145	294,893.00	4.001467	84	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	303037.1	3.921883	301,628.00	3.921883	100	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-5 (6-12) (21J1976-06)			Lab File ID: 21J1976-06.d		Analyzed: 11/11/21 19:08				
M8FOSA	476329.8	4.036517	451,140.00	4.044517	106	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	173623.5	2.57895	207,338.00	2.58715	84	50 - 150	-0.0082	+/-0.50	
M2PFTA	2031687	4.370283	1,799,881.00	4.378417	113	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	213512.6	3.842967	225,194.00	3.850917	95	50 - 150	-0.0080	+/-0.50	
MPFBA	830626	1.108317	819,390.00	1.108317	101	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	248106.7	2.904767	298,883.00	2.91295	83	50 - 150	-0.0082	+/-0.50	
M6PFDA	1265129	3.84345	1,173,486.00	3.851417	108	50 - 150	-0.0080	+/-0.50	
M3PFBS	186942.6	1.969733	190,139.00	1.969733	98	50 - 150	0.0000	+/-0.50	
M7PFUnA	1640135	3.993983	1,524,213.00	3.993983	108	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	121302.3	3.493333	131,267.00	3.493333	92	50 - 150	0.0000	+/-0.50	
M5PFPeA	824552.4	1.7826	823,921.00	1.791367	100	50 - 150	-0.0088	+/-0.50	
M5PFHxA	1113769	2.663233	1,131,820.00	2.672333	98	50 - 150	-0.0091	+/-0.50	
M3PFHxS	144825.1	3.266817	141,124.00	3.266833	103	50 - 150	0.0000	+/-0.50	
M4PFHpA	1166108	3.227617	1,179,935.00	3.2357	99	50 - 150	-0.0081	+/-0.50	
M8PFOA	1164376	3.50185	1,119,574.00	3.50185	104	50 - 150	0.0000	+/-0.50	
M8PFOS	164013.8	3.692083	163,358.00	3.692083	100	50 - 150	0.0000	+/-0.50	
M9PFNA	1047387	3.693117	1,027,621.00	3.693117	102	50 - 150	0.0000	+/-0.50	
MPFDoA	1679193	4.128783	1,594,256.00	4.136817	105	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	283125.3	4.001467	294,893.00	4.001467	96	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	312827.8	3.921883	301,628.00	3.921883	104	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-5 (12-18) (21J1976-07)									
			Lab File ID: 21J1976-07.d			Analyzed: 11/11/21 19:16			
M8FOSA	475376.3	4.036517	451,140.00	4.044517	105	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	178865.3	2.57895	207,338.00	2.58715	86	50 - 150	-0.0082	+/-0.50	
M2PFTA	1791708	4.370283	1,799,881.00	4.378417	100	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	229832.2	3.842967	225,194.00	3.850917	102	50 - 150	-0.0080	+/-0.50	
MPFBA	820871.1	1.108317	819,390.00	1.108317	100	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	242707.1	2.904767	298,883.00	2.91295	81	50 - 150	-0.0082	+/-0.50	
M6PFDA	1298725	3.84345	1,173,486.00	3.851417	111	50 - 150	-0.0080	+/-0.50	
M3PFBS	184708.9	1.969733	190,139.00	1.969733	97	50 - 150	0.0000	+/-0.50	
M7PFUnA	1526839	3.993983	1,524,213.00	3.993983	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	125376.7	3.493333	131,267.00	3.493333	96	50 - 150	0.0000	+/-0.50	
M5PFPeA	802461.9	1.7826	823,921.00	1.791367	97	50 - 150	-0.0088	+/-0.50	
M5PFHxA	1098819	2.663233	1,131,820.00	2.672333	97	50 - 150	-0.0091	+/-0.50	
M3PFHxS	137832.6	3.266817	141,124.00	3.266833	98	50 - 150	0.0000	+/-0.50	
M4PFHpA	1200803	3.227617	1,179,935.00	3.2357	102	50 - 150	-0.0081	+/-0.50	
M8PFOA	1121154	3.50185	1,119,574.00	3.50185	100	50 - 150	0.0000	+/-0.50	
M8PFOS	162334.4	3.692067	163,358.00	3.692083	99	50 - 150	0.0000	+/-0.50	
M9PFNA	989024.8	3.693117	1,027,621.00	3.693117	96	50 - 150	0.0000	+/-0.50	
MPFDoA	1645094	4.128783	1,594,256.00	4.136817	103	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	283688.1	4.00145	294,893.00	4.001467	96	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	317231.2	3.921883	301,628.00	3.921883	105	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-6 (6-12) (21J1976-08)			Lab File ID: 21J1976-08.d			Analyzed: 11/11/21 19:23			
M8FOSA	459365.8	4.036517	451,140.00	4.044517	102	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	166324.4	2.57895	207,338.00	2.58715	80	50 - 150	-0.0082	+/-0.50	
M2PFTA	2005032	4.370283	1,799,881.00	4.378417	111	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	225213.5	3.842967	225,194.00	3.850917	100	50 - 150	-0.0080	+/-0.50	
MPFBA	792463.8	1.108317	819,390.00	1.108317	97	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	220522.5	2.904767	298,883.00	2.91295	74	50 - 150	-0.0082	+/-0.50	
M6PFDA	1249794	3.84345	1,173,486.00	3.851417	107	50 - 150	-0.0080	+/-0.50	
M3PFBS	183040.1	1.969733	190,139.00	1.969733	96	50 - 150	0.0000	+/-0.50	
M7PFUnA	1536754	3.993983	1,524,213.00	3.993983	101	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	135981.6	3.493333	131,267.00	3.493333	104	50 - 150	0.0000	+/-0.50	
M5PFPeA	786260.8	1.7826	823,921.00	1.791367	95	50 - 150	-0.0088	+/-0.50	
M5PFHxA	1094064	2.663233	1,131,820.00	2.672333	97	50 - 150	-0.0091	+/-0.50	
M3PFHxS	136096.9	3.25875	141,124.00	3.266833	96	50 - 150	-0.0081	+/-0.50	
M4PFHpA	1172330	3.227617	1,179,935.00	3.2357	99	50 - 150	-0.0081	+/-0.50	
M8PFOA	1119189	3.50185	1,119,574.00	3.50185	100	50 - 150	0.0000	+/-0.50	
M8PFOS	156861.9	3.692083	163,358.00	3.692083	96	50 - 150	0.0000	+/-0.50	
M9PFNA	992551.4	3.693117	1,027,621.00	3.693117	97	50 - 150	0.0000	+/-0.50	
MPFDoA	1729424	4.128783	1,594,256.00	4.136817	108	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	283556.7	4.00145	294,893.00	4.001467	96	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	328569.6	3.921883	301,628.00	3.921883	109	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-7 (6-12) (21J1976-09)			Lab File ID: 21J1976-09.d			Analyzed: 11/11/21 19:30			
M8FOSA	414163.6	4.036517	451,140.00	4.044517	92	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	130763.2	2.57895	207,338.00	2.58715	63	50 - 150	-0.0082	+/-0.50	
M2PFTA	1646267	4.370283	1,799,881.00	4.378417	91	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	196554.5	3.850917	225,194.00	3.850917	87	50 - 150	0.0000	+/-0.50	
MPFBA	644688.1	1.108317	819,390.00	1.108317	79	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	181894.4	2.91295	298,883.00	2.91295	61	50 - 150	0.0000	+/-0.50	
M6PFDA	1037796	3.84345	1,173,486.00	3.851417	88	50 - 150	-0.0080	+/-0.50	
M3PFBS	152862.1	1.969733	190,139.00	1.969733	80	50 - 150	0.0000	+/-0.50	
M7PFUnA	1336919	3.993983	1,524,213.00	3.993983	88	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	109072.7	3.493333	131,267.00	3.493333	83	50 - 150	0.0000	+/-0.50	
M5PFPeA	647382.1	1.7826	823,921.00	1.791367	79	50 - 150	-0.0088	+/-0.50	
M5PFHxA	900214.1	2.672333	1,131,820.00	2.672333	80	50 - 150	0.0000	+/-0.50	
M3PFHxS	115286.8	3.266817	141,124.00	3.266833	82	50 - 150	0.0000	+/-0.50	
M4PFHpA	968213.1	3.2357	1,179,935.00	3.2357	82	50 - 150	0.0000	+/-0.50	
M8PFOA	954341.3	3.50185	1,119,574.00	3.50185	85	50 - 150	0.0000	+/-0.50	
M8PFOS	143482.3	3.692083	163,358.00	3.692083	88	50 - 150	0.0000	+/-0.50	
M9PFNA	862031.6	3.693117	1,027,621.00	3.693117	84	50 - 150	0.0000	+/-0.50	
MPFDoA	1513882	4.128783	1,594,256.00	4.136817	95	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	265645.1	4.00145	294,893.00	4.001467	90	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	322240.9	3.921883	301,628.00	3.921883	107	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-8 (6-12) (21J1976-10)			Lab File ID: 21J1976-10.d		Analyzed: 11/11/21 19:37				
M8FOSA	429542.5	4.036517	451,140.00	4.044517	95	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	142404.6	2.57895	207,338.00	2.58715	69	50 - 150	-0.0082	+/-0.50	
M2PFTA	1744823	4.370283	1,799,881.00	4.378417	97	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	252921.1	3.850917	225,194.00	3.850917	112	50 - 150	0.0000	+/-0.50	
MPFBA	715708.1	1.108317	819,390.00	1.108317	87	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	210972.2	2.91295	298,883.00	2.91295	71	50 - 150	0.0000	+/-0.50	
M6PFDA	1100976	3.84345	1,173,486.00	3.851417	94	50 - 150	-0.0080	+/-0.50	
M3PFBS	167831.8	1.969733	190,139.00	1.969733	88	50 - 150	0.0000	+/-0.50	
M7PFUnA	1148787	3.993983	1,524,213.00	3.993983	75	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	132266.6	3.493333	131,267.00	3.493333	101	50 - 150	0.0000	+/-0.50	
M5PFPeA	705230.6	1.7826	823,921.00	1.791367	86	50 - 150	-0.0088	+/-0.50	
M5PFHxA	985319.6	2.672333	1,131,820.00	2.672333	87	50 - 150	0.0000	+/-0.50	
M3PFHxS	129234.8	3.266817	141,124.00	3.266833	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1057264	3.2357	1,179,935.00	3.2357	90	50 - 150	0.0000	+/-0.50	
M8PFOA	1027628	3.50185	1,119,574.00	3.50185	92	50 - 150	0.0000	+/-0.50	
M8PFOS	149674.9	3.692067	163,358.00	3.692083	92	50 - 150	0.0000	+/-0.50	
M9PFNA	932227.2	3.693117	1,027,621.00	3.693117	91	50 - 150	0.0000	+/-0.50	
MPFDoA	1548333	4.128783	1,594,256.00	4.136817	97	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	218857	4.00145	294,893.00	4.001467	74	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	359520.1	3.921883	301,628.00	3.921883	119	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-8 (12-18) (21J1976-11)									
			Lab File ID: 21J1976-11.d			Analyzed: 11/11/21 19:52			
M8FOSA	465544	4.036517	451,140.00	4.036517	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	156888.6	2.57895	207,338.00	2.57895	76	50 - 150	0.0000	+/-0.50	
M2PF _T A	1949335	4.370283	1,799,881.00	4.370283	108	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	261418.6	3.850917	225,194.00	3.842967	116	50 - 150	0.0080	+/-0.50	
MPFBA	775907.3	1.108317	819,390.00	1.100017	95	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	221468.9	2.904767	298,883.00	2.904767	74	50 - 150	0.0000	+/-0.50	
M6PFDA	1210233	3.84345	1,173,486.00	3.84345	103	50 - 150	0.0000	+/-0.50	
M3PFBS	177243.9	1.969733	190,139.00	1.969733	93	50 - 150	0.0000	+/-0.50	
M7PFU _n A	1274838	3.993983	1,524,213.00	3.993983	84	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	131938.5	3.493333	131,267.00	3.493333	101	50 - 150	0.0000	+/-0.50	
M5PFPeA	765626.3	1.7826	823,921.00	1.7826	93	50 - 150	0.0000	+/-0.50	
M5PFH _x A	1060348	2.663233	1,131,820.00	2.663233	94	50 - 150	0.0000	+/-0.50	
M3PFH _x S	137153.3	3.266817	141,124.00	3.25875	97	50 - 150	0.0081	+/-0.50	
M4PFH _p A	1139615	3.227617	1,179,935.00	3.227617	97	50 - 150	0.0000	+/-0.50	
M8PFOA	1104311	3.50185	1,119,574.00	3.50185	99	50 - 150	0.0000	+/-0.50	
M8PFOS	160324.4	3.692067	163,358.00	3.692083	98	50 - 150	0.0000	+/-0.50	
M9PFNA	982692.6	3.693117	1,027,621.00	3.693117	96	50 - 150	0.0000	+/-0.50	
MPFDoA	1707133	4.128783	1,594,256.00	4.128783	107	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	211800.5	4.00145	294,893.00	4.001467	72	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	370427.3	3.921883	301,628.00	3.921883	123	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-10 (0-6) (21J1976-12)			Lab File ID: 21J1976-12.d			Analyzed: 11/11/21 19:59			
M8FOSA	397274.8	4.036517	451,140.00	4.036517	88	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	125346.5	2.57895	207,338.00	2.57895	60	50 - 150	0.0000	+/-0.50	
M2PFTA	1585461	4.370283	1,799,881.00	4.370283	88	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	205199.2	3.842967	225,194.00	3.842967	91	50 - 150	0.0000	+/-0.50	
MPFBA	690622.6	1.108317	819,390.00	1.100017	84	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	201377.7	2.904767	298,883.00	2.904767	67	50 - 150	0.0000	+/-0.50	
M6PFDA	1095949	3.84345	1,173,486.00	3.84345	93	50 - 150	0.0000	+/-0.50	
M3PFBS	162525.8	1.969733	190,139.00	1.969733	85	50 - 150	0.0000	+/-0.50	
M7PFUnA	1361680	3.993983	1,524,213.00	3.993983	89	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	114930.7	3.493333	131,267.00	3.493333	88	50 - 150	0.0000	+/-0.50	
M5PFPeA	697845.1	1.7826	823,921.00	1.7826	85	50 - 150	0.0000	+/-0.50	
M5PFHxA	960234.7	2.663233	1,131,820.00	2.663233	85	50 - 150	0.0000	+/-0.50	
M3PFHxS	125435.2	3.25875	141,124.00	3.25875	89	50 - 150	0.0000	+/-0.50	
M4PFHpA	1028650	3.227617	1,179,935.00	3.227617	87	50 - 150	0.0000	+/-0.50	
M8PFOA	1017987	3.50185	1,119,574.00	3.50185	91	50 - 150	0.0000	+/-0.50	
M8PFOS	140997.2	3.692083	163,358.00	3.692083	86	50 - 150	0.0000	+/-0.50	
M9PFNA	925321.6	3.693117	1,027,621.00	3.693117	90	50 - 150	0.0000	+/-0.50	
MPFDoA	1438261	4.128783	1,594,256.00	4.128783	90	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	270123.1	4.001467	294,893.00	4.001467	92	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	309099.9	3.921883	301,628.00	3.921883	102	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-11 (0-12) (21J1976-13)									
			Lab File ID: 21J1976-13.d			Analyzed: 11/11/21 20:06			
M8FOSA	438224.6	4.036517	451,140.00	4.036517	97	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	148956.3	2.57895	207,338.00	2.57895	72	50 - 150	0.0000	+/-0.50	
M2PFTA	1717888	4.370283	1,799,881.00	4.370283	95	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	212808.3	3.842967	225,194.00	3.842967	95	50 - 150	0.0000	+/-0.50	
MPFBA	736721.4	1.108317	819,390.00	1.100017	90	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	204393	2.904767	298,883.00	2.904767	68	50 - 150	0.0000	+/-0.50	
M6PFDA	1155640	3.84345	1,173,486.00	3.84345	98	50 - 150	0.0000	+/-0.50	
M3PFBS	167581.6	1.96145	190,139.00	1.969733	88	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1506896	3.993983	1,524,213.00	3.993983	99	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	115420.5	3.493333	131,267.00	3.493333	88	50 - 150	0.0000	+/-0.50	
M5PFPeA	729330.4	1.7826	823,921.00	1.7826	89	50 - 150	0.0000	+/-0.50	
M5PFHxA	986907.6	2.663233	1,131,820.00	2.663233	87	50 - 150	0.0000	+/-0.50	
M3PFHxS	127397.3	3.25875	141,124.00	3.25875	90	50 - 150	0.0000	+/-0.50	
M4PFHpA	1042270	3.227617	1,179,935.00	3.227617	88	50 - 150	0.0000	+/-0.50	
M8PFOA	1037192	3.50185	1,119,574.00	3.50185	93	50 - 150	0.0000	+/-0.50	
M8PFOS	148568.1	3.692083	163,358.00	3.692083	91	50 - 150	0.0000	+/-0.50	
M9PFNA	937900.5	3.693117	1,027,621.00	3.693117	91	50 - 150	0.0000	+/-0.50	
MPFDoA	1463697	4.128783	1,594,256.00	4.128783	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	276344.3	4.00145	294,893.00	4.001467	94	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	355494.3	3.921883	301,628.00	3.921883	118	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-12 (0-12) (21J1976-14)									
			Lab File ID: 21J1976-14.d			Analyzed: 11/11/21 20:14			
M8FOSA	373379.6	4.036517	451,140.00	4.036517	83	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	149580.7	2.570733	207,338.00	2.57895	72	50 - 150	-0.0082	+/-0.50	
M2PFTA	1608890	4.370283	1,799,881.00	4.370283	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	336807.3	3.842967	225,194.00	3.842967	150	50 - 150	0.0000	+/-0.50	
MPFBA	663085.1	1.108317	819,390.00	1.100017	81	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	189575.1	2.904767	298,883.00	2.904767	63	50 - 150	0.0000	+/-0.50	
M6PFDA	1027355	3.84345	1,173,486.00	3.84345	88	50 - 150	0.0000	+/-0.50	
M3PFBS	152842	1.96145	190,139.00	1.969733	80	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1270230	3.993983	1,524,213.00	3.993983	83	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	183976	3.493333	131,267.00	3.493333	140	50 - 150	0.0000	+/-0.50	
M5PFPeA	661674.4	1.7826	823,921.00	1.7826	80	50 - 150	0.0000	+/-0.50	
M5PFHxA	919430	2.663233	1,131,820.00	2.663233	81	50 - 150	0.0000	+/-0.50	
M3PFHxS	116671.4	3.258733	141,124.00	3.25875	83	50 - 150	0.0000	+/-0.50	
M4PFHpA	939036.7	3.227617	1,179,935.00	3.227617	80	50 - 150	0.0000	+/-0.50	
M8PFOA	927827.3	3.50185	1,119,574.00	3.50185	83	50 - 150	0.0000	+/-0.50	
M8PFOS	132138.2	3.692067	163,358.00	3.692083	81	50 - 150	0.0000	+/-0.50	
M9PFNA	814223.4	3.693117	1,027,621.00	3.693117	79	50 - 150	0.0000	+/-0.50	
MPFDoA	1386183	4.128783	1,594,256.00	4.128783	87	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	300486.2	4.00145	294,893.00	4.001467	102	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	289006.6	3.921883	301,628.00	3.921883	96	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-13 (0-12) (21J1976-15)			Lab File ID: 21J1976-15.d			Analyzed: 11/11/21 20:21			
M8FOSA	404318.1	4.036517	451,140.00	4.036517	90	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	159620	2.562517	207,338.00	2.57895	77	50 - 150	-0.0164	+/-0.50	
M2PFTA	1902844	4.370283	1,799,881.00	4.370283	106	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	285375.7	3.842967	225,194.00	3.842967	127	50 - 150	0.0000	+/-0.50	
MPFBA	743525.2	1.100017	819,390.00	1.100017	91	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	217271.1	2.896583	298,883.00	2.904767	73	50 - 150	-0.0082	+/-0.50	
M6PFDA	1138506	3.84345	1,173,486.00	3.84345	97	50 - 150	0.0000	+/-0.50	
M3PFBS	176920.5	1.95315	190,139.00	1.969733	93	50 - 150	-0.0166	+/-0.50	
M7PFUnA	1555752	3.986	1,524,213.00	3.993983	102	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	158660.7	3.48535	131,267.00	3.493333	121	50 - 150	-0.0080	+/-0.50	
M5PFPeA	756301.1	1.7743	823,921.00	1.7826	92	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1034738	2.655	1,131,820.00	2.663233	91	50 - 150	-0.0082	+/-0.50	
M3PFHxS	134964.4	3.25875	141,124.00	3.25875	96	50 - 150	0.0000	+/-0.50	
M4PFHpA	1081402	3.227617	1,179,935.00	3.227617	92	50 - 150	0.0000	+/-0.50	
M8PFOA	1056679	3.50185	1,119,574.00	3.50185	94	50 - 150	0.0000	+/-0.50	
M8PFOS	153142.5	3.684083	163,358.00	3.692083	94	50 - 150	-0.0080	+/-0.50	
M9PFNA	958929.1	3.685133	1,027,621.00	3.693117	93	50 - 150	-0.0080	+/-0.50	
MPFDoA	1649974	4.128783	1,594,256.00	4.128783	103	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	329594.8	3.993467	294,893.00	4.001467	112	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	349105.5	3.921883	301,628.00	3.921883	116	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
22MTN S-13 (12-24) (21J1976-16)			Lab File ID: 21J1976-16.d			Analyzed: 11/11/21 20:28			
M8FOSA	442157	4.036517	451,140.00	4.036517	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	155146.9	2.562517	207,338.00	2.57895	75	50 - 150	-0.0164	+/-0.50	
M2PFTA	1727971	4.370283	1,799,881.00	4.370283	96	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	215760.1	3.842967	225,194.00	3.842967	96	50 - 150	0.0000	+/-0.50	
MPFBA	741130.9	1.100017	819,390.00	1.100017	90	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	215801.5	2.896583	298,883.00	2.904767	72	50 - 150	-0.0082	+/-0.50	
M6PFDA	1101132	3.84345	1,173,486.00	3.84345	94	50 - 150	0.0000	+/-0.50	
M3PFBS	169560.2	1.95315	190,139.00	1.969733	89	50 - 150	-0.0166	+/-0.50	
M7PFUnA	1405355	3.986	1,524,213.00	3.993983	92	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	109413.9	3.48535	131,267.00	3.493333	83	50 - 150	-0.0080	+/-0.50	
M5PFPeA	728847.4	1.7743	823,921.00	1.7826	88	50 - 150	-0.0083	+/-0.50	
M5PFHxA	996209.3	2.655	1,131,820.00	2.663233	88	50 - 150	-0.0082	+/-0.50	
M3PFHxS	132510.3	3.25875	141,124.00	3.25875	94	50 - 150	0.0000	+/-0.50	
M4PFHpA	1041363	3.227617	1,179,935.00	3.227617	88	50 - 150	0.0000	+/-0.50	
M8PFOA	1023823	3.50185	1,119,574.00	3.50185	91	50 - 150	0.0000	+/-0.50	
M8PFOS	144667.9	3.684083	163,358.00	3.692083	89	50 - 150	-0.0080	+/-0.50	
M9PFNA	931973	3.685133	1,027,621.00	3.693117	91	50 - 150	-0.0080	+/-0.50	
MPFDoA	1498037	4.128783	1,594,256.00	4.128783	94	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	280826.1	3.993467	294,893.00	4.001467	95	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	342764.7	3.921883	301,628.00	3.921883	114	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Trip Blank (21J1976-17)			Lab File ID: 21J1976-17R.d			Analyzed: 11/09/21 18:27			
M8FOSA	378145.8	4.0525	365,630.00	4.0525	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	90339.15	2.6118	176,034.00	2.6118	51	50 - 150	0.0000	+/-0.50	
M2PF _{TA}	1736822	4.3784	1,459,197.00	4.386533	119	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	131398.8	3.858883	180,557.00	3.858883	73	50 - 150	0.0000	+/-0.50	
MPF _{BA}	899904.9	1.116633	665,049.00	1.108317	135	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	338528	2.929717	305,122.00	2.929717	111	50 - 150	0.0000	+/-0.50	
M6PF _{DA}	1145450	3.851417	906,735.00	3.851417	126	50 - 150	0.0000	+/-0.50	
M3PF _{BS}	197353.1	1.9945	160,570.00	1.9945	123	50 - 150	0.0000	+/-0.50	
M7PF _{UnA}	1503454	4.001983	1,106,943.00	4.001983	136	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	85572.05	3.501317	113,759.00	3.501317	75	50 - 150	0.0000	+/-0.50	
M5PF _{PeA}	848184.8	1.80795	686,897.00	1.80795	123	50 - 150	0.0000	+/-0.50	
M5PF _{HxA}	1156343	2.706317	886,969.00	2.69695	130	50 - 150	0.0094	+/-0.50	
M3PF _{HxS}	143373.8	3.2762	125,041.00	3.2762	115	50 - 150	0.0000	+/-0.50	
M4PF _{HpA}	1194945	3.243783	931,364.00	3.243783	128	50 - 150	0.0000	+/-0.50	
M8PF _{OA}	1143403	3.51015	889,744.00	3.51015	129	50 - 150	0.0000	+/-0.50	
M8PF _{OS}	159131.7	3.70005	133,024.00	3.70005	120	50 - 150	0.0000	+/-0.50	
M9PF _{NA}	1011333	3.7011	809,610.00	3.7011	125	50 - 150	0.0000	+/-0.50	
MPF _{DoA}	1354088	4.144834	1,183,580.00	4.144834	114	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	244034.6	4.00945	248,809.00	4.00945	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	253188.5	3.929867	276,127.00	3.929867	92	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Field Blank (21J1976-18)									
			Lab File ID: 21J1976-18R.d			Analyzed: 11/09/21 18:48			
M8FOSA	478233.8	4.0525	365,630.00	4.0525	131	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	144940.2	2.6118	176,034.00	2.6118	82	50 - 150	0.0000	+/-0.50	
M2PFTA	1679345	4.3784	1,459,197.00	4.3784	115	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	157485.8	3.850917	180,557.00	3.858883	87	50 - 150	-0.0080	+/-0.50	
MPFBA	1020134	1.108317	665,049.00	1.108317	153	50 - 150	0.0000	+/-0.50	*
M3HFPO-DA	349652.5	2.929717	305,122.00	2.929717	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1278629	3.851417	906,735.00	3.851417	141	50 - 150	0.0000	+/-0.50	
M3PFBS	230967.4	1.9945	160,570.00	1.9945	144	50 - 150	0.0000	+/-0.50	
M7PFUnA	1796940	4.001983	1,106,943.00	4.001983	162	50 - 150	0.0000	+/-0.50	*
M2-6:2FTS	110138.3	3.501317	113,759.00	3.501317	97	50 - 150	0.0000	+/-0.50	
M5PFPeA	982301.9	1.80795	686,897.00	1.80795	143	50 - 150	0.0000	+/-0.50	
M5PFHxA	1324353	2.706317	886,969.00	2.696967	149	50 - 150	0.0093	+/-0.50	
M3PFHxS	175785.8	3.2762	125,041.00	3.2762	141	50 - 150	0.0000	+/-0.50	
M4PFHpA	1394161	3.243767	931,364.00	3.243783	150	50 - 150	0.0000	+/-0.50	
M8PFOA	1314313	3.51015	889,744.00	3.51015	148	50 - 150	0.0000	+/-0.50	
M8PFOS	194048.1	3.70005	133,024.00	3.70005	146	50 - 150	0.0000	+/-0.50	
M9PFNA	1184800	3.7011	809,610.00	3.7011	146	50 - 150	0.0000	+/-0.50	
MPFDoA	1612656	4.136817	1,183,580.00	4.144834	136	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	292173.9	4.00945	248,809.00	4.00945	117	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	328726.4	3.929867	276,127.00	3.929867	119	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Equipment Blank (21J1976-19)			Lab File ID: 21J1976-19R.d			Analyzed: 11/09/21 18:56			
M8FOSA	414108	4.0525	365,630.00	4.0525	113	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	154574.5	2.6118	176,034.00	2.6118	88	50 - 150	0.0000	+/-0.50	
M2PFTA	1725172	4.3784	1,459,197.00	4.3784	118	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	170472.6	3.858883	180,557.00	3.858883	94	50 - 150	0.0000	+/-0.50	
MPFBA	950084.4	1.108317	665,049.00	1.108317	143	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	348575.7	2.929717	305,122.00	2.929717	114	50 - 150	0.0000	+/-0.50	
M6PFDA	1263403	3.851417	906,735.00	3.851417	139	50 - 150	0.0000	+/-0.50	
M3PFBS	216301.8	1.9945	160,570.00	1.9945	135	50 - 150	0.0000	+/-0.50	
M7PFUnA	1658726	4.001983	1,106,943.00	4.001983	150	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	122291.7	3.501317	113,759.00	3.501317	108	50 - 150	0.0000	+/-0.50	
M5PFPeA	920383.3	1.80795	686,897.00	1.80795	134	50 - 150	0.0000	+/-0.50	
M5PFHxA	1231093	2.706317	886,969.00	2.696967	139	50 - 150	0.0093	+/-0.50	
M3PFHxS	167649	3.2762	125,041.00	3.2762	134	50 - 150	0.0000	+/-0.50	
M4PFHpA	1341247	3.243767	931,364.00	3.243783	144	50 - 150	0.0000	+/-0.50	
M8PFOA	1220119	3.51015	889,744.00	3.51015	137	50 - 150	0.0000	+/-0.50	
M8PFOS	178931.1	3.70005	133,024.00	3.70005	135	50 - 150	0.0000	+/-0.50	
M9PFNA	1120940	3.7011	809,610.00	3.7011	138	50 - 150	0.0000	+/-0.50	
MPFDoA	1417932	4.1368	1,183,580.00	4.144834	120	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	288160	4.00945	248,809.00	4.00945	116	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	272503.9	3.929867	276,127.00	3.929867	99	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Rinsate (21J1976-20) Lab File ID: 21J1976-20R.d Analyzed: 11/09/21 19:03									
M8FOSA	462414.8	4.0525	365,630.00	4.0525	126	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	176172.3	2.6118	176,034.00	2.6118	100	50 - 150	0.0000	+/-0.50	
M2PFTA	1869938	4.3784	1,459,197.00	4.3784	128	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	189978	3.858883	180,557.00	3.858883	105	50 - 150	0.0000	+/-0.50	
MPFBA	1014963	1.108317	665,049.00	1.108317	153	50 - 150	0.0000	+/-0.50	*
M3HFPO-DA	350121.9	2.929717	305,122.00	2.929717	115	50 - 150	0.0000	+/-0.50	
M6PFDA	1322218	3.851417	906,735.00	3.851417	146	50 - 150	0.0000	+/-0.50	
M3PFBS	227685.4	1.9945	160,570.00	1.9945	142	50 - 150	0.0000	+/-0.50	
M7PFUnA	1662200	4.001983	1,106,943.00	4.001983	150	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	123937.4	3.501317	113,759.00	3.501317	109	50 - 150	0.0000	+/-0.50	
M5PFPeA	984908.4	1.80795	686,897.00	1.80795	143	50 - 150	0.0000	+/-0.50	
M5PFHxA	1332349	2.706317	886,969.00	2.696967	150	50 - 150	0.0093	+/-0.50	
M3PFHxS	177671.7	3.2762	125,041.00	3.2762	142	50 - 150	0.0000	+/-0.50	
M4PFHpA	1375827	3.243767	931,364.00	3.243783	148	50 - 150	0.0000	+/-0.50	
M8PFOA	1311802	3.51015	889,744.00	3.51015	147	50 - 150	0.0000	+/-0.50	
M8PFOS	194292.8	3.70005	133,024.00	3.70005	146	50 - 150	0.0000	+/-0.50	
M9PFNA	1149684	3.7011	809,610.00	3.7011	142	50 - 150	0.0000	+/-0.50	
MPFDoA	1537687	4.144834	1,183,580.00	4.144834	130	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	312440	4.00945	248,809.00	4.00945	126	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	311957.3	3.929867	276,127.00	3.929867	113	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B293895-BLK1)			Lab File ID: B293895-BLK1.d			Analyzed: 11/08/21 10:51			
M8FOSA	360347.7	4.052533	339,382.00	4.044533	106	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	173697.4	2.67895	143,359.00	2.678933	121	50 - 150	0.0000	+/-0.50	
M2PFTA	1456815	4.410933	1,310,564.00	4.410933	111	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	195293.1	3.883067	147,200.00	3.883067	133	50 - 150	0.0000	+/-0.50	
MPFBA	750445.9	1.13325	550,898.00	1.13325	136	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	211729.9	2.97845	203,262.00	2.97845	104	50 - 150	0.0000	+/-0.50	
M6PFDA	1086914	3.8756	844,341.00	3.883583	129	50 - 150	-0.0080	+/-0.50	
M3PFBS	160300.7	2.044233	129,662.00	2.054933	124	50 - 150	-0.0107	+/-0.50	
M7PFUnA	1435103	4.025983	1,071,417.00	4.033983	134	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	117499.8	3.525617	92,424.00	3.5336	127	50 - 150	-0.0080	+/-0.50	
M5PFPeA	739145.4	1.857667	565,564.00	1.857667	131	50 - 150	0.0000	+/-0.50	
M5PFHxA	1025358	2.7636	773,718.00	2.771783	133	50 - 150	-0.0082	+/-0.50	
M3PFHxS	129081.9	3.308383	103,548.00	3.308383	125	50 - 150	0.0000	+/-0.50	
M4PFHpA	1043177	3.277267	784,414.00	3.27725	133	50 - 150	0.0000	+/-0.50	
M8PFOA	1028305	3.53415	789,294.00	3.542133	130	50 - 150	-0.0080	+/-0.50	
M8PFOS	140014.5	3.716267	115,844.00	3.724233	121	50 - 150	-0.0080	+/-0.50	
M9PFNA	1067003	3.725233	804,190.00	3.725233	133	50 - 150	0.0000	+/-0.50	
MPFDoA	1328665	4.169283	1,127,246.00	4.169283	118	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	241598	4.03345	207,462.00	4.04145	116	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	249659.3	3.953883	198,246.00	3.961867	126	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B293895-BS1)			Lab File ID: B293895-BS1.d			Analyzed: 11/08/21 10:37			
M8FOSA	411593.3	4.052533	339,382.00	4.044533	121	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	181999	2.68715	143,359.00	2.678933	127	50 - 150	0.0082	+/-0.50	
M2PFTA	1507396	4.410933	1,310,564.00	4.410933	115	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	215214.4	3.88305	147,200.00	3.883067	146	50 - 150	0.0000	+/-0.50	
MPFBA	777372.1	1.141567	550,898.00	1.13325	141	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	233092	2.986567	203,262.00	2.97845	115	50 - 150	0.0081	+/-0.50	
M6PFDA	1154806	3.883583	844,341.00	3.883583	137	50 - 150	0.0000	+/-0.50	
M3PFBS	171489.7	2.054933	129,662.00	2.054933	132	50 - 150	0.0000	+/-0.50	
M7PFUnA	1363129	4.033967	1,071,417.00	4.033983	127	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	132249.1	3.5336	92,424.00	3.5336	143	50 - 150	0.0000	+/-0.50	
M5PFPeA	776054.8	1.86595	565,564.00	1.857667	137	50 - 150	0.0083	+/-0.50	
M5PFHxA	1076656	2.771783	773,718.00	2.771783	139	50 - 150	0.0000	+/-0.50	
M3PFHxS	136727.9	3.308383	103,548.00	3.308383	132	50 - 150	0.0000	+/-0.50	
M4PFHpA	1143547	3.27725	784,414.00	3.27725	146	50 - 150	0.0000	+/-0.50	
M8PFOA	1102001	3.542133	789,294.00	3.542133	140	50 - 150	0.0000	+/-0.50	
M8PFOS	151012	3.724233	115,844.00	3.724233	130	50 - 150	0.0000	+/-0.50	
M9PFNA	1132298	3.725233	804,190.00	3.725233	141	50 - 150	0.0000	+/-0.50	
MPFDoA	1395201	4.169283	1,127,246.00	4.169283	124	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	253351.9	4.04145	207,462.00	4.04145	122	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	265779.8	3.961867	198,246.00	3.961867	134	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B293895-BSD1)									
			Lab File ID: B293895-BSD1.d			Analyzed: 11/08/21 10:44			
M8FOSA	400913.8	4.052533	339,382.00	4.044533	118	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	184214.7	2.678933	143,359.00	2.678933	128	50 - 150	0.0000	+/-0.50	
M2PFTA	1516479	4.410933	1,310,564.00	4.410933	116	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	204794.4	3.88305	147,200.00	3.883067	139	50 - 150	0.0000	+/-0.50	
MPFBA	801384.3	1.13325	550,898.00	1.13325	145	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	242044.4	2.97845	203,262.00	2.97845	119	50 - 150	0.0000	+/-0.50	
M6PFDA	1162087	3.883583	844,341.00	3.883583	138	50 - 150	0.0000	+/-0.50	
M3PFBS	169370.9	2.044217	129,662.00	2.054933	131	50 - 150	-0.0107	+/-0.50	
M7PFUnA	1420227	4.025983	1,071,417.00	4.033983	133	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	129238.9	3.525617	92,424.00	3.5336	140	50 - 150	-0.0080	+/-0.50	
M5PFPeA	786390.6	1.857667	565,564.00	1.857667	139	50 - 150	0.0000	+/-0.50	
M5PFHxA	1106334	2.771783	773,718.00	2.771783	143	50 - 150	0.0000	+/-0.50	
M3PFHxS	131843.5	3.308383	103,548.00	3.308383	127	50 - 150	0.0000	+/-0.50	
M4PFHpA	1119623	3.27725	784,414.00	3.27725	143	50 - 150	0.0000	+/-0.50	
M8PFOA	1087704	3.542133	789,294.00	3.542133	138	50 - 150	0.0000	+/-0.50	
M8PFOS	154146.1	3.716267	115,844.00	3.724233	133	50 - 150	-0.0080	+/-0.50	
M9PFNA	1137439	3.725233	804,190.00	3.725233	141	50 - 150	0.0000	+/-0.50	
MPFDoA	1420795	4.169283	1,127,246.00	4.169283	126	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	260542.4	4.04145	207,462.00	4.04145	126	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	281428.3	3.961867	198,246.00	3.961867	142	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B294243-BLK1)			Lab File ID: B294243-BLK1.d			Analyzed: 11/11/21 18:11			
M8FOSA	490342.2	4.044517	451,140.00	4.044517	109	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	205068.7	2.58715	207,338.00	2.58715	99	50 - 150	0.0000	+/-0.50	
M2PFTA	1870291	4.378417	1,799,881.00	4.378417	104	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	211172.3	3.850917	225,194.00	3.850917	94	50 - 150	0.0000	+/-0.50	
MPFBA	827123.1	1.108317	819,390.00	1.108317	101	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	273852.6	2.91295	298,883.00	2.91295	92	50 - 150	0.0000	+/-0.50	
M6PFDA	1316101	3.851417	1,173,486.00	3.851417	112	50 - 150	0.0000	+/-0.50	
M3PFBS	190587.5	1.978033	190,139.00	1.969733	100	50 - 150	0.0083	+/-0.50	
M7PFUnA	1551978	3.993983	1,524,213.00	3.993983	102	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	128916.8	3.493333	131,267.00	3.493333	98	50 - 150	0.0000	+/-0.50	
M5PFPeA	822307.6	1.791367	823,921.00	1.791367	100	50 - 150	0.0000	+/-0.50	
M5PFHxA	1134324	2.672333	1,131,820.00	2.672333	100	50 - 150	0.0000	+/-0.50	
M3PFHxS	143601.8	3.266817	141,124.00	3.266833	102	50 - 150	0.0000	+/-0.50	
M4PFHpA	1231164	3.2357	1,179,935.00	3.2357	104	50 - 150	0.0000	+/-0.50	
M8PFOA	1172033	3.50185	1,119,574.00	3.50185	105	50 - 150	0.0000	+/-0.50	
M8PFOS	159980.8	3.692067	163,358.00	3.692083	98	50 - 150	0.0000	+/-0.50	
M9PFNA	1024317	3.693117	1,027,621.00	3.693117	100	50 - 150	0.0000	+/-0.50	
MPFDoA	1656260	4.136817	1,594,256.00	4.136817	104	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	288367.4	4.00145	294,893.00	4.001467	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	317908.7	3.921883	301,628.00	3.921883	105	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B294243-BS1)									
			Lab File ID: B294243-BS1.d			Analyzed: 11/11/21 18:04			
M8FOSA	456748.8	4.044517	451,140.00	4.044517	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	197303.9	2.58715	207,338.00	2.58715	95	50 - 150	0.0000	+/-0.50	
M2PFTA	1803860	4.378417	1,799,881.00	4.378417	100	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	224793.7	3.850917	225,194.00	3.850917	100	50 - 150	0.0000	+/-0.50	
MPFBA	782645.7	1.108317	819,390.00	1.108317	96	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	250614.8	2.91295	298,883.00	2.91295	84	50 - 150	0.0000	+/-0.50	
M6PFDA	1179372	3.851417	1,173,486.00	3.851417	101	50 - 150	0.0000	+/-0.50	
M3PFBS	175368.7	1.978033	190,139.00	1.969733	92	50 - 150	0.0083	+/-0.50	
M7PFUnA	1501925	3.993983	1,524,213.00	3.993983	99	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	127828.5	3.493333	131,267.00	3.493333	97	50 - 150	0.0000	+/-0.50	
M5PFPeA	770826.9	1.791367	823,921.00	1.791367	94	50 - 150	0.0000	+/-0.50	
M5PFHxA	1077173	2.672333	1,131,820.00	2.672333	95	50 - 150	0.0000	+/-0.50	
M3PFHxS	132753.2	3.266833	141,124.00	3.266833	94	50 - 150	0.0000	+/-0.50	
M4PFHpA	1127470	3.2357	1,179,935.00	3.2357	96	50 - 150	0.0000	+/-0.50	
M8PFOA	1088199	3.50185	1,119,574.00	3.50185	97	50 - 150	0.0000	+/-0.50	
M8PFOS	147556.3	3.692083	163,358.00	3.692083	90	50 - 150	0.0000	+/-0.50	
M9PFNA	967232.6	3.693117	1,027,621.00	3.693117	94	50 - 150	0.0000	+/-0.50	
MPFDoA	1579796	4.128783	1,594,256.00	4.136817	99	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	275886.3	4.001467	294,893.00	4.001467	94	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	314601.8	3.921883	301,628.00	3.921883	104	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B294243-MS1)									
			Lab File ID: B294243-MS1.d			Analyzed: 11/11/21 18:18			
M8FOSA	425703.2	4.044517	451,140.00	4.044517	94	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	161929.7	2.58715	207,338.00	2.58715	78	50 - 150	0.0000	+/-0.50	
M2PFTA	1860962	4.378417	1,799,881.00	4.378417	103	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	190339.9	3.850933	225,194.00	3.850917	85	50 - 150	0.0000	+/-0.50	
MPFBA	712213.4	1.108317	819,390.00	1.108317	87	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	218456.4	2.91295	298,883.00	2.91295	73	50 - 150	0.0000	+/-0.50	
M6PFDA	1131923	3.851417	1,173,486.00	3.851417	96	50 - 150	0.0000	+/-0.50	
M3PFBS	168995.9	1.978033	190,139.00	1.969733	89	50 - 150	0.0083	+/-0.50	
M7PFUnA	1401613	3.993983	1,524,213.00	3.993983	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	106518.7	3.493333	131,267.00	3.493333	81	50 - 150	0.0000	+/-0.50	
M5PFPeA	717086.6	1.791367	823,921.00	1.791367	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	985207.3	2.672333	1,131,820.00	2.672333	87	50 - 150	0.0000	+/-0.50	
M3PFHxS	130502.1	3.266833	141,124.00	3.266833	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1036197	3.2357	1,179,935.00	3.2357	88	50 - 150	0.0000	+/-0.50	
M8PFOA	1032541	3.50185	1,119,574.00	3.50185	92	50 - 150	0.0000	+/-0.50	
M8PFOS	145752.8	3.692083	163,358.00	3.692083	89	50 - 150	0.0000	+/-0.50	
M9PFNA	937495.3	3.693117	1,027,621.00	3.693117	91	50 - 150	0.0000	+/-0.50	
MPFDoA	1490703	4.136817	1,594,256.00	4.136817	94	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	268246.1	4.001467	294,893.00	4.001467	91	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	300254.1	3.921883	301,628.00	3.921883	100	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B294243-MSD1)									
			Lab File ID: B294243-MSD1.d			Analyzed: 11/11/21 18:25			
M8FOSA	421729.6	4.044517	451,140.00	4.044517	93	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	162951.5	2.58715	207,338.00	2.58715	79	50 - 150	0.0000	+/-0.50	
M2PFTA	1701513	4.378417	1,799,881.00	4.378417	95	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	198802.1	3.850917	225,194.00	3.850917	88	50 - 150	0.0000	+/-0.50	
MPFBA	693712.6	1.108317	819,390.00	1.108317	85	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	208003.1	2.91295	298,883.00	2.91295	70	50 - 150	0.0000	+/-0.50	
M6PFDA	1115619	3.851417	1,173,486.00	3.851417	95	50 - 150	0.0000	+/-0.50	
M3PFBS	169479.4	1.978033	190,139.00	1.969733	89	50 - 150	0.0083	+/-0.50	
M7PFUnA	1458661	3.993983	1,524,213.00	3.993983	96	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	113873.4	3.493333	131,267.00	3.493333	87	50 - 150	0.0000	+/-0.50	
M5PFPeA	713144.7	1.791367	823,921.00	1.791367	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	978295.6	2.672333	1,131,820.00	2.672333	86	50 - 150	0.0000	+/-0.50	
M3PFHxS	126306.8	3.266833	141,124.00	3.266833	90	50 - 150	0.0000	+/-0.50	
M4PFHpA	1028661	3.2357	1,179,935.00	3.2357	87	50 - 150	0.0000	+/-0.50	
M8PFOA	1046858	3.50185	1,119,574.00	3.50185	94	50 - 150	0.0000	+/-0.50	
M8PFOS	148311.8	3.692083	163,358.00	3.692083	91	50 - 150	0.0000	+/-0.50	
M9PFNA	940114.4	3.693117	1,027,621.00	3.693117	91	50 - 150	0.0000	+/-0.50	
MPFDoA	1453800	4.128783	1,594,256.00	4.136817	91	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	257326.2	4.001467	294,893.00	4.001467	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	294620.5	3.921883	301,628.00	3.921883	98	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065115-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	423	0.8628989	0.799615		-15.3	30
Perfluorobutanesulfonic acid (PFBS)	A	444	373	0.9900012	0.8887524		-16.1	30
Perfluoropentanoic acid (PFPeA)	A	500	407	0.9353824	0.8334025		-18.5	30
Perfluorohexanoic acid (PFHxA)	A	500	422	0.86678	0.8120918		-15.6	30
11Cl-PF3OUdS (F53B Minor)	A	472	445	1.835659	1.753341		-5.6	30
9Cl-PF3ONS (F53B Major)	A	466	453	3.897292	3.781268		-2.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	415	1.602632	1.49088		-12.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	403	2.979159	0.1173783		-19.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	498	0.7665044	0.8855685		3.7	30
Perfluorodecanoic acid (PFDA)	A	500	417	0.929213	0.8634664		-16.6	30
Perfluorododecanoic acid (PFDoA)	A	500	427	0.9361562	0.8549957		-14.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	402	3.93233	3.474057		-9.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	534	0.4568315	0.5241968		12.1	30
N-EtFOSAA	A	500	406	0.9836556	0.8064959		-18.9	30
N-MeFOSAA	A	500	422	1.027301	0.9631958		-15.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	468	0.8542676	0.8965934		-6.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	461	1.009812	1.048253		-7.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	446	1.061084	1.109116		-4.8	30
Perfluorodecanesulfonic acid (PFDS)	A	482	462	0.6287667	0.6217433		-4.2	30
Perfluorooctanesulfonamide (FOSA)	A	500	400	0.8334166	0.7355786		-20.0	30
Perfluorononanesulfonic acid (PFNS)	A	481	519	0.319818	0.349107		7.9	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	473	0.3462983	0.3123852		-5.5	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	447	0.3044628	0.2947673		-10.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	418	0.9652933	0.9468037		-8.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	480	0.495495	0.4751388		-4.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	476	0.5879048	0.5586348		-4.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	447	1.004025	1.024852		-6.2	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	391	0.9760894	0.9024041		-16.8	30
Perfluoroundecanoic acid (PFUnA)	A	500	417	0.8528971	0.7808284		-16.6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	469	0.3237613	0.3070561		-6.1	30
Perfluoroheptanoic acid (PFHpA)	A	500	473	0.9139933	0.8670914		-5.4	30
Perfluorooctanoic acid (PFOA)	A	500	462	0.8653288	0.8024483		-7.7	30
Perfluorooctanesulfonic acid (PFOS)	A	464	458	0.9382121	0.9902376		-1.2	30
Perfluorononanoic acid (PFNA)	A	500	460	0.938444	0.8883012		-8.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065115-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2330	0.8628989	0.880375		-6.8	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2150	0.9900012	1.027367		-3.0	30
Perfluoropentanoic acid (PFPeA)	A	2500	2270	0.9353824	0.9277113		-9.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2270	0.86678	0.8744921		-9.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2370	1.835659	1.884347		0.6	30
9Cl-PF3ONS (F53B Major)	A	2330	2350	3.897292	3.962634		0.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2380	1.602632	1.711559		0.9	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2160	2.979159	0.1263891		-13.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2740	0.7665044	0.961566		14.0	30
Perfluorodecanoic acid (PFDA)	A	2500	2240	0.929213	0.9266368		-10.5	30
Perfluorododecanoic acid (PFDoA)	A	2500	2340	0.9361562	0.9366762		-6.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.93233	3.893405		0.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2410	0.4568315	0.4730519		1.1	30
N-EtFOSAA	A	2500	2350	0.9836556	0.9403483		-5.8	30
N-MeFOSAA	A	2500	2310	1.027301	1.054079		-7.7	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2260	0.8542676	0.8611868		-9.6	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2360	1.009812	1.066181		-5.5	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2390	0.6287667	0.6443868		-0.7	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2470	1.061084	1.213426		5.3	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2210	0.8334166	0.8124679		-11.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2460	0.319818	0.3315026		2.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3616047		8.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2440	0.3044628	0.3211985		-2.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2220	0.9652933	1.006942		-2.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2640	0.495495	0.5265675		5.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2620	0.5879048	0.6201523		5.0	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2470	1.004025	1.119909		3.7	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9862956		-9.0	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2550	0.8528971	0.9549437		2.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2530	0.3237613	0.332383		1.0	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2520	0.9139933	0.931435		0.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2500	0.8653288	0.8759402		-0.01	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2250	0.9382121	0.9700591		-3.2	30
Perfluorononanoic acid (PFNA)	A	2500	2570	0.938444	0.9950557		2.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-454 PFAS

S065115-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2330	0.8628989	0.8811921		-6.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2190	0.9900012	1.046099		-1.2	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9353824	0.9463008		-7.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2270	0.86678	0.8737316		-9.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2590	1.835659	2.060038		9.9	30
9Cl-PF3ONS (F53B Major)	A	2330	2450	3.897292	4.13158		5.1	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2440	1.602632	1.753723		3.4	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2070	2.979159	0.1215601		-17.0	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2380	0.7665044	0.8377837		-0.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2220	0.929213	0.921425		-11.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2420	0.9361562	0.9701233		-3.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2280	3.93233	3.990996		2.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2690	0.4568315	0.5288559		13.0	30
N-EtFOSAA	A	2500	2390	0.9836556	0.9538518		-4.5	30
N-MeFOSAA	A	2500	2270	1.027301	1.035474		-9.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2410	0.8542676	0.9187587		-3.5	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.009812	1.073788		-4.8	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2510	1.061084	1.236901		7.4	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2600	0.6287667	0.6991961		7.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2250	0.8334166	0.828345		-9.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2560	0.319818	0.345274		6.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2730	0.3462983	0.3651987		9.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2430	0.3044628	0.3199283		-2.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2290	0.9652933	1.03915		0.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2650	0.495495	0.5295835		6.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2610	0.5879048	0.6176661		4.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2540	1.004025	1.150603		6.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2250	0.9760894	1.038276		-4.2	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2480	0.8528971	0.9276148		-0.9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2580	0.3237613	0.3401267		3.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2430	0.9139933	0.8969026		-2.8	30
Perfluorooctanoic acid (PFOA)	A	2500	2490	0.8653288	0.8719887		-0.5	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2350	0.9382121	1.016093		1.4	30
Perfluorononanoic acid (PFNA)	A	2500	2440	0.938444	0.9463743		-2.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	430	0.8628989	0.812246		-14.0	30
Perfluorobutanesulfonic acid (PFBS)	A	444	380	0.9900012	0.9057642		-14.5	30
Perfluoropentanoic acid (PFPeA)	A	500	432	0.9353824	0.8845059		-13.5	30
Perfluorohexanoic acid (PFHxA)	A	500	447	0.86678	0.8597585		-10.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	483	1.835659	1.901037		2.3	30
9Cl-PF3ONS (F53B Major)	A	466	425	3.897292	3.547621		-8.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	429	1.602632	1.540415		-9.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	366	2.979159	0.1066423		-26.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	548	0.7665044	0.9752743		14.2	30
Perfluorodecanoic acid (PFDA)	A	500	409	0.929213	0.8479211		-18.1	30
Perfluorododecanoic acid (PFDoA)	A	500	414	0.9361562	0.8288102		-17.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	416	3.93233	3.595173		-6.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	387	0.4568315	0.380312		-18.7	30
N-EtFOSAA	A	500	419	0.9836556	0.8329432		-16.2	30
N-MeFOSAA	A	500	390	1.027301	0.8896324		-22.1	30
Perfluorotetradecanoic acid (PFTA)	A	500	459	0.8542676	0.8795762		-8.2	30
Perfluorotridecanoic acid (PFTrDA)	A	500	390	1.009812	0.8874929		-21.9	30
Perfluorodecanesulfonic acid (PFDS)	A	482	436	0.6287667	0.5875307		-9.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	428	1.061084	1.064296		-8.6	30
Perfluorooctanesulfonamide (FOSA)	A	500	430	0.8334166	0.7903497		-14.0	30
Perfluorononanesulfonic acid (PFNS)	A	481	420	0.319818	0.2827318		-12.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	533	0.3462983	0.3522219		6.6	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	469	0.3044628	0.3092859		-6.2	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	426	0.9652933	0.9640774		-6.8	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	470	0.495495	0.4660075		-5.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	457	0.5879048	0.5364524		-8.6	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	423	1.004025	0.9719038		-11.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	365	0.9760894	0.8429797		-22.3	30
Perfluoroundecanoic acid (PFUnA)	A	500	435	0.8528971	0.8148841		-13.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	480	0.3237613	0.3138713		-4.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	471	0.9139933	0.8638247		-5.8	30
Perfluorooctanoic acid (PFOA)	A	500	475	0.8653288	0.8251183		-5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	464	399	0.9382121	0.8624749		-14.0	30
Perfluorononanoic acid (PFNA)	A	500	446	0.938444	0.8610913		-10.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2380	0.8628989	0.8995787		-4.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2200	0.9900012	1.047284		-1.1	30
Perfluoropentanoic acid (PFPeA)	A	2500	2390	0.9353824	0.9759035		-4.6	30
Perfluorohexanoic acid (PFHxA)	A	2500	2380	0.86678	0.917677		-4.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2420	1.835659	1.92478		2.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2400	3.897292	4.05115		3.0	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2310	1.602632	1.663269		-1.9	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1960	2.979159	0.1146334		-21.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2770	0.7665044	0.9750795		15.6	30
Perfluorodecanoic acid (PFDA)	A	2500	2360	0.929213	0.9788841		-5.5	30
Perfluorododecanoic acid (PFDoA)	A	2500	2320	0.9361562	0.9275358		-7.3	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2270	3.93233	3.969859		2.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2390	0.4568315	0.4700091		0.4	30
N-EtFOSAA	A	2500	2280	0.9836556	0.9100714		-8.9	30
N-MeFOSAA	A	2500	2420	1.027301	1.106819		-3.0	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2340	0.8542676	0.8906106		-6.5	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.009812	1.075504		-4.6	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2410	1.061084	1.18768		3.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2420	0.6287667	0.6530737		0.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2470	0.8334166	0.9066466		-1.4	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2500	0.319818	0.3373986		4.3	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2760	0.3462983	0.3693868		10.3	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2520	0.3044628	0.3318331		0.7	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.031588		-0.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2640	0.495495	0.5265402		5.5	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2620	0.5879048	0.6189643		4.8	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2820	1.004025	1.275926		18.4	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2270	0.9760894	1.047715		-3.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8528971	0.8702713		-7.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2710	0.3237613	0.3565569		8.3	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2580	0.9139933	0.9528248		3.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2580	0.8653288	0.9045224		3.2	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2130	0.9382121	0.9216298		-8.1	30
Perfluorononanoic acid (PFNA)	A	2500	2450	0.938444	0.9481167		-2.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2360	0.8628989	0.8930858		-5.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2190	0.9900012	1.043439		-1.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2370	0.9353824	0.9702235		-5.1	30
Perfluorohexanoic acid (PFHxA)	A	2500	2350	0.86678	0.9052124		-6.0	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2640	1.835659	2.095784		11.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2650	3.897292	4.473237		13.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2260	1.602632	1.624912		-4.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2020	2.979159	0.1183483		-19.2	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2720	0.7665044	0.9554875		13.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2100	0.929213	0.8704248		-16.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2520	0.9361562	1.010519		1.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2280	3.93233	3.991677		2.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2660	0.4568315	0.5221496		11.6	30
N-EtFOSAA	A	2500	2500	0.9836556	0.9998938		0.08	30
N-MeFOSAA	A	2500	2140	1.027301	0.9761852		-14.5	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2490	0.8542676	0.948065		-0.4	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2520	1.009812	1.135268		0.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2610	0.6287667	0.7023388		8.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2610	1.061084	1.28163		11.4	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2500	0.8334166	0.9196404		0.05	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2550	0.319818	0.3435179		6.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2470	0.3462983	0.3304193		-1.2	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2500	0.3044628	0.3293527		-0.08	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2210	0.9652933	1.000475		-3.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2650	0.495495	0.5297108		6.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2660	0.5879048	0.6296098		6.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2550	1.004025	1.158248		7.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2270	0.9760894	1.047941		-3.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2280	0.8528971	0.8541395		-8.8	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2790	0.3237613	0.3680313		11.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2590	0.9139933	0.9576801		3.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2580	0.8653288	0.9048242		3.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2420	0.9382121	1.046347		4.4	30
Perfluorononanoic acid (PFNA)	A	2500	2460	0.938444	0.9553772		-1.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2350	0.8628989	0.8860905		-6.2	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.019276		-3.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2330	0.9353824	0.9547375		-6.7	30
Perfluorohexanoic acid (PFHxA)	A	2500	2350	0.86678	0.903339		-6.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2290	1.835659	1.818587		-2.9	30
9Cl-PF3ONS (F53B Major)	A	2330	2320	3.897292	3.918012		-0.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2230	1.602632	1.600545		-5.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2060	2.979159	0.1205975		-17.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2590	0.7665044	0.911715		8.0	30
Perfluorodecanoic acid (PFDA)	A	2500	2280	0.929213	0.9451302		-8.8	30
Perfluorododecanoic acid (PFDoA)	A	2500	2500	0.9361562	0.9999374		-0.06	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2260	3.93233	3.950489		1.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2670	0.4568315	0.52528		12.2	30
N-EtFOSAA	A	2500	2310	0.9836556	0.9238697		-7.5	30
N-MeFOSAA	A	2500	2210	1.027301	1.010166		-11.5	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2350	0.8542676	0.8951266		-6.0	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2400	1.009812	1.083532		-3.9	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2470	0.6287667	0.6649487		2.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2400	1.061084	1.183794		2.7	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2340	0.8334166	0.8600857		-6.4	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.319818	0.3345653		3.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2700	0.3462983	0.3611759		7.9	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2520	0.3044628	0.3322971		0.8	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2260	0.9652933	1.026943		-0.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2610	0.495495	0.5202772		4.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2640	0.5879048	0.6236201		5.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2630	1.004025	1.190113		10.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2320	0.9760894	1.068538		-1.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2670	0.8528971	1.001401		6.9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2740	0.3237613	0.3604289		9.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2520	0.9139933	0.928855		0.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2550	0.8653288	0.8922683		1.8	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2280	0.9382121	0.9834333		-1.9	30
Perfluorononanoic acid (PFNA)	A	2500	2510	0.938444	0.9722193		0.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S065193-CCV5

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2350	0.8628989	0.8883123		-5.9	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2230	0.9900012	1.064607		0.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2340	0.9353824	0.9563209		-6.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2320	0.86678	0.8914917		-7.4	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2450	1.835659	1.945374		3.8	30
9Cl-PF3ONS (F53B Major)	A	2330	2340	3.897292	3.954361		0.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2360	1.602632	1.696537		0.02	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1920	2.979159	0.1121971		-23.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	3130	0.7665044	1.099453		30.6	30 *
Perfluorodecanoic acid (PFDA)	A	2500	2160	0.929213	0.894415		-13.6	30
Perfluorododecanoic acid (PFDoA)	A	2500	2350	0.9361562	0.9402406		-6.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2260	3.93233	3.952277		1.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2630	0.4568315	0.5165034		10.4	30
N-EtFOSAA	A	2500	2370	0.9836556	0.9454209		-5.3	30
N-MeFOSAA	A	2500	2280	1.027301	1.04137		-8.8	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2430	0.8542676	0.9234345		-3.0	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2480	1.009812	1.119939		-0.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2440	0.6287667	0.6575115		1.3	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2600	1.061084	1.276981		10.9	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2360	0.8334166	0.8681399		-5.5	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2400	0.319818	0.3233953		-0.06	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2770	0.3462983	0.3716528		11.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2420	0.3044628	0.3192537		-3.1	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2270	0.9652933	1.03158		-0.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2670	0.495495	0.5332471		6.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2640	0.5879048	0.6247573		5.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2520	1.004025	1.14429		6.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2290	0.9760894	1.058119		-2.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2540	0.8528971	0.9504971		1.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2720	0.3237613	0.3575407		8.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2530	0.9139933	0.9357188		1.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2670	0.8653288	0.9372367		6.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2260	0.9382121	0.9765217		-2.6	30
Perfluorononanoic acid (PFNA)	A	2500	2340	0.938444	0.9075274		-6.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065289-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	449	0.8628989	0.848643		-10.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	424	0.9900012	1.012017		-4.4	30
Perfluoropentanoic acid (PFPeA)	A	500	432	0.9353824	0.8837209		-13.6	30
Perfluorohexanoic acid (PFHxA)	A	500	438	0.86678	0.8432275		-12.4	30
11Cl-PF3OUdS (F53B Minor)	A	472	448	1.835659	1.763132		-5.1	30
9Cl-PF3ONS (F53B Major)	A	466	509	3.897292	4.256666		9.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	428	1.602632	1.537735		-9.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	501	2.979159	0.1459983		0.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	455	0.7665044	0.8104586		-5.1	30
Perfluorodecanoic acid (PFDA)	A	500	436	0.929213	0.9038259		-12.7	30
Perfluorododecanoic acid (PFDoA)	A	500	423	0.9361562	0.8459062		-15.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	429	3.93233	3.7137		-3.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	525	0.4568315	0.5157542		10.3	30
N-EtFOSAA	A	500	414	0.9836556	0.822905		-17.2	30
N-MeFOSAA	A	500	444	1.027301	1.01487		-11.1	30
Perfluorotetradecanoic acid (PFTA)	A	500	483	0.8542676	0.926149		-3.3	30
Perfluorotridecanoic acid (PFTrDA)	A	500	479	1.009812	1.088363		-4.2	30
Perfluorodecanesulfonic acid (PFDS)	A	482	463	0.6287667	0.6234222		-4.0	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	448	1.061084	1.115432		-4.2	30
Perfluorooctanesulfonamide (FOSA)	A	500	457	0.8334166	0.8407193		-8.5	30
Perfluorononanesulfonic acid (PFNS)	A	481	444	0.319818	0.2987955		-7.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	493	0.3462983	0.3256941		-1.4	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	438	0.3044628	0.2885749		-12.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	423	0.9652933	0.9566208		-7.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	490	0.495495	0.4850967		-2.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	485	0.5879048	0.5688902		-3.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	451	1.004025	1.034616		-5.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	416	0.9760894	0.9592807		-11.5	30
Perfluoroundecanoic acid (PFUnA)	A	500	435	0.8528971	0.8151328		-13.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	475	0.3237613	0.3108248		-5.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	495	0.9139933	0.9084594		-0.9	30
Perfluorooctanoic acid (PFOA)	A	500	526	0.8653288	0.9136823		5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	464	450	0.9382121	0.9715991		-3.1	30
Perfluorononanoic acid (PFNA)	A	500	473	0.938444	0.9137429		-5.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065289-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2290	0.8628989	0.863806		-8.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2140	0.9900012	1.019355		-3.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9388056		-8.2	30
Perfluorohexanoic acid (PFHxA)	A	2500	2280	0.86678	0.8783137		-8.8	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2530	1.835659	2.012635		7.4	30
9Cl-PF3ONS (F53B Major)	A	2330	2410	3.897292	4.074062		3.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2150	1.602632	1.548259		-8.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2340	2.979159	0.1374249		-6.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2540	0.7665044	0.8945817		5.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2310	0.929213	0.9580796		-7.5	30
Perfluorododecanoic acid (PFDoA)	A	2500	2360	0.9361562	0.9462964		-5.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2190	3.93233	3.823468		-1.5	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2540	0.4568315	0.4985244		6.5	30
N-EtFOSAA	A	2500	2390	0.9836556	0.9566018		-4.2	30
N-MeFOSAA	A	2500	2390	1.027301	1.090917		-4.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2340	0.8542676	0.8924961		-6.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2250	1.009812	1.01365		-10.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2350	1.061084	1.15856		0.5	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2270	0.6287667	0.6114191		-5.8	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2230	0.8334166	0.8180547		-11.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2590	0.319818	0.348836		7.8	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2530	0.3462983	0.3378905		1.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2380	0.3044628	0.3142952		-4.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2180	0.9652933	0.9911336		-4.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.5045233		1.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2500	0.5879048	0.5914126		0.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2260	1.004025	1.025661		-5.1	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2200	0.9760894	1.014011		-6.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2390	0.8528971	0.8963776		-4.3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2620	0.3237613	0.3442339		4.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2390	0.9139933	0.8831702		-4.3	30
Perfluorooctanoic acid (PFOA)	A	2500	2500	0.8653288	0.874566		-0.2	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2260	0.9382121	0.9755663		-2.7	30
Perfluorononanoic acid (PFNA)	A	2500	2420	0.938444	0.9364634		-3.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065289-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2270	0.8628989	0.856434		-9.3	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.013431		-4.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9362058		-8.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2220	0.86678	0.8548739		-11.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2420	1.835659	1.919291		2.5	30
9Cl-PF3ONS (F53B Major)	A	2330	2370	3.897292	4.004019		1.9	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2200	1.602632	1.582027		-6.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2600	2.979159	0.1530011		4.2	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2690	0.7665044	0.9467494		12.2	30
Perfluorodecanoic acid (PFDA)	A	2500	2210	0.929213	0.9150245		-11.7	30
Perfluorododecanoic acid (PFDoA)	A	2500	2440	0.9361562	0.976304		-2.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2220	3.93233	3.892119		0.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2390	0.4568315	0.4702348		0.5	30
N-EtFOSAA	A	2500	2320	0.9836556	0.927518		-7.1	30
N-MeFOSAA	A	2500	2290	1.027301	1.045711		-8.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2220	0.8542676	0.8457152		-11.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2310	1.009812	1.044484		-7.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2360	1.061084	1.160987		0.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2640	0.6287667	0.710088		9.4	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2300	0.8334166	0.8452991		-8.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2550	0.319818	0.3434393		6.1	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2620	0.3462983	0.350322		4.7	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2270	0.3044628	0.2998627		-9.0	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2180	0.9652933	0.9886059		-4.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.495495	0.505185		1.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2510	0.5879048	0.592379		0.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2400	1.004025	1.089214		0.8	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2140	0.9760894	0.9880537		-8.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2300	0.8528971	0.8615246		-8.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2530	0.3237613	0.3325934		1.1	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2420	0.9139933	0.8913065		-3.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2430	0.8653288	0.8499918		-2.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9382121	0.9488362		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2370	0.938444	0.9197828		-5.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S065289-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8628989	0.8625491		-8.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2120	0.9900012	1.00905		-4.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2290	0.9353824	0.9379711		-8.3	30
Perfluorohexanoic acid (PFHxA)	A	2500	2210	0.86678	0.8520138		-11.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2400	1.835659	1.904212		1.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2380	3.897292	4.013		2.1	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2140	1.602632	1.53532		-9.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2780	2.979159	0.1635565		11.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2590	0.7665044	0.9125281		8.1	30
Perfluorodecanoic acid (PFDA)	A	2500	2110	0.929213	0.8723579		-15.8	30
Perfluorododecanoic acid (PFDoA)	A	2500	2230	0.9361562	0.8942915		-10.6	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2190	3.93233	3.834224		-1.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2430	0.4568315	0.4770988		1.9	30
N-EtFOSAA	A	2500	2300	0.9836556	0.9196938		-7.9	30
N-MeFOSAA	A	2500	2090	1.027301	0.9521895		-16.6	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2270	0.8542676	0.8635308		-9.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2250	1.009812	1.01419		-10.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2360	0.6287667	0.6358177		-2.0	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2350	1.061084	1.159187		0.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2240	0.8334166	0.8219908		-10.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2340	0.319818	0.3153515		-2.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2560	0.3462983	0.3428804		2.5	30
Perfluoro-1-butananesulfonamide (FBSA)	A	2500	2270	0.3044628	0.2995956		-9.1	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2220	0.9652933	1.009149		-2.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2550	0.495495	0.5080059		1.9	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2500	0.5879048	0.5896747		-0.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2330	1.004025	1.055994		-2.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2180	0.9760894	1.008107		-7.0	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2240	0.8528971	0.8376818		-10.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2540	0.3237613	0.3341734		1.6	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2420	0.9139933	0.8912517		-3.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2460	0.8653288	0.8634762		-1.4	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2230	0.9382121	0.9624081		-4.0	30
Perfluorononanoic acid (PFNA)	A	2500	2420	0.938444	0.9379926		-3.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SOP-466 PFAS in Soil	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

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Minneapolis, MN 55414

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/
Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Name: Princeton Soil Sampling - 22 Mountain
Project Location: Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps/Michael Scherer
Pace Analytical Quote Name/Number:
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

Requested Turnaround Time:
 7-Day
 10-Day
 PFAS 10-Day (std)
 3-Day
 4-Day
 1-Day
 2-Day
 Field Filtered
 Lab to Filter
 Field Filtered
 Lab to Filter
Format: PDF EXCEL
Other: SOXHLET
CLP Like Data Pkg Required:
Email To: mjscherer@tighebond.com
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS (isotope dilution method)
1	22MTN S-1 (6-12)	10/27/21	08:00	GRAB	S	U	1					X
2	22MTN S-1 (12-24)		08:00				/					X
3	22MTN S-3 (6-12)		08:30				/					X
4	22MTN S-4 (6-12)		08:50				/					X
5	22MTN S-4 (12-18)		08:50				/					X
6	22MTN S-5 (6-12)		09:00				/					X
7	22MTN S-5 (12-18)		09:00				/					X
8	22MTN S-6 (6-12)		09:30				/					X
9	22MTN S-7 (6-12)		10:00				/					X
10	22MTN S-8 (6-12)		10:30				/					X
11	22MTN S-8 (12-18)		10:30				/					X
12	22MTN S-10 (0-6)		11:00				/					X
13	22MTN S-11 (0-12)		11:30				/					X

Client Comments:

Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 12:00
 Received by: (signature) *[Signature]* Date/Time: 10/29/21 18:15
 Relinquished by: (signature) *[Signature]* Date/Time: 2:03 PM
 Received by: (signature) *[Signature]* Date/Time: 10/29/21 10:49 AM
 Relinquished by: (signature) *[Signature]* Date/Time:
 Received by: (signature) *[Signature]* Date/Time:
 Relinquished by: (signature) *[Signature]* Date/Time:
 Received by: (signature) *[Signature]* Date/Time:
 Relinquished by: (signature) *[Signature]* Date/Time:
 Comments:

Special Requirements:

MA RCP Required MA State DW Required
 MLP Certification Form Required CT RCP Required
 RCP Certification Form Required

Project Entity: Government Municipality WRTA
 Federal City 21 J School MBTA Brownfield

Other: Chromatogram
 AIHA-LAP, LLC

NEIAC and AIHA-LAP, LLC Accredited:

Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.



Phone: 612-607-6400
Fax: 612-607-6344

20190710

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
 Address: 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Project Location: Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Arps/Michael Scherer
 Invoice Recipient: Tighe & Bond
 Sampled By: M Scherer

Doc # 381 Rev 4_01/08/2020

1800 Elm Street SE
Minneapolis, MN 55414

CHAIN OF CUSTODY RECORD

Requested Turnaround Time:
 7-Day
 10-Day
 PFAS 10 Day (std)
 3-Day
 4-Day
 Due Date:
 Field Filtered
 Lab to Filter

Requested Analysis:
 Field Filtered
 Lab to Filter
 Field Filtered
 Lab to Filter

Format: PDF EXCEL
 Other: SOXHLET
 CLP Like Data Pkg Required:
 Email To: mjscherer@tighebond.com
 Fax To #:

PCB ONLY
 NON SOXHLET

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
14	22MTN S-12 (0-12)	12:00	10/27/21	GRAB	S	U	1				
15	22MTN S-13 (0-12)	12:30									
16	22MTN S-13 (12-24)	12:30									
17	TRIP BLANK										
18	FIELD BLANK	08:00									
19	EQUIPMENT BLANK	12:00									
20	RINSATE	08:00									

Relinquished by: (signature)
 Received by: (signature)
 Relinquished by: (signature)
 Received by: (signature)

Date/Time: 10/27/21 12:00
 Date/Time: 10/27/21 12:00
 Date/Time: 2035
 Date/Time: 10/27/21 20:35
 Date/Time:

Received by: (signature)
 Relinquished by: (signature)

Date/Time:
 Date/Time:
 Date/Time:

Project Entity:
 Government
 Federal
 City
 Municipality
 21 J
 Brownfield
 MWRA
 School
 MBTA
 WRTA
 Chromatogram
 AIHA-LAP, LLC
 Other:

ANALYSIS REQUESTED

Analysis Requested	Requested
PFAS (isotope dilution method)	X
	X
	X
	X
	X
	X
	X

Client Comments:

Special Requirements:
 MA MCP Required
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required
 PWSID #

Use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Page 2 of 2

Preservation Code:
 Cooler Use Only
 Total Number Of:
 VIALS
 GLASS
 PLASTIC
 BACTERIA
 ENCORE
 Glassware in the fridge? Y/N
 Glassware in freezer? Y/N
 Prepackaged Cooler? Y/N
 *Pace Analytical is not responsible for missing samples from prepacked coolers
 Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)
 Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B
 Received By MA Date 10/29/11 Time 2035
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? MA Were Samples Tampled with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? RT On COC? RT
 Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

[Empty box for comments]

December 20, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

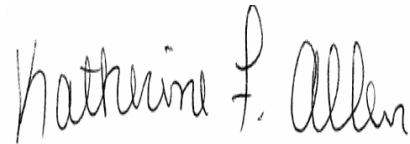
Project Location: 30 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 21K1387

Enclosed are results of analyses for samples as received by the laboratory on November 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 12/20/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21K1387

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 30 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30MTN S-3 (12-24)	21K1387-01	Soil		SM 2540G SOP-454 PFAS	
30MTN S-4 (6-12)	21K1387-02	Soil		SM 2540G SOP-454 PFAS	
30MTN S-5 (6-12)	21K1387-03	Soil		SM 2540G SOP-454 PFAS	
30MTN S-5 (12-24)	21K1387-04	Soil		SM 2540G SOP-454 PFAS	
30MTN S-8 (0-12)	21K1387-05	Soil		SM 2540G SOP-454 PFAS	
30MTN S-9 (0-12)	21K1387-06	Soil		SM 2540G SOP-454 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-454 PFAS

Qualifications:

MS-22 Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluoro-1-hexanesulfonamide (FHxSA), Perfluorobutanesulfonic acid (PFBS), Perfluorohexanesulfonic acid (PFHxS), Perfluorooctanesulfonic acid (PFOS), Perfluorotridecanoic acid (PFTrDA)
B295868-MS1, 21K1387-05[30MTN S-8 (0-12)], B295868-MSD1

PF-18 Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.

Analyte & Samples(s) Qualified:

M2PFFTA, M8FOSA, MPFD_oA
21K1387-05[30MTN S-8 (0-12)], B295868-MS1, B295868-MSD1

S-29 Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

d3-NMeFOSAA, d5-NEtFOSAA, M2-4:2FTS, M2-6:2FTS, M2-8:2FTS, M2PFFTA, M3HFPO-DA, M7PFUnA, M8FOSA, MPFD_oA
21K1387-02[30MTN S-4 (6-12)], 21K1387-01[30MTN S-3 (12-24)], 21K1387-03[30MTN S-5 (6-12)], 21K1387-04[30MTN S-5 (12-24)], 21K1387-05[30MTN S-8 (0-12)],
21K1387-06[30MTN S-9 (0-12)], B296966-BS1, B296966-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski
Laboratory Director

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-3 (12-24)

Sampled: 10/28/2021 08:30

Sample ID: 21K1387-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.2		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	DRL

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-3 (12-24)

Sampled: 10/28/2021 08:30

Sample ID: 21K1387-01

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	4.9	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorobutanesulfonic acid (PFBS)	5.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoropentanoic acid (PFPeA)	5.9	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorohexanoic acid (PFHxA)	39	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoroheptanesulfonic acid (PFHpS)	41	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	3.6	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoro-1-butanesulfonamide (FBSA)	7.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorohexanesulfonic acid (PFHxS)	230	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:24	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoropentanesulfonic acid (PFPeS)	8.1	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluoroheptanoic acid (PFHpA)	16	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorooctanoic acid (PFOA)	47	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC
Perfluorooctanesulfonic acid (PFOS)	330	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:24	BLH
Perfluorononanoic acid (PFNA)	2.7	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:49	JFC

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-4 (6-12)

Sampled: 10/28/2021 09:00

Sample ID: 21K1387-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	65.4		% Wt	1		SM 2540G	11/11/21	11/21/21 9:08	DRL

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-4 (6-12)

Sampled: 10/28/2021 09:00

Sample ID: 21K1387-02

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.9	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorobutanesulfonic acid (PFBS)	5.5	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoropentanoic acid (PFPeA)	7.6	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorohexanoic acid (PFHxA)	33	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoroheptanesulfonic acid (PFHpS)	44	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorononanesulfonic acid (PFNS)	11	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	8.7	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoro-1-butanesulfonamide (FBSA)	4.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorohexanesulfonic acid (PFHxS)	250	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:31	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoropentanesulfonic acid (PFPeS)	7.4	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluoroheptanoic acid (PFHpA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorooctanoic acid (PFOA)	36	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC
Perfluorooctanesulfonic acid (PFOS)	1800	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:31	BLH
Perfluorononanoic acid (PFNA)	4.1	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 19:56	JFC

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-5 (6-12)

Sampled: 10/28/2021 09:30

Sample ID: 21K1387-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	DRL

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-5 (6-12)

Sampled: 10/28/2021 09:30

Sample ID: 21K1387-03

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoropentanoic acid (PFPeA)	9.3	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorohexanoic acid (PFHxA)	24	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoroheptanesulfonic acid (PFHpS)	11	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorohexanesulfonic acid (PFHxS)	41	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluoroheptanoic acid (PFHpA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorooctanoic acid (PFOA)	33	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC
Perfluorooctanesulfonic acid (PFOS)	290	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:38	BLH
Perfluorononanoic acid (PFNA)	11	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:03	JFC

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-5 (12-24)

Sampled: 10/28/2021 09:30

Sample ID: 21K1387-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	71.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:08	DRL

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-5 (12-24)

Sampled: 10/28/2021 09:30

Sample ID: 21K1387-04

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	2.5	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorobutanesulfonic acid (PFBS)	25	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorohexanoic acid (PFHxA)	3.4	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoroheptanesulfonic acid (PFHpS)	3.2	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorohexanesulfonic acid (PFHxS)	49	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoropentanesulfonic acid (PFPeS)	20	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluoroheptanoic acid (PFHpA)	2.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorooctanoic acid (PFOA)	8.3	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorooctanesulfonic acid (PFOS)	31	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:10	JFC

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-8 (0-12)

Sampled: 10/28/2021 10:30

Sample ID: 21K1387-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.8		% Wt	1		SM 2540G	11/11/21	11/12/21 9:09	DRL

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-8 (0-12)

Sampled: 10/28/2021 10:30

Sample ID: 21K1387-05

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorohexanesulfonic acid (PFHxS)	22	2.0	ng/L	1	MS-22	SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorooctanoic acid (PFOA)	2.5	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorooctanesulfonic acid (PFOS)	110	2.0	ng/L	1	MS-22	SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:18	JFC

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-9 (0-12)

Sampled: 10/28/2021 11:00

Sample ID: 21K1387-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.5		% Wt	1		SM 2540G	11/11/21	11/12/21 9:09	DRL

Project Location: 30 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1387

Date Received: 11/19/2021

Field Sample #: 30MTN S-9 (0-12)

Sampled: 10/28/2021 11:00

Sample ID: 21K1387-06

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	4.9	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorobutanesulfonic acid (PFBS)	6.7	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoropentanoic acid (PFPeA)	4.6	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorohexanoic acid (PFHxA)	36	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoroheptanesulfonic acid (PFHpS)	31	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorononanesulfonic acid (PFNS)	2.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	5.9	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoro-1-butanesulfonamide (FBSA)	5.2	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorohexanesulfonic acid (PFHxS)	370	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:45	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoropentanesulfonic acid (PFPeS)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluoroheptanoic acid (PFHpA)	16	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorooctanoic acid (PFOA)	36	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC
Perfluorooctanesulfonic acid (PFOS)	400	50	ng/L	1		SOP-454 PFAS	12/15/21	12/17/21 16:45	BLH
Perfluorononanoic acid (PFNA)	2.1	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:25	JFC

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21K1387-01 [30MTN S-3 (12-24)]	B294465	11/11/21
21K1387-02 [30MTN S-4 (6-12)]	B294465	11/11/21
21K1387-03 [30MTN S-5 (6-12)]	B294465	11/11/21
21K1387-04 [30MTN S-5 (12-24)]	B294465	11/11/21
21K1387-05 [30MTN S-8 (0-12)]	B294465	11/11/21
21K1387-06 [30MTN S-9 (0-12)]	B294465	11/11/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Leachates were extracted on 11/22/2021 per SW-846 1311 in Batch B295327

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21K1387-01 [30MTN S-3 (12-24)]	B295868	247	1.00	12/06/21
21K1387-02 [30MTN S-4 (6-12)]	B295868	258	1.00	12/06/21
21K1387-03 [30MTN S-5 (6-12)]	B295868	257	1.00	12/06/21
21K1387-04 [30MTN S-5 (12-24)]	B295868	254	1.00	12/06/21
21K1387-05 [30MTN S-8 (0-12)]	B295868	261	1.00	12/06/21
21K1387-06 [30MTN S-9 (0-12)]	B295868	251	1.00	12/06/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Leachates were extracted on 11/22/2021 per SW-846 1311 in Batch B295327

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21K1387-01RE1 [30MTN S-3 (12-24)]	B296966	10.0	1.00	12/15/21
21K1387-02RE1 [30MTN S-4 (6-12)]	B296966	10.0	1.00	12/15/21
21K1387-03RE1 [30MTN S-5 (6-12)]	B296966	10.0	1.00	12/15/21
21K1387-06RE1 [30MTN S-9 (0-12)]	B296966	10.0	1.00	12/15/21

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295868 - SOP 454-PFAAS

Blank (B295868-BLK1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L
N-EtFOSAA	ND	2.0	ng/L
N-MeFOSAA	ND	2.0	ng/L
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.0	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L

LCS (B295868-BS1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	9.85	2.0	ng/L	9.26	106	73-129
Perfluorobutanesulfonic acid (PFBS)	7.31	2.0	ng/L	8.20	89.2	72-130
Perfluoropentanoic acid (PFPeA)	9.27	2.0	ng/L	9.26	100	72-129
Perfluorohexanoic acid (PFHxA)	9.32	2.0	ng/L	9.26	101	72-129
11Cl-PF3OUdS (F53B Minor)	7.72	2.0	ng/L	8.73	88.5	50-150
9Cl-PF3ONS (F53B Major)	9.12	2.0	ng/L	8.63	106	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.12	2.0	ng/L	8.73	93.1	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.64	2.0	ng/L	9.26	71.6	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.03	2.0	ng/L	8.89	102	67-138
Perfluorodecanoic acid (PFDA)	10.5	2.0	ng/L	9.26	113	71-129
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	9.26	90.1	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.67	2.0	ng/L	8.24	105	50-150

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295868 - SOP 454-PFAAS

LCS (B295868-BS1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluoroheptanesulfonic acid (PFHpS)	8.59	2.0	ng/L	8.85		97.1	69-134			
N-EtFOSAA	10.9	2.0	ng/L	9.26		118	61-135			
N-MeFOSAA	9.17	2.0	ng/L	9.26		99.1	65-136			
Perfluorotetradecanoic acid (PFTA)	9.40	2.0	ng/L	9.26		101	71-132			
Perfluorotridecanoic acid (PFTTrDA)	9.97	2.0	ng/L	9.26		108	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.88	2.0	ng/L	8.66		103	63-143			
Perfluorodecanesulfonic acid (PFDS)	6.16	2.0	ng/L	8.94		68.9	53-142			
Perfluorooctanesulfonamide (FOSA)	9.85	2.0	ng/L	9.26		106	67-137			
Perfluorononanesulfonic acid (PFNS)	8.97	2.0	ng/L	8.89		101	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.07	2.0	ng/L	9.26		87.2	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	7.48	2.0	ng/L	9.26		80.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	9.04	2.0	ng/L	8.48		107	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.05	2.0	ng/L	9.26		97.7	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	9.07	2.0	ng/L	9.26		97.9	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.32	2.0	ng/L	8.80		106	64-140			
Perfluoropetanesulfonic acid (PFPeS)	9.43	2.0	ng/L	8.71		108	71-127			
Perfluoroundecanoic acid (PFUnA)	9.49	2.0	ng/L	9.26		102	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.91	2.0	ng/L	9.26		96.2	50-150			
Perfluoroheptanoic acid (PFHpA)	9.38	2.0	ng/L	9.26		101	72-130			
Perfluorooctanoic acid (PFOA)	9.44	2.0	ng/L	9.26		102	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.44	2.0	ng/L	8.57		86.8	65-140			
Perfluorononanoic acid (PFNA)	9.76	2.0	ng/L	9.26		105	69-130			

Matrix Spike (B295868-MS1)

Source: 21K1387-05

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	10.3	2.0	ng/L	10.0	ND	103	73-129			
Perfluorobutanesulfonic acid (PFBS)	7.97	2.0	ng/L	8.88	0.813	80.6	72-130			MS-22
Perfluoropentanoic acid (PFPeA)	9.52	2.0	ng/L	10.0	0.559	89.4	72-129			
Perfluorohexanoic acid (PFHxA)	10.3	2.0	ng/L	10.0	1.24	90.1	72-129			
11Cl-PF3OUdS (F53B Minor)	5.68	2.0	ng/L	9.45	ND	60.1	50-150			
9Cl-PF3ONS (F53B Major)	9.18	2.0	ng/L	9.35	ND	98.2	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.07	2.0	ng/L	9.45	ND	85.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.85	2.0	ng/L	10.0	ND	68.2	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	8.81	2.0	ng/L	9.63	ND	91.5	67-138			
Perfluorodecanoic acid (PFDA)	10.7	2.0	ng/L	10.0	0.875	98.4	71-129			
Perfluorododecanoic acid (PFDoA)	8.07	2.0	ng/L	10.0	ND	80.5	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	8.55	2.0	ng/L	8.93	ND	95.8	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	10.7	2.0	ng/L	9.58	1.41	96.8	69-134			
N-EtFOSAA	10.7	2.0	ng/L	10.0	ND	106	61-135			
N-MeFOSAA	9.41	2.0	ng/L	10.0	ND	93.9	65-136			
Perfluorotetradecanoic acid (PFTA)	9.21	2.0	ng/L	10.0	ND	91.8	71-132			
Perfluorotridecanoic acid (PFTTrDA)	13.1	2.0	ng/L	10.0	ND	130	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.58	2.0	ng/L	9.38	ND	91.5	63-143			
Perfluorodecanesulfonic acid (PFDS)	5.29	2.0	ng/L	9.68	ND	54.6	53-142			
Perfluorooctanesulfonamide (FOSA)	10.5	2.0	ng/L	10.0	ND	104	67-137			
Perfluorononanesulfonic acid (PFNS)	9.06	2.0	ng/L	9.63	1.41	79.5	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	6.19	2.0	ng/L	10.0	1.57	46.0	* 50-150			MS-22
Perfluoro-1-butanefulfonamide (FBSA)	8.03	2.0	ng/L	10.0	0.928	70.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	27.6	2.0	ng/L	9.18	21.8	63.5	* 68-131			MS-22
Perfluoro-4-oxapentanoic acid (PFMPA)	9.47	2.0	ng/L	10.0	ND	94.4	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	8.89	2.0	ng/L	10.0	ND	88.6	50-150			

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B295868 - SOP 454-PFAAS										
Matrix Spike (B295868-MS1)										
			Source: 21K1387-05		Prepared: 12/06/21 Analyzed: 12/10/21					
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.69	2.0	ng/L	9.53	ND	91.2	64-140			
Perfluoropetanesulfonic acid (PFPeS)	9.80	2.0	ng/L	9.43	1.02	93.1	71-127			
Perfluoroundecanoic acid (PFUnA)	9.96	2.0	ng/L	10.0	ND	99.3	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.80	2.0	ng/L	10.0	ND	87.8	50-150			
Perfluoroheptanoic acid (PFHpA)	9.85	2.0	ng/L	10.0	0.468	93.6	72-130			
Perfluorooctanoic acid (PFOA)	11.4	2.0	ng/L	10.0	2.46	89.4	71-133			
Perfluorooctanesulfonic acid (PFOS)	107	2.0	ng/L	9.28	114	-67.4 *	65-140			MS-22
Perfluorononanoic acid (PFNA)	10.6	2.0	ng/L	10.0	0.636	99.6	69-130			
Matrix Spike Dup (B295868-MSD1)										
			Source: 21K1387-05		Prepared: 12/06/21 Analyzed: 12/10/21					
Perfluorobutanoic acid (PFBA)	11.2	2.0	ng/L	9.92	ND	113	73-129	8.10	30	
Perfluorobutanesulfonic acid (PFBS)	8.56	2.0	ng/L	8.78	0.813	88.3	72-130	7.15	30	
Perfluoropentanoic acid (PFPeA)	10.3	2.0	ng/L	9.92	0.559	98.7	72-129	8.24	30	
Perfluorohexanoic acid (PFHxA)	11.1	2.0	ng/L	9.92	1.24	99.5	72-129	7.69	30	
11Cl-PF3OUdS (F53B Minor)	5.97	2.0	ng/L	9.34	ND	63.9	50-150	4.96	30	
9Cl-PF3ONS (F53B Major)	10.2	2.0	ng/L	9.24	ND	111	50-150	10.7	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.29	2.0	ng/L	9.34	ND	88.7	50-150	2.63	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.70	2.0	ng/L	9.92	ND	67.6	50-150	2.11	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.72	2.0	ng/L	9.52	ND	102	67-138	9.82	30	
Perfluorodecanoic acid (PFDA)	11.6	2.0	ng/L	9.92	0.875	108	71-129	7.52	30	
Perfluorododecanoic acid (PFDoA)	8.94	2.0	ng/L	9.92	ND	90.2	72-134	10.2	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	9.17	2.0	ng/L	8.83	ND	104	50-150	6.93	30	
Perfluoroheptanesulfonic acid (PFHpS)	11.7	2.0	ng/L	9.47	1.41	109	69-134	9.48	30	
N-EtFOSAA	11.1	2.0	ng/L	9.92	ND	112	61-135	4.03	30	
N-MeFOSAA	9.30	2.0	ng/L	9.92	ND	93.7	65-136	1.26	30	
Perfluorotetradecanoic acid (PFTA)	10.8	2.0	ng/L	9.92	ND	109	71-132	16.2	30	
Perfluorotridecanoic acid (PFTrDA)	17.6	2.0	ng/L	9.92	ND	177 *	65-144	29.4	30	MS-22
4:2 Fluorotelomersulfonic acid (4:2FTS A)	9.19	2.0	ng/L	9.27	ND	99.1	63-143	6.84	30	
Perfluorodecanesulfonic acid (PFDS)	5.67	2.0	ng/L	9.57	ND	59.2	53-142	6.93	30	
Perfluorooctanesulfonamide (FOSA)	11.2	2.0	ng/L	9.92	ND	113	67-137	6.66	30	
Perfluoronanesulfonic acid (PFNS)	10.5	2.0	ng/L	9.52	1.41	95.3	69-127	14.5	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	8.31	2.0	ng/L	9.92	1.57	67.9	50-150	29.2	30	
Perfluoro-1-butanefulfonamide (FBSA)	8.98	2.0	ng/L	9.92	0.928	81.2	50-150	11.2	30	
Perfluorohexanesulfonic acid (PFHxS)	31.3	2.0	ng/L	9.07	21.8	105	68-131	12.5	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	10.1	2.0	ng/L	9.92	ND	102	50-150	6.28	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	9.41	2.0	ng/L	9.92	ND	94.9	50-150	5.74	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.42	2.0	ng/L	9.42	ND	100	64-140	8.12	30	
Perfluoropetanesulfonic acid (PFPeS)	10.7	2.0	ng/L	9.32	1.02	104	71-127	8.69	30	
Perfluoroundecanoic acid (PFUnA)	10.2	2.0	ng/L	9.92	ND	103	69-133	2.55	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	9.44	2.0	ng/L	9.92	ND	95.2	50-150	7.01	30	
Perfluoroheptanoic acid (PFHpA)	10.5	2.0	ng/L	9.92	0.468	101	72-130	6.61	30	
Perfluorooctanoic acid (PFOA)	12.4	2.0	ng/L	9.92	2.46	100	71-133	8.33	30	
Perfluorooctanesulfonic acid (PFOS)	122	2.0	ng/L	9.17	114	88.0	65-140	12.5	30	
Perfluorononanoic acid (PFNA)	11.3	2.0	ng/L	9.92	0.636	107	69-130	5.81	30	

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B296966 - SOP 454-PFAAS

Blank (B296966-BLK1)

Prepared: 12/15/21 Analyzed: 12/17/21

Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L
11Cl-PF3OUdS (F53B Minor)	ND	1.9	ng/L
9Cl-PF3ONS (F53B Major)	ND	1.9	ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L
N-EtFOSAA	ND	1.9	ng/L
N-MeFOSAA	ND	1.9	ng/L
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L

LCS (B296966-BS1)

Prepared: 12/15/21 Analyzed: 12/17/21

Perfluorobutanoic acid (PFBA)	9.74	1.9	ng/L	9.56	102	73-129
Perfluorobutanesulfonic acid (PFBS)	7.78	1.9	ng/L	8.46	91.9	72-130
Perfluoropentanoic acid (PFPeA)	9.56	1.9	ng/L	9.56	100	72-129
Perfluorohexanoic acid (PFHxA)	9.44	1.9	ng/L	9.56	98.8	72-129
11Cl-PF3OUdS (F53B Minor)	8.07	1.9	ng/L	9.00	89.6	50-150
9Cl-PF3ONS (F53B Major)	8.46	1.9	ng/L	8.91	94.9	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.13	1.9	ng/L	9.00	90.3	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.85	1.9	ng/L	9.56	71.6	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.04	1.9	ng/L	9.18	98.5	67-138
Perfluorodecanoic acid (PFDA)	9.81	1.9	ng/L	9.56	103	71-129
Perfluorododecanoic acid (PFDoA)	8.40	1.9	ng/L	9.56	87.9	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.38	1.9	ng/L	8.51	98.5	50-150

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B296966 - SOP 454-PFAAS

LCS (B296966-BS1)

Prepared: 12/15/21 Analyzed: 12/17/21

Perfluoroheptanesulfonic acid (PFHpS)	8.28	1.9	ng/L	9.13		90.7	69-134			
N-EtFOSAA	11.8	1.9	ng/L	9.56		123	61-135			
N-MeFOSAA	10.9	1.9	ng/L	9.56		114	65-136			
Perfluorotetradecanoic acid (PFTA)	9.06	1.9	ng/L	9.56		94.8	71-132			
Perfluorotridecanoic acid (PFTTrDA)	9.15	1.9	ng/L	9.56		95.8	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.98	1.9	ng/L	8.94		100	63-143			
Perfluorodecanesulfonic acid (PFDS)	8.59	1.9	ng/L	9.22		93.2	53-142			
Perfluorooctanesulfonamide (FOSA)	9.82	1.9	ng/L	9.56		103	67-137			
Perfluorononanesulfonic acid (PFNS)	9.04	1.9	ng/L	9.18		98.5	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.80	1.9	ng/L	9.56		92.1	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	8.23	1.9	ng/L	9.56		86.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	8.13	1.9	ng/L	8.75		93.0	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	8.68	1.9	ng/L	9.56		90.8	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	8.80	1.9	ng/L	9.56		92.1	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.81	1.9	ng/L	9.08		97.1	64-140			
Perfluoropetanesulfonic acid (PFPeS)	8.25	1.9	ng/L	8.99		91.8	71-127			
Perfluoroundecanoic acid (PFUnA)	9.19	1.9	ng/L	9.56		96.2	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.89	1.9	ng/L	9.56		93.0	50-150			
Perfluoroheptanoic acid (PFHpA)	9.55	1.9	ng/L	9.56		99.9	72-130			
Perfluorooctanoic acid (PFOA)	9.57	1.9	ng/L	9.56		100	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.79	1.9	ng/L	8.84		88.1	65-140			
Perfluorononanoic acid (PFNA)	9.47	1.9	ng/L	9.56		99.1	69-130			

LCS Dup (B296966-BSD1)

Prepared: 12/15/21 Analyzed: 12/17/21

Perfluorobutanoic acid (PFBA)	9.53	1.9	ng/L	9.32		102	73-129	2.20	30	
Perfluorobutanesulfonic acid (PFBS)	7.58	1.9	ng/L	8.25		91.9	72-130	2.52	30	
Perfluoropentanoic acid (PFPeA)	9.40	1.9	ng/L	9.32		101	72-129	1.74	30	
Perfluorohexanoic acid (PFHxA)	9.27	1.9	ng/L	9.32		99.5	72-129	1.78	30	
11Cl-PF3OUdS (F53B Minor)	7.58	1.9	ng/L	8.78		86.3	50-150	6.32	30	
9Cl-PF3ONS (F53B Major)	8.22	1.9	ng/L	8.69		94.5	50-150	2.88	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.00	1.9	ng/L	8.78		91.1	50-150	1.64	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.64	1.9	ng/L	9.32		71.2	50-150	3.06	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	8.10	1.9	ng/L	8.95		90.5	67-138	10.9	30	
Perfluorodecanoic acid (PFDA)	9.20	1.9	ng/L	9.32		98.7	71-129	6.45	30	
Perfluorododecanoic acid (PFDoA)	8.02	1.9	ng/L	9.32		86.0	72-134	4.63	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.29	1.9	ng/L	8.30		99.9	50-150	1.13	30	
Perfluoroheptanesulfonic acid (PFHpS)	8.86	1.9	ng/L	8.90		99.5	69-134	6.79	30	
N-EtFOSAA	10.7	1.9	ng/L	9.32		115	61-135	9.70	30	
N-MeFOSAA	10.9	1.9	ng/L	9.32		117	65-136	0.276	30	
Perfluorotetradecanoic acid (PFTA)	9.01	1.9	ng/L	9.32		96.7	71-132	0.564	30	
Perfluorotridecanoic acid (PFTTrDA)	8.75	1.9	ng/L	9.32		93.8	65-144	4.54	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.76	1.9	ng/L	8.72		101	63-143	2.46	30	
Perfluorodecanesulfonic acid (PFDS)	8.34	1.9	ng/L	9.00		92.7	53-142	2.96	30	
Perfluorooctanesulfonamide (FOSA)	9.18	1.9	ng/L	9.32		98.4	67-137	6.76	30	
Perfluorononanesulfonic acid (PFNS)	7.45	1.9	ng/L	8.95		83.2	69-127	19.3	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	8.48	1.9	ng/L	9.32		91.0	50-150	3.71	30	
Perfluoro-1-butanesulfonamide (FBSA)	8.13	1.9	ng/L	9.32		87.2	50-150	1.29	30	
Perfluorohexanesulfonic acid (PFHxS)	8.25	1.9	ng/L	8.53		96.7	68-131	1.46	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	8.52	1.9	ng/L	9.32		91.3	50-150	1.86	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	8.63	1.9	ng/L	9.32		92.6	50-150	1.96	30	

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B296966 - SOP 454-PFAAS

LCS Dup (B296966-BSD1)

Prepared: 12/15/21 Analyzed: 12/17/21

6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.37	1.9	ng/L	8.86		106	64-140	6.11	30	
Perfluoropetanesulfonic acid (PFPeS)	8.38	1.9	ng/L	8.76		95.6	71-127	1.53	30	
Perfluoroundecanoic acid (PFUnA)	9.47	1.9	ng/L	9.32		102	69-133	2.99	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.67	1.9	ng/L	9.32		93.0	50-150	2.49	30	
Perfluoroheptanoic acid (PFHpA)	9.40	1.9	ng/L	9.32		101	72-130	1.55	30	
Perfluorooctanoic acid (PFOA)	9.36	1.9	ng/L	9.32		100	71-133	2.21	30	
Perfluorooctanesulfonic acid (PFOS)	7.81	1.9	ng/L	8.62		90.6	65-140	0.289	30	
Perfluorononanoic acid (PFNA)	8.89	1.9	ng/L	9.32		95.3	69-130	6.36	30	

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m ³	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
S-29	Extracted Internal Standard is outside of control limits.

ANALYST

STATION PDF Management Station
JFC James F. Constantino
JLH Jessica L. Hoffman
EGR Evett G Rivera
DRL Daniel R Letendre
BLM Brianna Henriquez
BAA Bonita A. Abanulo
AP Alan Pienkowski

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	502	0.8726536	0.8106862		0.4	30
Perfluorobutanesulfonic acid (PFBS)	A	444	365	1.034827	0.9579922		-17.8	30
Perfluoropentanoic acid (PFPeA)	A	500	479	0.9416954	0.850437		-4.1	30
Perfluorohexanoic acid (PFHxA)	A	500	492	0.8870079	0.8122723		-1.5	30
11Cl-PF3OUdS (F53B Minor)	A	472	468	1.890252	1.69973		-0.8	30
9Cl-PF3ONS (F53B Major)	A	466	500	4.003141	3.658917		7.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	449	1.564661	1.426383		-5.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	366	0.113234	9.655043E-02		-26.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	452	0.8256201	0.8353691		-5.7	30
Perfluorodecanoic acid (PFDA)	A	500	505	0.94938	0.8561714		0.9	30
Perfluorododecanoic acid (PFDoA)	A	500	377	0.9872099	0.8367448		-24.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	420	3.684554	3.324035		-5.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	415	0.5160624	0.4338931		-12.8	30
N-EtFOSAA	A	500	475	1.038731	0.9437298		-4.9	30
N-MeFOSAA	A	500	365	1.305848	1.066715		-26.9	30
Perfluorotetradecanoic acid (PFTA)	A	500	497	0.9277335	0.9098907		-0.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	464	1.103444	1.071363		-7.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	446	1.118371	1.129567		-4.7	30
Perfluorodecanesulfonic acid (PFDS)	A	482	379	0.6583436	0.5858578		-21.3	30
Perfluorooctanesulfonamide (FOSA)	A	500	509	0.8979885	0.8047167		1.9	30
Perfluorononanesulfonic acid (PFNS)	A	481	541	0.3492842	0.3664506		12.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	470	0.3693497	0.3140201		-5.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	387	0.3204893	0.2781549		-22.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	490	0.9794421	0.9804783		7.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	468	0.5122801	0.4623818		-6.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	457	0.5962392	0.5332501		-8.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	460	1.130289	1.166613		-3.4	30
Perfluoropetanesulfonic acid (PFPeS)	A	470	475	1.028871	0.9450194		1.0	30
Perfluoroundecanoic acid (PFUnA)	A	500	438	0.9026781	0.7513365		-12.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	460	0.3454187	0.3062844		-8.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	493	0.9500985	0.8511227		-1.5	30
Perfluorooctanoic acid (PFOA)	A	500	496	0.9096161	0.8404851		-0.9	30
Perfluorooctanesulfonic acid (PFOS)	A	464	404	1.00684	0.97812		-12.9	30
Perfluorononanoic acid (PFNA)	A	500	503	0.9600681	0.8407658		0.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2710	0.8726536	0.8881422		8.3	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2030	1.034827	1.065636		-8.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9416954	0.9293174		3.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2560	0.8870079	0.8575558		2.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2580	1.890252	1.906923		9.1	30
9Cl-PF3ONS (F53B Major)	A	2330	2740	4.003141	4.124835		17.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2390	1.564661	1.538045		1.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1920	0.113234	0.1006413		-23.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2760	0.8256201	1.008614		15.1	30
Perfluorodecanoic acid (PFDA)	A	2500	2800	0.94938	0.9708773		11.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2240	0.9872099	0.9971611		-10.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2340	3.684554	3.754546		5.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.5160624	0.5240782		4.4	30
N-EtFOSAA	A	2500	2610	1.038731	1.045165		4.2	30
N-MeFOSAA	A	2500	2220	1.305848	1.294316		-11.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2540	0.9277335	0.9392104		1.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2360	1.103444	1.09036		-5.7	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2450	1.118371	1.233346		4.9	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2280	0.6583436	0.7058362		-5.2	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2790	0.8979885	0.8995486		11.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.3492842	0.3410062		3.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2490	0.3693497	0.3382475		-0.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2090	0.3204893	0.3006576		-16.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2460	0.9794421	1.000911		7.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2640	0.5122801	0.5277206		5.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2600	0.5962392	0.6119762		3.9	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2390	1.130289	1.201004		0.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2510	1.028871	1.014665		6.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2760	0.9026781	0.9618613		10.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2530	0.3454187	0.3411156		1.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2610	0.9500985	0.9195254		4.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2640	0.9096161	0.9105787		5.7	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2150	1.00684	1.039446		-7.4	30
Perfluorononanoic acid (PFNA)	A	2500	2790	0.9600681	0.9562091		11.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2690	0.8726536	0.8815901		7.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	1990	1.034827	1.046355		-10.2	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9416954	0.9322723		3.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2570	0.8870079	0.8589575		2.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2740	1.890252	2.029447		16.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2670	4.003141	4.022994		14.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2470	1.564661	1.591407		4.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1910	0.113234	0.1003395		-23.5	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2750	0.8256201	1.003467		14.5	30
Perfluorodecanoic acid (PFDA)	A	2500	2810	0.94938	0.975884		12.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2660	0.9872099	1.182248		6.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2340	3.684554	3.757305		5.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2570	0.5160624	0.5423832		8.0	30
N-EtFOSAA	A	2500	2430	1.038731	0.9720365		-3.0	30
N-MeFOSAA	A	2500	2200	1.305848	1.285461		-11.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.9277335	0.9213056		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.103444	1.101293		-4.8	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2140	0.6583436	0.6616038		-11.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2470	1.118371	1.241125		5.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2670	0.8979885	0.8589759		6.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2620	0.3492842	0.3604592		9.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2630	0.3693497	0.3580286		5.3	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2150	0.3204893	0.3095182		-13.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2410	0.9794421	0.9800692		5.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2600	0.5122801	0.5201509		4.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2610	0.5962392	0.6143938		4.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2560	1.130289	1.286875		7.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2440	1.028871	0.9886165		3.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2730	0.9026781	0.9519951		9.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2600	0.3454187	0.3498323		3.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2720	0.9500985	0.9585035		8.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.9096161	0.9050888		5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2140	1.00684	1.034549		-7.9	30
Perfluorononanoic acid (PFNA)	A	2500	3090	0.9600681	1.059936		23.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066609-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	466	0.9101546	0.8396613		-6.7	30
Perfluorobutanesulfonic acid (PFBS)	A	444	361	1.088078	0.9457485		-18.8	30
Perfluoropentanoic acid (PFPeA)	A	500	475	0.9380624	0.8902487		-4.9	30
Perfluorohexanoic acid (PFHxA)	A	500	476	0.8947457	0.8397251		-4.8	30
11Cl-PF3OUdS (F53B Minor)	A	472	403	1.933101	1.60179		-14.7	30
9Cl-PF3ONS (F53B Major)	A	466	477	4.132634	3.990864		2.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	445	1.747268	1.586824		-5.8	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	646	0.1496372	0.1774107		29.2	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	505	0.8774866	1.041447		5.3	30
Perfluorodecanoic acid (PFDA)	A	500	475	1.000734	0.9100278		-4.9	30
Perfluorododecanoic acid (PFDoA)	A	500	421	1.043277	0.9699071		-15.9	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	400	3.902511	3.521481		-10.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	407	0.5203174	0.4484949		-14.4	30
N-EtFOSAA	A	500	449	1.136484	0.9745746		-10.3	30
N-MeFOSAA	A	500	433	1.335256	1.215654		-13.4	30
Perfluorotetradecanoic acid (PFTA)	A	500	467	0.9748045	0.9020214		-6.5	30
Perfluorotridecanoic acid (PFTrDA)	A	500	418	1.160104	0.9995885		-16.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	415	1.177901	1.148484		-11.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	441	0.7304392	0.6996616		-8.5	30
Perfluorooctanesulfonamide (FOSA)	A	500	454	0.8950099	0.8132873		-9.2	30
Perfluorononanesulfonic acid (PFNS)	A	481	475	0.3548235	0.3676143		-1.2	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	463	0.3725778	0.3265124		-7.3	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	403	0.3327278	0.2878123		-19.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	377	1.053209	0.8867247		-17.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	425	0.5725106	0.4921378		-15.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	423	0.6479708	0.5602575		-15.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	510	1.18479	1.403615		7.1	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	432	1.026007	0.953143		-8.0	30
Perfluoroundecanoic acid (PFUnA)	A	500	469	0.9429028	0.8743524		-6.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	451	0.3623035	0.3307945		-9.7	30
Perfluoroheptanoic acid (PFHpA)	A	500	463	0.9844363	0.8877087		-7.3	30
Perfluorooctanoic acid (PFOA)	A	500	512	0.9407904	0.9465791		2.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	385	1.048296	0.9342739		-17.1	30
Perfluorononanoic acid (PFNA)	A	500	495	0.997817	0.9361035		-0.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066609-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2410	0.9101546	0.8737493		-3.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2010	1.088078	1.054094		-9.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2460	0.9380624	0.9242095		-1.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2430	0.8947457	0.8607504		-3.0	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2230	1.933101	1.79212		-5.3	30
9Cl-PF3ONS (F53B Major)	A	2330	2380	4.132634	4.023092		2.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.747268	1.572306		-7.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2780	0.1496372	0.1549498		11.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2290	0.8774866	0.9334614		-4.4	30
Perfluorodecanoic acid (PFDA)	A	2500	2450	1.000734	0.9481205		-1.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2000	1.043277	0.9222987		-20.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2120	3.902511	3.774125		-4.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2310	0.5203174	0.5089016		-3.1	30
N-EtFOSAA	A	2500	2290	1.136484	1.00392		-8.4	30
N-MeFOSAA	A	2500	2400	1.335256	1.349027		-3.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2320	0.9748045	0.9006242		-7.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2240	1.160104	1.078511		-10.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2250	0.7304392	0.7141686		-6.6	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2210	1.177901	1.208045		-5.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2470	0.8950099	0.8914182		-1.1	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2470	0.3548235	0.3842816		3.1	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2370	0.3725778	0.3373986		-5.2	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2130	0.3327278	0.304356		-14.8	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	1940	1.053209	0.9136687		-15.1	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2310	0.5725106	0.5371223		-7.8	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2360	0.6479708	0.626729		-5.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2160	1.18479	1.176577		-9.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2120	1.026007	0.9390695		-9.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2400	0.9429028	0.9009881		-4.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2360	0.3623035	0.348124		-5.5	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2460	0.9844363	0.9497982		-1.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2360	0.9407904	0.8790549		-5.5	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2130	1.048296	1.034381		-8.2	30
Perfluorononanoic acid (PFNA)	A	2500	2400	0.997817	0.9175234		-3.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066609-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2440	0.9101546	0.8829564		-2.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	1980	1.088078	1.038057		-10.9	30
Perfluoropentanoic acid (PFPeA)	A	2500	2460	0.9380624	0.9249805		-1.7	30
Perfluorohexanoic acid (PFHxA)	A	2500	2480	0.8947457	0.8790018		-0.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2280	1.933101	1.832705		-3.2	30
9Cl-PF3ONS (F53B Major)	A	2330	2240	4.132634	3.78601		-3.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2240	1.747268	1.614075		-5.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2950	0.1496372	0.1642505		17.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2290	0.8774866	0.9303166		-4.7	30
Perfluorodecanoic acid (PFDA)	A	2500	2560	1.000734	0.9892537		2.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2060	1.043277	0.9486751		-17.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2120	3.902511	3.771922		-4.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2340	0.5203174	0.5157165		-1.9	30
N-EtFOSAA	A	2500	2640	1.136484	1.156563		5.4	30
N-MeFOSAA	A	2500	2320	1.335256	1.300572		-7.4	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2360	0.9748045	0.9190824		-5.4	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2220	1.160104	1.066493		-11.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2240	0.7304392	0.7118169		-6.9	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2260	1.177901	1.233836		-3.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2530	0.8950099	0.9105407		1.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2140	0.3548235	0.3328676		-10.7	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2440	0.3725778	0.3473497		-2.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2170	0.3327278	0.30995		-13.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2090	1.053209	0.985991		-8.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2300	0.5725106	0.5369783		-7.8	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2310	0.6479708	0.6149292		-7.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2590	1.18479	1.410983		9.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2220	1.026007	0.9842696		-5.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2310	0.9429028	0.8672246		-7.7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2420	0.3623035	0.3569709		-3.1	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2430	0.9844363	0.9370706		-3.0	30
Perfluorooctanoic acid (PFOA)	A	2500	2330	0.9407904	0.8670709		-6.8	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	1990	1.048296	0.9688545		-14.0	30
Perfluorononanoic acid (PFNA)	A	2500	2460	0.997817	0.9400632		-1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

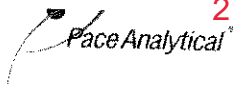
Certified Analyses included in this Report

Analyte	Certifications
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No certified Analyses included in this Report

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022



21K1387

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

211956

CHAIN OF CUSTODY RECORD

1800 Elm Street SE
Minneapolis, MN 55414

Doc # 381 Rev 4_01/08/2020

Page 1 of 2

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Requested Turnaround Time		Dissolved Water Samples	
7-Day <input type="checkbox"/>	10-Day <input type="checkbox"/>	<input type="radio"/> Field Filtered	<input type="radio"/> Lab to Filter
PFAS 10-Day (std) <input checked="" type="checkbox"/>		Due Date:	
Rush Approval/Qualifier		Orthophosphate Samples	
1-Day <input type="checkbox"/>	3-Day <input type="checkbox"/>	<input type="radio"/> Field Filtered	<input type="radio"/> Lab to Filter
2-Day <input type="checkbox"/>	4-Day <input type="checkbox"/>		
Data Delivery			
Format: PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/>		PCB ONLY	
Other:		SOXHLET <input type="checkbox"/>	
CLP Like Data Pkg Required: <input type="checkbox"/>		NON SOXHLET <input type="checkbox"/>	
Email To: mischerer@tighebond.com		Fax To #:	

Company/Altname: Tighe & Bond
 Address: 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Project Name: Princeton Soil Sampling - 30 Mountain
 Project Location: Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Arps/Michael Scherer
 Pace Analytical Quote Name/Number
 Invoice Recipient: Tighe & Bond
 Sampled By: M Scherer

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS (isotope dilution method)
	30MTN S-2 (6-12)	10/28/21	0800	GRAB	S	U						X
01	30MTN S-3 (6-12)		0830						1			X
02	30MTN S-3 (12-24)		0830						1			X
03	30MTN S-4 (6-12)		0900						1			X
04	30MTN S-5 (6-12)		0930						1			X
	30MTN S-5 (12-24)		0930						1			X
05	30MTN S-7 (0-12)		1000						1			X
06	30MTN S-8 (0-12)		1030						1			X
	30MTN S-9 (0-12)		1100						1			X
	30MTN S-10 (0-12)		1130						1			X
	30MTN S-11 (0-12)		1200						1			X
	30MTN S-11 (24-36)		1200						1			X

² Preservation Code

Courier Use Only
 Total Number Of:
 VIALS _____
 GLASS _____
 PLASTIC _____
 BACTERIA _____
 ENCORE _____

Glassware in the fridge? Y / N
 Glassware in freezer? Y / N
 Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

¹ Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 1200
 Received by: (signature) *[Signature]* Date/Time: 10/29/21 1915
 Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 2035
 Received by: (signature) *[Signature]* Date/Time: 10/29/21 2035
 Relinquished by: (signature) _____ Date/Time: _____
 Received by: (signature) _____ Date/Time: _____
 Relinquished by: (signature) _____ Date/Time: _____
 Received by: (signature) _____ Date/Time: _____

Client Comments:
Per client run SPLP PFAS on samples JLH 11/19/2021

Duration Limit Requirements		Special Requirements	
MA <input type="checkbox"/>	5-1 <input checked="" type="checkbox"/>	MA MCP Required <input type="checkbox"/>	MCP Certification Form Required <input type="checkbox"/>
CT <input type="checkbox"/>		CT RCP Required <input type="checkbox"/>	RCP Certification Form Required <input type="checkbox"/>
Other <input type="checkbox"/>		MA State DW Required <input type="checkbox"/>	
Project Entity		PWSID #	
Government <input type="checkbox"/>	Municipality <input type="checkbox"/>	MWRA <input type="checkbox"/>	WRTA <input type="checkbox"/>
Federal <input type="checkbox"/>	21 J <input type="checkbox"/>	School <input type="checkbox"/>	
City <input type="checkbox"/>	Brownfield <input type="checkbox"/>	MBTA <input type="checkbox"/>	

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High, M - Medium, L - Low, C - Clean, U - Unknown

² Preservation Codes:
 I = iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B

Received By MA Date 10/29/11 Time 2035

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? MA Were Samples Tampered with? MA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? MA

Proper Media/Containers Used? T

Were trip blanks received? T

Do all samples have the proper pH? MA

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? T

Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

December 16, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

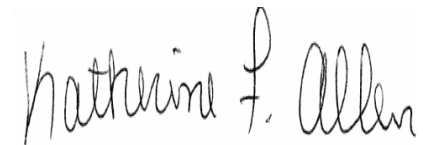
Project Location: 54 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21K1390

Enclosed are results of analyses for samples as received by the laboratory on November 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 12/16/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21K1390

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 54 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
54MTN S-6 (6-12)	21K1390-01	Soil		SM 2540G SOP-454 PFAS	
54MTN S-10 (12-24)	21K1390-02	Soil		SM 2540G SOP-454 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-454 PFAS

Qualifications:

S-29 Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-4:2FTS, M2-6:2FTS, M2PFTA, M8FOSA, MPFD_oA

21K1390-02[54MTN S-10 (12-24)], 21K1390-01[54MTN S-6 (6-12)]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1390

Date Received: 11/19/2021

Field Sample #: 54MTN S-6 (6-12)

Sampled: 10/28/2021 12:30

Sample ID: 21K1390-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:13	DRL

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1390

Date Received: 11/19/2021

Field Sample #: 54MTN S-6 (6-12)

Sampled: 10/28/2021 12:30

Sample ID: 21K1390-01

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	8.3	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoropentanoic acid (PFPeA)	15	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorohexanoic acid (PFHxA)	11	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorodecanoic acid (PFDA)	16	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluoroheptanoic acid (PFHpA)	18	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorooctanoic acid (PFOA)	32	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorooctanesulfonic acid (PFOS)	130	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC
Perfluorononanoic acid (PFNA)	16	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:32	JFC

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1390

Date Received: 11/19/2021

Field Sample #: 54MTN S-10 (12-24)

Sampled: 10/28/2021 16:00

Sample ID: 21K1390-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.4		% Wt	1		SM 2540G	11/11/21	11/12/21 9:14	DRL

Project Location: 54 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1390

Date Received: 11/19/2021

Field Sample #: 54MTN S-10 (12-24)

Sampled: 10/28/2021 16:00

Sample ID: 21K1390-02

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoropentanoic acid (PFPeA)	18	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorohexanoic acid (PFHxA)	26	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluoroheptanoic acid (PFHpA)	50	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorooctanoic acid (PFOA)	120	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorooctanesulfonic acid (PFOS)	26	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC
Perfluorononanoic acid (PFNA)	11	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:39	JFC

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21K1390-01 [54MTN S-6 (6-12)]	B294465	11/11/21
21K1390-02 [54MTN S-10 (12-24)]	B294465	11/11/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Leachates were extracted on 11/22/2021 per SW-846 1311 in Batch B295327

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21K1390-01 [54MTN S-6 (6-12)]	B295868	259	1.00	12/06/21
21K1390-02 [54MTN S-10 (12-24)]	B295868	245	1.00	12/06/21

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295868 - SOP 454-PFAAS

Blank (B295868-BLK1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L
N-EtFOSAA	ND	2.0	ng/L
N-MeFOSAA	ND	2.0	ng/L
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.0	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L

LCS (B295868-BS1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	9.85	2.0	ng/L	9.26	106	73-129
Perfluorobutanesulfonic acid (PFBS)	7.31	2.0	ng/L	8.20	89.2	72-130
Perfluoropentanoic acid (PFPeA)	9.27	2.0	ng/L	9.26	100	72-129
Perfluorohexanoic acid (PFHxA)	9.32	2.0	ng/L	9.26	101	72-129
11Cl-PF3OUdS (F53B Minor)	7.72	2.0	ng/L	8.73	88.5	50-150
9Cl-PF3ONS (F53B Major)	9.12	2.0	ng/L	8.63	106	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.12	2.0	ng/L	8.73	93.1	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.64	2.0	ng/L	9.26	71.6	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.03	2.0	ng/L	8.89	102	67-138
Perfluorodecanoic acid (PFDA)	10.5	2.0	ng/L	9.26	113	71-129
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	9.26	90.1	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.67	2.0	ng/L	8.24	105	50-150

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295868 - SOP 454-PFAAS

LCS (B295868-BS1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluoroheptanesulfonic acid (PFHpS)	8.59	2.0	ng/L	8.85		97.1	69-134			
N-EtFOSAA	10.9	2.0	ng/L	9.26		118	61-135			
N-MeFOSAA	9.17	2.0	ng/L	9.26		99.1	65-136			
Perfluorotetradecanoic acid (PFTA)	9.40	2.0	ng/L	9.26		101	71-132			
Perfluorotridecanoic acid (PFTrDA)	9.97	2.0	ng/L	9.26		108	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.88	2.0	ng/L	8.66		103	63-143			
Perfluorodecanesulfonic acid (PFDS)	6.16	2.0	ng/L	8.94		68.9	53-142			
Perfluorooctanesulfonamide (FOSA)	9.85	2.0	ng/L	9.26		106	67-137			
Perfluorononanesulfonic acid (PFNS)	8.97	2.0	ng/L	8.89		101	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.07	2.0	ng/L	9.26		87.2	50-150			
Perfluoro-1-butanefulfonamide (FBSA)	7.48	2.0	ng/L	9.26		80.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	9.04	2.0	ng/L	8.48		107	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.05	2.0	ng/L	9.26		97.7	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	9.07	2.0	ng/L	9.26		97.9	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.32	2.0	ng/L	8.80		106	64-140			
Perfluoropentanesulfonic acid (PFPeS)	9.43	2.0	ng/L	8.71		108	71-127			
Perfluoroundecanoic acid (PFUnA)	9.49	2.0	ng/L	9.26		102	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.91	2.0	ng/L	9.26		96.2	50-150			
Perfluoroheptanoic acid (PFHpA)	9.38	2.0	ng/L	9.26		101	72-130			
Perfluorooctanoic acid (PFOA)	9.44	2.0	ng/L	9.26		102	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.44	2.0	ng/L	8.57		86.8	65-140			
Perfluorononanoic acid (PFNA)	9.76	2.0	ng/L	9.26		105	69-130			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
S-29	Extracted Internal Standard is outside of control limits.

ANALYST

RLF Rebecca Faust
 STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman
 DRL Daniel R Letendre
 BLM Brianna Henriquez
 BAA Bonita A. Abanulo
 AP Alan Pienkowski

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	502	0.8726536	0.8106862		0.4	30
Perfluorobutanesulfonic acid (PFBS)	A	444	365	1.034827	0.9579922		-17.8	30
Perfluoropentanoic acid (PFPeA)	A	500	479	0.9416954	0.850437		-4.1	30
Perfluorohexanoic acid (PFHxA)	A	500	492	0.8870079	0.8122723		-1.5	30
11Cl-PF3OUdS (F53B Minor)	A	472	468	1.890252	1.69973		-0.8	30
9Cl-PF3ONS (F53B Major)	A	466	500	4.003141	3.658917		7.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	449	1.564661	1.426383		-5.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	366	0.113234	9.655043E-02		-26.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	452	0.8256201	0.8353691		-5.7	30
Perfluorodecanoic acid (PFDA)	A	500	505	0.94938	0.8561714		0.9	30
Perfluorododecanoic acid (PFDoA)	A	500	377	0.9872099	0.8367448		-24.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	420	3.684554	3.324035		-5.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	415	0.5160624	0.4338931		-12.8	30
N-EtFOSAA	A	500	475	1.038731	0.9437298		-4.9	30
N-MeFOSAA	A	500	365	1.305848	1.066715		-26.9	30
Perfluorotetradecanoic acid (PFTA)	A	500	497	0.9277335	0.9098907		-0.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	464	1.103444	1.071363		-7.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	446	1.118371	1.129567		-4.7	30
Perfluorodecanesulfonic acid (PFDS)	A	482	379	0.6583436	0.5858578		-21.3	30
Perfluorooctanesulfonamide (FOSA)	A	500	509	0.8979885	0.8047167		1.9	30
Perfluorononanesulfonic acid (PFNS)	A	481	541	0.3492842	0.3664506		12.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	470	0.3693497	0.3140201		-5.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	387	0.3204893	0.2781549		-22.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	490	0.9794421	0.9804783		7.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	468	0.5122801	0.4623818		-6.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	457	0.5962392	0.5332501		-8.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	460	1.130289	1.166613		-3.4	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	475	1.028871	0.9450194		1.0	30
Perfluoroundecanoic acid (PFUnA)	A	500	438	0.9026781	0.7513365		-12.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	460	0.3454187	0.3062844		-8.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	493	0.9500985	0.8511227		-1.5	30
Perfluorooctanoic acid (PFOA)	A	500	496	0.9096161	0.8404851		-0.9	30
Perfluorooctanesulfonic acid (PFOS)	A	464	404	1.00684	0.97812		-12.9	30
Perfluorononanoic acid (PFNA)	A	500	503	0.9600681	0.8407658		0.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2710	0.8726536	0.8881422		8.3	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2030	1.034827	1.065636		-8.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9416954	0.9293174		3.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2560	0.8870079	0.8575558		2.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2580	1.890252	1.906923		9.1	30
9Cl-PF3ONS (F53B Major)	A	2330	2740	4.003141	4.124835		17.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2390	1.564661	1.538045		1.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1920	0.113234	0.1006413		-23.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2760	0.8256201	1.008614		15.1	30
Perfluorodecanoic acid (PFDA)	A	2500	2800	0.94938	0.9708773		11.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2240	0.9872099	0.9971611		-10.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2340	3.684554	3.754546		5.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.5160624	0.5240782		4.4	30
N-EtFOSAA	A	2500	2610	1.038731	1.045165		4.2	30
N-MeFOSAA	A	2500	2220	1.305848	1.294316		-11.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2540	0.9277335	0.9392104		1.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2360	1.103444	1.09036		-5.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2280	0.6583436	0.7058362		-5.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2450	1.118371	1.233346		4.9	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2790	0.8979885	0.8995486		11.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.3492842	0.3410062		3.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2490	0.3693497	0.3382475		-0.4	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2090	0.3204893	0.3006576		-16.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2460	0.9794421	1.000911		7.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2640	0.5122801	0.5277206		5.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2600	0.5962392	0.6119762		3.9	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2390	1.130289	1.201004		0.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2510	1.028871	1.014665		6.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2760	0.9026781	0.9618613		10.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2530	0.3454187	0.3411156		1.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2610	0.9500985	0.9195254		4.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2640	0.9096161	0.9105787		5.7	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2150	1.00684	1.039446		-7.4	30
Perfluorononanoic acid (PFNA)	A	2500	2790	0.9600681	0.9562091		11.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2690	0.8726536	0.8815901		7.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	1990	1.034827	1.046355		-10.2	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9416954	0.9322723		3.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2570	0.8870079	0.8589575		2.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2740	1.890252	2.029447		16.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2670	4.003141	4.022994		14.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2470	1.564661	1.591407		4.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1910	0.113234	0.1003395		-23.5	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2750	0.8256201	1.003467		14.5	30
Perfluorodecanoic acid (PFDA)	A	2500	2810	0.94938	0.975884		12.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2660	0.9872099	1.182248		6.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2340	3.684554	3.757305		5.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2570	0.5160624	0.5423832		8.0	30
N-EtFOSAA	A	2500	2430	1.038731	0.9720365		-3.0	30
N-MeFOSAA	A	2500	2200	1.305848	1.285461		-11.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.9277335	0.9213056		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.103444	1.101293		-4.8	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2140	0.6583436	0.6616038		-11.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2470	1.118371	1.241125		5.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2670	0.8979885	0.8589759		6.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2620	0.3492842	0.3604592		9.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2630	0.3693497	0.3580286		5.3	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2150	0.3204893	0.3095182		-13.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2410	0.9794421	0.9800692		5.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2600	0.5122801	0.5201509		4.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2610	0.5962392	0.6143938		4.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2560	1.130289	1.286875		7.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2440	1.028871	0.9886165		3.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2730	0.9026781	0.9519951		9.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2600	0.3454187	0.3498323		3.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2720	0.9500985	0.9585035		8.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.9096161	0.9050888		5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2140	1.00684	1.034549		-7.9	30
Perfluorononanoic acid (PFNA)	A	2500	3090	0.9600681	1.059936		23.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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No certified Analyses included in this Report

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

CHAIN OF CUSTODY RECORD

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

~~2151975~~

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Location: Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps/Michael Scherer
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

Retention Time
7-Day 10-Day
PFAS 10-Day (std) Due Date: _____

Matrix Approval Required
1-Day 3-Day
2-Day 4-Day

Data Delivery
Format: PDF EXCEL
Other: _____
CLP Like Data Pkg Required:
Email To: mjscherer@tighebond.com
Fax To #: _____

Analysis Requested
Dissolved Metals Samples: Field Filtered Lab to Filter
Orthophosphate Samples: Field Filtered Lab to Filter
PCB ONLY
SOXHLET
NON SOXHLET

PFAS (isotope dilution method)

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
01	54MTN S-5A (0-12)	10/28/21	1200	GRAB	S	U			1		X
2	54MTN S-6 (6-12)		1230						1		X
3	54MTN S-7 (0-12)		1300						1		X
4	54MTN S-7 (12-24)		1330						1		X
5	54MTN S-8 (0-12)		1400						1		X
6	54MTN S-9 (0-12)		1430						1		X
7	54 MTN S-9 (12-24)		1500						1		X
02	54MTN S-10 (0-12)		1530						1		X
8	54MTN S-10 (12-24)		1600						1		X
9	54MTN S-11 (0-12)		1630						1		X
10	54MTN S-11 (12-24)		1700						1		X
11	54MTN S-12 (0-12)		1730						1		X

2 Preservation Code
Courier Use Only
Total Number Of:
VIALS _____
GLASS _____
PLASTIC _____
BACTERIA _____
ENCORE _____
Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

- 1 Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 1200
Received by: (signature) *[Signature]* Date/Time: 10/29/21 1815
Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 2035
Received by: (signature) *[Signature]* Date/Time: 10/29/21 2035
Relinquished by: (signature) _____ Date/Time: _____
Received by: (signature) _____ Date/Time: _____
Relinquished by: (signature) _____ Date/Time: _____
Received by: (signature) _____ Date/Time: _____

Client Comments:

Detection Limit Requirements: MA AM-1 S-1

Special Requirements: MA HCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State DW Required

Project Entity:
Government Municipality MWRA WRTA
Federal 21 J School
City Brownfield MBTA

Other: Chromatogram AIHA-LAP, LLC

RELAC and AIHA-LAP, LLC Accredited

- 2 Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Comments: client confirmed sample 13 is a repeat of sample 12. JLH 11/1/2021

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

21519175
Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>

Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Location: Princeton Soil Sampling - 54 Mountain Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps/Michael Scherer
Pace Analytical Quote Name/Number
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

ANALYSIS REQUESTED

7-Day PFAS 10-Day (std) 10-Day Due Date: Field Filtered Lab to Filter
 1-Day 3-Day 3-Day Due Date: Field Filtered Lab to Filter
 2-Day 4-Day 4-Day Due Date: Field Filtered Lab to Filter
 Format: PDF EXCEL
 Other: **PCB ONLY**
 CLP Like Data Pkg Required: SOX-HLET
 Email To: mjscherer@tighebond.com
 Fax To #:

Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
54MTN S-12 (0-12)	1800	1830	GRAB	S	U	1				
54MTN S-13 (0-12)	1830	1900	GRAB	S	U	1				
54MTN S-13 (12-24)	1900	1930	GRAB	S	U	1				
54MTN S-14 (0-6)	1930		GRAB	S	U	1				

Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
S	U	1				
S	U	1				
S	U	1				
S	U	1				

Client Comments:

Retinquished by: (signature) Date/Time: 10/29/21 12:00
 Received by: (signature) Date/Time: 10/29/21 18:15
 Requested by: (signature) Date/Time: 10/29/21 20:35
 Received by: (signature) Date/Time: 10/29/21 20:55
 Retinquished by: (signature) Date/Time:
 Received by: (signature) Date/Time:
 Retinquished by: (signature) Date/Time:
 Received by: (signature) Date/Time:

Special Requirements: MA HCLP Required MA HCLP Certification Form Required
 CT RCP Required RCP Certification Form Required
 MA State DWP Required MA State DWP Required

Project Entity: Government Municipality City
 Federal 21 J Brownfield
 WRTA AWRA School MBTA
 Chromatogram AIHA-LAP, LLC

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T 13

Received By MA Date 10/29/11 Time 2035

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp -3.0
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F

Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

Sample S-12 (O-12) may be repeated on chain twice

December 16, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

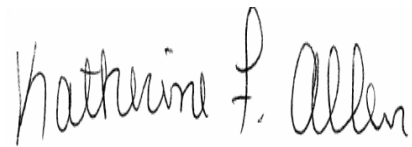
Project Location: 22 Mountain, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21K1395

Enclosed are results of analyses for samples as received by the laboratory on November 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 12/16/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21K1395

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 22 Mountain, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
22MTN S-1 (6-12)	21K1395-01	Soil		SM 2540G SOP-454 PFAS	
22MTN S-1 (12-24)	21K1395-02	Soil		SM 2540G SOP-454 PFAS	
22MTN S-7 (6-12)	21K1395-03	Soil		SM 2540G SOP-454 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SOP-454 PFAS

Qualifications:

S-29 Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-4:2FTS, M2PFPTA, M8FOSA, MPFD₀A

21K1395-02[22MTN S-1 (12-24)], 21K1395-01[22MTN S-1 (6-12)], 21K1395-03[22MTN S-7 (6-12)]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1395

Date Received: 11/19/2021

Field Sample #: 22MTN S-1 (6-12)

Sampled: 10/27/2021 08:00

Sample ID: 21K1395-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	77.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	DRL

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1395

Date Received: 11/19/2021

Field Sample #: 22MTN S-1 (6-12)

Sampled: 10/27/2021 08:00

Sample ID: 21K1395-01

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorobutanesulfonic acid (PFBS)	2.1	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoropentanoic acid (PFPeA)	6.6	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorohexanoic acid (PFHxA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoroheptanesulfonic acid (PFHpS)	2.2	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorohexanesulfonic acid (PFHxS)	52	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoropentanesulfonic acid (PFPeS)	2.6	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluoroheptanoic acid (PFHpA)	4.9	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorooctanoic acid (PFOA)	10	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorooctanesulfonic acid (PFOS)	140	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC
Perfluorononanoic acid (PFNA)	2.5	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:46	JFC

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1395

Date Received: 11/19/2021

Field Sample #: 22MTN S-1 (12-24)

Sampled: 10/27/2021 08:00

Sample ID: 21K1395-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.3		% Wt	1		SM 2540G	11/11/21	11/12/21 9:16	DRL

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1395

Date Received: 11/19/2021

Field Sample #: 22MTN S-1 (12-24)

Sampled: 10/27/2021 08:00

Sample ID: 21K1395-02

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	13	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorobutanesulfonic acid (PFBS)	2.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoropentanoic acid (PFPeA)	12	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorohexanoic acid (PFHxA)	29	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoroheptanesulfonic acid (PFHpS)	2.8	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorohexanesulfonic acid (PFHxS)	120	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoropentanesulfonic acid (PFPeS)	4.2	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluoroheptanoic acid (PFHpA)	14	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorooctanoic acid (PFOA)	26	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorooctanesulfonic acid (PFOS)	85	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC
Perfluorononanoic acid (PFNA)	4.0	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 20:54	JFC

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1395

Date Received: 11/19/2021

Field Sample #: 22MTN S-7 (6-12)

Sampled: 10/27/2021 10:00

Sample ID: 21K1395-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.9		% Wt	1		SM 2540G	11/11/21	11/12/21 9:17	DRL

Project Location: 22 Mountain, Princeton, MA

Sample Description:

Work Order: 21K1395

Date Received: 11/19/2021

Field Sample #: 22MTN S-7 (6-12)

Sampled: 10/27/2021 10:00

Sample ID: 21K1395-03

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorobutanesulfonic acid (PFBS)	11	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorohexanoic acid (PFHxA)	2.7	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
N-EtFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
N-MeFOSAA	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorohexanesulfonic acid (PFHxS)	9.5	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoropentanesulfonic acid (PFPeS)	7.7	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluoroheptanoic acid (PFHpA)	7.4	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorooctanoic acid (PFOA)	22	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorooctanesulfonic acid (PFOS)	19	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC
Perfluorononanoic acid (PFNA)	8.0	2.0	ng/L	1		SOP-454 PFAS	12/6/21	12/10/21 21:08	JFC

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21K1395-01 [22MTN S-1 (6-12)]	B294465	11/11/21
21K1395-02 [22MTN S-1 (12-24)]	B294465	11/11/21
21K1395-03 [22MTN S-7 (6-12)]	B294465	11/11/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Leachates were extracted on 11/22/2021 per SW-846 1311 in Batch B295327

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21K1395-01 [22MTN S-1 (6-12)]	B295868	262	1.00	12/06/21
21K1395-02 [22MTN S-1 (12-24)]	B295868	258	1.00	12/06/21
21K1395-03 [22MTN S-7 (6-12)]	B295868	255	1.00	12/06/21

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295868 - SOP 454-PFAAS

Blank (B295868-BLK1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L
11Cl-PF3OUdS (F53B Minor)	ND	2.0	ng/L
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L
N-EtFOSAA	ND	2.0	ng/L
N-MeFOSAA	ND	2.0	ng/L
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.0	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L

LCS (B295868-BS1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluorobutanoic acid (PFBA)	9.85	2.0	ng/L	9.26	106	73-129
Perfluorobutanesulfonic acid (PFBS)	7.31	2.0	ng/L	8.20	89.2	72-130
Perfluoropentanoic acid (PFPeA)	9.27	2.0	ng/L	9.26	100	72-129
Perfluorohexanoic acid (PFHxA)	9.32	2.0	ng/L	9.26	101	72-129
11Cl-PF3OUdS (F53B Minor)	7.72	2.0	ng/L	8.73	88.5	50-150
9Cl-PF3ONS (F53B Major)	9.12	2.0	ng/L	8.63	106	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.12	2.0	ng/L	8.73	93.1	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.64	2.0	ng/L	9.26	71.6	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.03	2.0	ng/L	8.89	102	67-138
Perfluorodecanoic acid (PFDA)	10.5	2.0	ng/L	9.26	113	71-129
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	9.26	90.1	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.67	2.0	ng/L	8.24	105	50-150

QUALITY CONTROL

SPLP - Semivolatile Organic Compounds by LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295868 - SOP 454-PFAAS

LCS (B295868-BS1)

Prepared: 12/06/21 Analyzed: 12/10/21

Perfluoroheptanesulfonic acid (PFHpS)	8.59	2.0	ng/L	8.85		97.1	69-134			
N-EtFOSAA	10.9	2.0	ng/L	9.26		118	61-135			
N-MeFOSAA	9.17	2.0	ng/L	9.26		99.1	65-136			
Perfluorotetradecanoic acid (PFTA)	9.40	2.0	ng/L	9.26		101	71-132			
Perfluorotridecanoic acid (PFTrDA)	9.97	2.0	ng/L	9.26		108	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.88	2.0	ng/L	8.66		103	63-143			
Perfluorodecanesulfonic acid (PFDS)	6.16	2.0	ng/L	8.94		68.9	53-142			
Perfluorooctanesulfonamide (FOSA)	9.85	2.0	ng/L	9.26		106	67-137			
Perfluorononanesulfonic acid (PFNS)	8.97	2.0	ng/L	8.89		101	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.07	2.0	ng/L	9.26		87.2	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	7.48	2.0	ng/L	9.26		80.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	9.04	2.0	ng/L	8.48		107	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.05	2.0	ng/L	9.26		97.7	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	9.07	2.0	ng/L	9.26		97.9	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.32	2.0	ng/L	8.80		106	64-140			
Perfluoropetanesulfonic acid (PFPeS)	9.43	2.0	ng/L	8.71		108	71-127			
Perfluoroundecanoic acid (PFUnA)	9.49	2.0	ng/L	9.26		102	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.91	2.0	ng/L	9.26		96.2	50-150			
Perfluoroheptanoic acid (PFHpA)	9.38	2.0	ng/L	9.26		101	72-130			
Perfluorooctanoic acid (PFOA)	9.44	2.0	ng/L	9.26		102	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.44	2.0	ng/L	8.57		86.8	65-140			
Perfluorononanoic acid (PFNA)	9.76	2.0	ng/L	9.26		105	69-130			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m ³	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
S-29	Extracted Internal Standard is outside of control limits.

ANALYST

RLF Rebecca Faust
 STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman
 DRL Daniel R Letendre
 BLM Brianna Henriquez
 BAA Bonita A. Abanulo
 AP Alan Pienkowski

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	502	0.8726536	0.8106862		0.4	30
Perfluorobutanesulfonic acid (PFBS)	A	444	365	1.034827	0.9579922		-17.8	30
Perfluoropentanoic acid (PFPeA)	A	500	479	0.9416954	0.850437		-4.1	30
Perfluorohexanoic acid (PFHxA)	A	500	492	0.8870079	0.8122723		-1.5	30
11Cl-PF3OUdS (F53B Minor)	A	472	468	1.890252	1.69973		-0.8	30
9Cl-PF3ONS (F53B Major)	A	466	500	4.003141	3.658917		7.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	449	1.564661	1.426383		-5.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	366	0.113234	9.655043E-02		-26.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	452	0.8256201	0.8353691		-5.7	30
Perfluorodecanoic acid (PFDA)	A	500	505	0.94938	0.8561714		0.9	30
Perfluorododecanoic acid (PFDoA)	A	500	377	0.9872099	0.8367448		-24.7	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	420	3.684554	3.324035		-5.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	415	0.5160624	0.4338931		-12.8	30
N-EtFOSAA	A	500	475	1.038731	0.9437298		-4.9	30
N-MeFOSAA	A	500	365	1.305848	1.066715		-26.9	30
Perfluorotetradecanoic acid (PFTA)	A	500	497	0.9277335	0.9098907		-0.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	464	1.103444	1.071363		-7.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	446	1.118371	1.129567		-4.7	30
Perfluorodecanesulfonic acid (PFDS)	A	482	379	0.6583436	0.5858578		-21.3	30
Perfluorooctanesulfonamide (FOSA)	A	500	509	0.8979885	0.8047167		1.9	30
Perfluorononanesulfonic acid (PFNS)	A	481	541	0.3492842	0.3664506		12.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	470	0.3693497	0.3140201		-5.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	387	0.3204893	0.2781549		-22.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	490	0.9794421	0.9804783		7.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	468	0.5122801	0.4623818		-6.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	457	0.5962392	0.5332501		-8.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	460	1.130289	1.166613		-3.4	30
Perfluoropetanesulfonic acid (PFPeS)	A	470	475	1.028871	0.9450194		1.0	30
Perfluoroundecanoic acid (PFUnA)	A	500	438	0.9026781	0.7513365		-12.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	460	0.3454187	0.3062844		-8.0	30
Perfluoroheptanoic acid (PFHpA)	A	500	493	0.9500985	0.8511227		-1.5	30
Perfluorooctanoic acid (PFOA)	A	500	496	0.9096161	0.8404851		-0.9	30
Perfluorooctanesulfonic acid (PFOS)	A	464	404	1.00684	0.97812		-12.9	30
Perfluorononanoic acid (PFNA)	A	500	503	0.9600681	0.8407658		0.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2710	0.8726536	0.8881422		8.3	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2030	1.034827	1.065636		-8.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9416954	0.9293174		3.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2560	0.8870079	0.8575558		2.5	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2580	1.890252	1.906923		9.1	30
9Cl-PF3ONS (F53B Major)	A	2330	2740	4.003141	4.124835		17.4	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2390	1.564661	1.538045		1.2	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1920	0.113234	0.1006413		-23.3	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2760	0.8256201	1.008614		15.1	30
Perfluorodecanoic acid (PFDA)	A	2500	2800	0.94938	0.9708773		11.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2240	0.9872099	0.9971611		-10.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2340	3.684554	3.754546		5.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.5160624	0.5240782		4.4	30
N-EtFOSAA	A	2500	2610	1.038731	1.045165		4.2	30
N-MeFOSAA	A	2500	2220	1.305848	1.294316		-11.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2540	0.9277335	0.9392104		1.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2360	1.103444	1.09036		-5.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2280	0.6583436	0.7058362		-5.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2450	1.118371	1.233346		4.9	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2790	0.8979885	0.8995486		11.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2480	0.3492842	0.3410062		3.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2490	0.3693497	0.3382475		-0.4	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2090	0.3204893	0.3006576		-16.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2460	0.9794421	1.000911		7.9	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2640	0.5122801	0.5277206		5.6	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2600	0.5962392	0.6119762		3.9	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2390	1.130289	1.201004		0.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2510	1.028871	1.014665		6.6	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2760	0.9026781	0.9618613		10.2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2530	0.3454187	0.3411156		1.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2610	0.9500985	0.9195254		4.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2640	0.9096161	0.9105787		5.7	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2150	1.00684	1.039446		-7.4	30
Perfluorononanoic acid (PFNA)	A	2500	2790	0.9600681	0.9562091		11.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066490-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2690	0.8726536	0.8815901		7.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	1990	1.034827	1.046355		-10.2	30
Perfluoropentanoic acid (PFPeA)	A	2500	2590	0.9416954	0.9322723		3.8	30
Perfluorohexanoic acid (PFHxA)	A	2500	2570	0.8870079	0.8589575		2.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2740	1.890252	2.029447		16.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2670	4.003141	4.022994		14.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2470	1.564661	1.591407		4.7	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1910	0.113234	0.1003395		-23.5	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2750	0.8256201	1.003467		14.5	30
Perfluorodecanoic acid (PFDA)	A	2500	2810	0.94938	0.975884		12.4	30
Perfluorododecanoic acid (PFDoA)	A	2500	2660	0.9872099	1.182248		6.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2340	3.684554	3.757305		5.4	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2570	0.5160624	0.5423832		8.0	30
N-EtFOSAA	A	2500	2430	1.038731	0.9720365		-3.0	30
N-MeFOSAA	A	2500	2200	1.305848	1.285461		-11.9	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2500	0.9277335	0.9213056		-0.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2380	1.103444	1.101293		-4.8	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2140	0.6583436	0.6616038		-11.2	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2470	1.118371	1.241125		5.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2670	0.8979885	0.8589759		6.7	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2620	0.3492842	0.3604592		9.4	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2630	0.3693497	0.3580286		5.3	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2150	0.3204893	0.3095182		-13.9	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2410	0.9794421	0.9800692		5.7	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2600	0.5122801	0.5201509		4.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2610	0.5962392	0.6143938		4.3	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2560	1.130289	1.286875		7.6	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2440	1.028871	0.9886165		3.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2730	0.9026781	0.9519951		9.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2600	0.3454187	0.3498323		3.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2720	0.9500985	0.9585035		8.9	30
Perfluorooctanoic acid (PFOA)	A	2500	2630	0.9096161	0.9050888		5.1	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2140	1.00684	1.034549		-7.9	30
Perfluorononanoic acid (PFNA)	A	2500	3090	0.9600681	1.059936		23.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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No certified Analyses included in this Report

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
Tighe & Bond

Address: 120 Front Street, Worcester, MA 01610

Phone: 508-754-2201

Project Name: Princeton Soil Sampling - 22 Mountain

Project Location: Princeton, MA

Project Number: P-0534017

Project Manager: Jeff Arps/Michael Scherer

Pace Analytical Quote Name/Number

Invoice Recipient: Tighe & Bond

Sampled By: M Scherer

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
01	22MTN S-1 (6-12)	10/27/21	08:00	GRAB	S	U	1				
02	22MTN S-1 (12-24)		08:00				/				
03	22MTN S-3 (6-12)		08:30				/				
04	22MTN S-4 (6-12)		08:50				/				
05	22MTN S-4 (12-18)		08:50				/				
06	22MTN S-5 (6-12)		09:00				/				
07	22MTN S-5 (12-18)		09:00				/				
08	22MTN S-6 (6-12)		09:30				/				
09	22MTN S-7 (6-12)		10:00				/				
10	22MTN S-8 (6-12)		10:30				/				
11	22MTN S-8 (12-18)		10:30				/				
12	22MTN S-10 (0-6)		11:00				/				
13	22MTN S-11 (0-12)		11:30				/				

Client Comments:

Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 12:00

Received by: (signature) *[Signature]* Date/Time: 10/29/21 18:15

Relinquished by: (signature) *[Signature]* Date/Time: 10/29/21 2:03 PM

Received by: (signature) *[Signature]* Date/Time: 10/29/21 10:49 AM

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

Relinquished by: (signature) *[Signature]* Date/Time: [Blank]

Received by: (signature) *[Signature]* Date/Time: [Blank]

1800 Elm Street SE
Minneapolis, MN 55414

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 7-Day 10-Day PFAS 10-Day (std) 3-Day 4-Day

Due Date: Field Filtered Lab to Filter

Requested Approval: Field Filtered Lab to Filter

Format: PDF EXCEL SOXHLET

Other: CLP Like Data Pkg Required: NON SOXHLET

Email To: mjscherer@tighebond.com

Fax To #: [Blank]

ANALYSIS REQUESTED

Preservation Code	Counter Use Only	Total Number Of	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1							
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*Pace Analytical is not responsible for missing samples from prepacked coolers

*Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

*Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

MA RCP Required MA State DW Required

MCP Certification Form Required RCP Certification Form Required

CT RCP Required

Special Requirements: [Blank]

Project Entity: Government Municipality WRTA Other Chromatogram AIHA-LAP, LLC School AMBA City Brownfield

PWSID #: [Blank]

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.



Phone: 612-607-6400
Fax: 612-607-6344

20190710

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
 Address: 120 Front Street, Worcester, MA 01610
 Phone: 508-754-2201
 Project Location: Princeton, MA
 Project Number: P-0534017
 Project Manager: Jeff Arps/Michael Scherer
 Invoice Recipient: Tighe & Bond
 Sampled By: M Scherer

Doc # 381 Rev 4_01/08/2020

1800 Elm Street SE
Minneapolis, MN 55414

CHAIN OF CUSTODY RECORD

ANALYSIS REQUESTED

Page 2 of 2

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	Analysis Requested				Preservation Code	
							VIALS	GLASS	PLASTIC	BACTERIA		
14	22MTN S-12 (0-12)	12:00	10/27/21	GRAB	S	U						
15	22MTN S-13 (0-12)	12:30										
16	22MTN S-13 (12-24)	12:30										
17	TRIP BLANK											
18	FIELD BLANK	08:00										
19	EQUIPMENT BLANK	12:00										
20	RINSATE	08:00										

Client Comments:

Relinquished by: (signature) *[Signature]* Date/Time: 10/27/21 12:00

Received by: (signature) *[Signature]* Date/Time: 10/27/21 12:00

Relinquished by: (signature) *[Signature]* Date/Time: 2035

Received by: (signature) *[Signature]* Date/Time: 10/27/21 20:35

Relinquished by: (signature) *[Signature]* Date/Time: []

Received by: (signature) *[Signature]* Date/Time: []

Relinquished by: (signature) *[Signature]* Date/Time: []

Received by: (signature) *[Signature]* Date/Time: []

Comments:

MA MCP Required MA State DW Required

MA Certification Form Required

CT RCP Required

RCP Certification Form Required

MA State DW Required

PWSID # []

Project Entity: Government Federal City Municipality 21 J Brownfield MWRA School MBTA WRTA Other Chromatogram AIHA-LAP, LLC

NECAC and AIHA-LAP, LLC Accredited

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B
 Received By MA Date 10/29/11 Time 2035
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.0
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? MA Were Samples Tampered with? MA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? MA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? RT On COC? RT
 Do all samples have the proper pH? MA Acid _____ Base _____

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

December 6, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

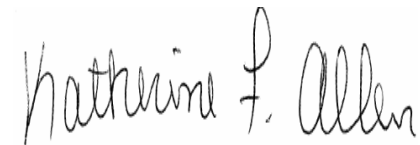
Project Location: 18 MTN, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21K1406

Enclosed are results of analyses for samples as received by the laboratory on November 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 12/6/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21K1406

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 18 MTN, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
18MTN S-1	21K1406-01	Soil		SM 2540G SOP-466 PFAS	
18MTN S-2	21K1406-02	Soil		SM 2540G SOP-466 PFAS	
18MTN S-3	21K1406-03	Soil		SM 2540G SOP-466 PFAS	
18MTN S-4	21K1406-04	Soil		SM 2540G SOP-466 PFAS	
18MTN S-5	21K1406-05	Soil		SM 2540G SOP-466 PFAS	
18MTN S-6	21K1406-06	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopycinski
Laboratory Director

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-1

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.19	0.88	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.88	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoropentanoic acid (PFPeA)	0.48	0.88	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorohexanoic acid (PFHxA)	0.32	0.88	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.88	0.25	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
9Cl-PF3ONS (F53B Major)	ND	0.88	0.22	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.88	0.28	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.88	0.43	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.88	0.23	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorodecanoic acid (PFDA)	0.40	0.88	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorododecanoic acid (PFDoA)	0.35	0.88	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.88	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.88	0.26	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
N-EtFOSAA	ND	0.88	0.25	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
N-MeFOSAA	ND	0.88	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorotetradecanoic acid (PFTA)	0.22	0.88	0.17	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorotridecanoic acid (PFTrDA)	0.20	0.88	0.20	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.88	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.88	0.21	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.88	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.88	0.24	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.88	0.27	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.88	0.28	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.88	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.88	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.88	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.88	0.20	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.88	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoroundecanoic acid (PFUnA)	0.40	0.88	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.88	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluoroheptanoic acid (PFHpA)	0.33	0.88	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorooctanoic acid (PFOA)	1.3	0.88	0.25	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorooctanesulfonic acid (PFOS)	2.7	0.88	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH
Perfluorononanoic acid (PFNA)	0.32	0.88	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:35	BLH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Sampled: 11/17/2021 12:00

Field Sample #: 18MTN S-1

Sample ID: 21K1406-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	43.4		% Wt	1		SM 2540G	11/26/21	11/27/21 14:58	MJH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-2

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.46	0.062	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.46	0.086	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
9Cl-PF3ONS (F53B Major)	ND	0.46	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.46	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.46	0.22	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.46	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorodecanoic acid (PFDA)	ND	0.46	0.060	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorododecanoic acid (PFDoA)	0.091	0.46	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.46	0.076	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.46	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
N-EtFOSAA	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
N-MeFOSAA	ND	0.46	0.084	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.46	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.46	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.46	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.46	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.46	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.46	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.46	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.46	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.46	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.46	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.46	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.46	0.068	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoroundecanoic acid (PFUnA)	0.13	0.46	0.084	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.46	0.072	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.46	0.067	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorooctanoic acid (PFOA)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorooctanesulfonic acid (PFOS)	0.18	0.46	0.063	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH
Perfluorononanoic acid (PFNA)	ND	0.46	0.076	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:42	BLH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-2

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.2		% Wt	1		SM 2540G	11/26/21	11/27/21 14:58	MJH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-3

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.40	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoropentanoic acid (PFPeA)	0.14	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.52	0.098	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorodecanoic acid (PFDA)	0.23	0.52	0.067	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorododecanoic acid (PFDoA)	0.088	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
N-EtFOSAA	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.52	0.084	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.096	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoroundecanoic acid (PFUnA)	0.19	0.52	0.095	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluoroheptanoic acid (PFHpA)	0.13	0.52	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorooctanoic acid (PFOA)	0.24	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorooctanesulfonic acid (PFOS)	2.1	0.52	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH
Perfluorononanoic acid (PFNA)	0.51	0.52	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:49	BLH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-3

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.6		% Wt	1		SM 2540G	11/26/21	11/27/21 14:58	MJH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-4

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.10	0.48	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	0.073	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorodecanoic acid (PFDA)	0.26	0.48	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorododecanoic acid (PFDoA)	0.077	0.48	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
N-EtFOSAA	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
N-MeFOSAA	ND	0.48	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	0.076	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.070	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoroundecanoic acid (PFUnA)	0.17	0.48	0.087	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.48	0.069	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorooctanoic acid (PFOA)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorooctanesulfonic acid (PFOS)	1.4	0.48	0.065	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH
Perfluorononanoic acid (PFNA)	0.26	0.48	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 17:56	BLH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Sampled: 11/17/2021 12:00

Field Sample #: 18MTN S-4

Sample ID: 21K1406-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.7		% Wt	1		SM 2540G	11/26/21	11/27/21 14:58	MJH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-5

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.72	0.69	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.69	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoropentanoic acid (PFPeA)	0.40	0.69	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorohexanoic acid (PFHxA)	0.27	0.69	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.69	0.19	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
9Cl-PF3ONS (F53B Major)	ND	0.69	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.69	0.22	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.69	0.33	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.69	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorodecanoic acid (PFDA)	0.30	0.69	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorododecanoic acid (PFDoA)	0.12	0.69	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.69	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.69	0.21	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
N-EtFOSAA	ND	0.69	0.19	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
N-MeFOSAA	ND	0.69	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.69	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.69	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.69	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.69	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.69	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.69	0.19	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.69	0.21	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.69	0.22	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.69	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.69	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.69	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.69	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.69	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoroundecanoic acid (PFUnA)	0.20	0.69	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.69	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluoroheptanoic acid (PFHpA)	0.44	0.69	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorooctanoic acid (PFOA)	2.4	0.69	0.20	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorooctanesulfonic acid (PFOS)	4.0	0.69	0.094	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH
Perfluorononanoic acid (PFNA)	0.67	0.69	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:03	BLH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-5

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	58.9		% Wt	1		SM 2540G	11/26/21	11/27/21 14:58	MJH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-6

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.12	0.53	0.071	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
9Cl-PF3ONS (F53B Major)	ND	0.53	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.53	0.26	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.53	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorodecanoic acid (PFDA)	0.18	0.53	0.069	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.53	0.082	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.53	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
N-EtFOSAA	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
N-MeFOSAA	ND	0.53	0.097	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.53	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.53	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.53	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.53	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.53	0.086	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.53	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.53	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.53	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.53	0.078	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoroundecanoic acid (PFUnA)	0.13	0.53	0.097	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.53	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluoroheptanoic acid (PFHpA)	0.090	0.53	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorooctanoic acid (PFOA)	0.29	0.53	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorooctanesulfonic acid (PFOS)	2.4	0.53	0.073	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH
Perfluorononanoic acid (PFNA)	0.28	0.53	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:18	BLH

Project Location: 18 MTN, Princeton, MA

Sample Description:

Work Order: 21K1406

Date Received: 11/19/2021

Field Sample #: 18MTN S-6

Sampled: 11/17/2021 12:00

Sample ID: 21K1406-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.8		% Wt	1		SM 2540G	11/26/21	11/27/21 14:59	MJH

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21K1406-01 [18MTN S-1]	B295606	11/26/21
21K1406-02 [18MTN S-2]	B295606	11/26/21
21K1406-03 [18MTN S-3]	B295606	11/26/21
21K1406-04 [18MTN S-4]	B295606	11/26/21
21K1406-05 [18MTN S-5]	B295606	11/26/21
21K1406-06 [18MTN S-6]	B295606	11/26/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21K1406-01 [18MTN S-1]	B295330	5.88	5.00	11/29/21
21K1406-02 [18MTN S-2]	B295330	5.83	5.00	11/29/21
21K1406-03 [18MTN S-3]	B295330	5.85	5.00	11/29/21
21K1406-04 [18MTN S-4]	B295330	5.98	5.00	11/29/21
21K1406-05 [18MTN S-5]	B295330	5.54	5.00	11/29/21
21K1406-06 [18MTN S-6]	B295330	5.62	5.00	11/29/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295330 - SOP 465-PFAAS

Blank (B295330-BLK1)

Prepared: 11/29/21 Analyzed: 12/01/21

Perfluorobutanoic acid (PFBA)	ND	0.40	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.40	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.40	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.40	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.40	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.40	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.40	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.40	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.40	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.40	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.40	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.40	µg/kg wet							
N-EtFOSAA	ND	0.40	µg/kg wet							
N-MeFOSAA	ND	0.40	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.40	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.40	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.40	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.40	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.40	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.40	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.40	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.40	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.40	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.40	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.40	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.40	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.40	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.40	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.40	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.40	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.40	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.40	µg/kg wet							

LCS (B295330-BS1)

Prepared: 11/29/21 Analyzed: 12/01/21

Perfluorobutanoic acid (PFBA)	2.00	0.39	µg/kg wet	2.18		91.9	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.87	0.39	µg/kg wet	1.92		97.4	72-128			
Perfluoropentanoic acid (PFPeA)	1.92	0.39	µg/kg wet	2.18		88.4	69-132			
Perfluorohexanoic acid (PFHxA)	1.95	0.39	µg/kg wet	2.18		89.4	70-132			
11Cl-PF3OUdS (F53B Minor)	1.97	0.39	µg/kg wet	2.05		96.1	50-150			
9Cl-PF3ONS (F53B Major)	1.94	0.39	µg/kg wet	2.03		95.7	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.97	0.39	µg/kg wet	2.05		96.2	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.94	0.39	µg/kg wet	2.18		89.0	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.29	0.39	µg/kg wet	2.09		109	65-137			
Perfluorodecanoic acid (PFDA)	1.99	0.39	µg/kg wet	2.18		91.3	69-133			
Perfluorododecanoic acid (PFDoA)	2.36	0.39	µg/kg wet	2.18		109	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.10	0.39	µg/kg wet	1.94		109	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B295330 - SOP 465-PFAAS										
LCS (B295330-BS1)										
					Prepared: 11/29/21 Analyzed: 12/01/21					
Perfluoroheptanesulfonic acid (PFHpS)	2.16	0.39	µg/kg wet	2.08		104	70-132			
N-EtFOSAA	2.90	0.39	µg/kg wet	2.18		133	61-139			
N-MeFOSAA	2.75	0.39	µg/kg wet	2.18		126	63-144			
Perfluorotetradecanoic acid (PFTA)	2.03	0.39	µg/kg wet	2.18		93.3	69-133			
Perfluorotridecanoic acid (PFTrDA)	1.96	0.39	µg/kg wet	2.18		89.9	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.04	0.39	µg/kg wet	2.04		99.9	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.19	0.39	µg/kg wet	2.10		104	59-134			
Perfluorooctanesulfonamide (FOSA)	2.05	0.39	µg/kg wet	2.18		94.4	67-137			
Perfluorononanesulfonic acid (PFNS)	1.73	0.39	µg/kg wet	2.09		83.1	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.12	0.39	µg/kg wet	2.18		97.4	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.26	0.39	µg/kg wet	2.18		104	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.84	0.39	µg/kg wet	1.98		93.1	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.25	0.39	µg/kg wet	2.18		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.16	0.39	µg/kg wet	2.18		99.4	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.28	0.39	µg/kg wet	2.07		110	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.91	0.39	µg/kg wet	2.05		93.2	73-123			
Perfluoroundecanoic acid (PFUnA)	2.02	0.39	µg/kg wet	2.18		92.7	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.23	0.39	µg/kg wet	2.18		102	50-150			
Perfluoroheptanoic acid (PFHpA)	2.15	0.39	µg/kg wet	2.18		99.0	71-131			
Perfluorooctanoic acid (PFOA)	2.10	0.39	µg/kg wet	2.18		96.4	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.78	0.39	µg/kg wet	2.01		88.5	68-136			
Perfluorononanoic acid (PFNA)	2.03	0.39	µg/kg wet	2.18		93.4	72-129			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

SSR Samantha S Runyon
 STATION PDF Management Station
 MJH Matthew J. Hammond
 JFC James F. Constantino
 JLH Jessica L. Hoffman

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
18MTN S-1 (21K1406-01) Lab File ID: 21K1406-01.d Analyzed: 12/02/21 17:35									
M8FOSA	343799.6	4.044533	516,491.00	4.044533	67	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	106526.1	2.628217	194,541.00	2.644867	55	50 - 150	-0.0167	+/-0.50	
M2PFTA	1014930	4.386567	1,680,862.00	4.394667	60	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	210484.6	3.866867	268,229.00	3.86685	78	50 - 150	0.0000	+/-0.50	
MPFBA	598251.9	1.12495	845,328.00	1.12495	71	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	207527.5	2.945967	273,580.00	2.954083	76	50 - 150	-0.0081	+/-0.50	
M6PFDA	869143.9	3.86735	1,162,829.00	3.867333	75	50 - 150	0.0000	+/-0.50	
M3PFBS	150751.8	2.011067	190,734.00	2.019367	79	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1107594	4.01	1,596,639.00	4.017983	69	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	158113.1	3.509633	112,436.00	3.517617	141	50 - 150	-0.0080	+/-0.50	
M5PFPeA	634783.4	1.824517	825,110.00	1.8328	77	50 - 150	-0.0083	+/-0.50	
M5PFHxA	866659.5	2.7145	1,126,300.00	2.730867	77	50 - 150	-0.0164	+/-0.50	
M3PFHxS	115418.6	3.28425	145,931.00	3.2923	79	50 - 150	-0.0080	+/-0.50	
M4PFHpA	869726.6	3.251867	1,097,299.00	3.25995	79	50 - 150	-0.0081	+/-0.50	
M8PFOA	844608.9	3.51815	1,050,193.00	3.52615	80	50 - 150	-0.0080	+/-0.50	
M8PFOS	124608.8	3.7083	156,089.00	3.7083	80	50 - 150	0.0000	+/-0.50	
M9PFNA	760625.4	3.7093	1,109,090.00	3.709283	69	50 - 150	0.0000	+/-0.50	
MPFDoA	1082027	4.15315	1,559,132.00	4.153133	69	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	136893	4.017467	181,890.00	4.02545	75	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	120631.5	3.9379	165,605.00	3.945883	73	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<p>18MTN S-2 (21K1406-02) Lab File ID: 21K1406-02.d Analyzed: 12/02/21 17:42</p>									
M8FOSA	404864.2	4.044533	516,491.00	4.044533	78	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	150002	2.628217	194,541.00	2.644867	77	50 - 150	-0.0167	+/-0.50	
M2PFTA	1349274	4.38655	1,680,862.00	4.394667	80	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	194795	3.86685	268,229.00	3.86685	73	50 - 150	0.0000	+/-0.50	
MPFBA	658352.3	1.12495	845,328.00	1.12495	78	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	214887.3	2.945967	273,580.00	2.954083	79	50 - 150	-0.0081	+/-0.50	
M6PFDA	954609.5	3.867333	1,162,829.00	3.867333	82	50 - 150	0.0000	+/-0.50	
M3PFBS	168530	2.011083	190,734.00	2.019367	88	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1234472	4.009984	1,596,639.00	4.017983	77	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	141894.3	3.509617	112,436.00	3.517617	126	50 - 150	-0.0080	+/-0.50	
M5PFPeA	682838.6	1.824517	825,110.00	1.8328	83	50 - 150	-0.0083	+/-0.50	
M5PFHxA	928605.9	2.7145	1,126,300.00	2.730867	82	50 - 150	-0.0164	+/-0.50	
M3PFHxS	130451.2	3.28425	145,931.00	3.2923	89	50 - 150	-0.0080	+/-0.50	
M4PFHpA	936084.6	3.251867	1,097,299.00	3.25995	85	50 - 150	-0.0081	+/-0.50	
M8PFOA	939812.4	3.52615	1,050,193.00	3.52615	89	50 - 150	0.0000	+/-0.50	
M8PFOS	131994.2	3.7083	156,089.00	3.7083	85	50 - 150	0.0000	+/-0.50	
M9PFNA	852124	3.7093	1,109,090.00	3.709283	77	50 - 150	0.0000	+/-0.50	
MPFDoA	1256825	4.153133	1,559,132.00	4.153133	81	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	147235.9	4.01745	181,890.00	4.02545	81	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	142102	3.945867	165,605.00	3.945883	86	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
18MTN S-3 (21K1406-03) Lab File ID: 21K1406-03.d Analyzed: 12/02/21 17:49									
M8FOSA	437771.9	4.036533	516,491.00	4.044533	85	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	147333.6	2.628217	194,541.00	2.644867	76	50 - 150	-0.0167	+/-0.50	
M2PFTA	1291520	4.38655	1,680,862.00	4.394667	77	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	191653.1	3.86685	268,229.00	3.86685	71	50 - 150	0.0000	+/-0.50	
MPFBA	667083.3	1.12495	845,328.00	1.12495	79	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	233345	2.937833	273,580.00	2.954083	85	50 - 150	-0.0162	+/-0.50	
M6PFDA	979380.9	3.86735	1,162,829.00	3.867333	84	50 - 150	0.0000	+/-0.50	
M3PFBS	161789.8	2.011067	190,734.00	2.019367	85	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1297136	4.01	1,596,639.00	4.017983	81	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	136333.2	3.509617	112,436.00	3.517617	121	50 - 150	-0.0080	+/-0.50	
M5PFPeA	679842.8	1.824517	825,110.00	1.8328	82	50 - 150	-0.0083	+/-0.50	
M5PFHxA	933955.8	2.7145	1,126,300.00	2.730867	83	50 - 150	-0.0164	+/-0.50	
M3PFHxS	122031.1	3.28425	145,931.00	3.2923	84	50 - 150	-0.0080	+/-0.50	
M4PFHpA	928830.9	3.251867	1,097,299.00	3.25995	85	50 - 150	-0.0081	+/-0.50	
M8PFOA	922089.7	3.51815	1,050,193.00	3.52615	88	50 - 150	-0.0080	+/-0.50	
M8PFOS	130846.4	3.7083	156,089.00	3.7083	84	50 - 150	0.0000	+/-0.50	
M9PFNA	823702.8	3.7093	1,109,090.00	3.709283	74	50 - 150	0.0000	+/-0.50	
MPFDoA	1232435	4.153133	1,559,132.00	4.153133	79	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	153215.9	4.017467	181,890.00	4.02545	84	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	138191.7	3.937883	165,605.00	3.945883	83	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
18MTN S-4 (21K1406-04)									
			Lab File ID: 21K1406-04.d			Analyzed: 12/02/21 17:56			
M8FOSA	471160.1	4.044533	516,491.00	4.044533	91	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	166984	2.628217	194,541.00	2.644867	86	50 - 150	-0.0167	+/-0.50	
M2PFTA	1471122	4.38655	1,680,862.00	4.394667	88	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	218597.8	3.86685	268,229.00	3.86685	81	50 - 150	0.0000	+/-0.50	
MPFBA	746370.1	1.12495	845,328.00	1.12495	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	252551	2.93785	273,580.00	2.954083	92	50 - 150	-0.0162	+/-0.50	
M6PFDA	1074186	3.86735	1,162,829.00	3.867333	92	50 - 150	0.0000	+/-0.50	
M3PFBS	181492.2	2.002783	190,734.00	2.019367	95	50 - 150	-0.0166	+/-0.50	
M7PFUnA	1429510	4.009984	1,596,639.00	4.017983	90	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	158537.8	3.509617	112,436.00	3.517617	141	50 - 150	-0.0080	+/-0.50	
M5PFPeA	766877.5	1.816233	825,110.00	1.8328	93	50 - 150	-0.0166	+/-0.50	
M5PFHxA	1037249	2.7145	1,126,300.00	2.730867	92	50 - 150	-0.0164	+/-0.50	
M3PFHxS	135975.8	3.28425	145,931.00	3.2923	93	50 - 150	-0.0080	+/-0.50	
M4PFHpA	1060039	3.251867	1,097,299.00	3.25995	97	50 - 150	-0.0081	+/-0.50	
M8PFOA	995438.8	3.51815	1,050,193.00	3.52615	95	50 - 150	-0.0080	+/-0.50	
M8PFOS	145132.3	3.7083	156,089.00	3.7083	93	50 - 150	0.0000	+/-0.50	
M9PFNA	959262.4	3.7093	1,109,090.00	3.709283	86	50 - 150	0.0000	+/-0.50	
MPFDoA	1416481	4.153133	1,559,132.00	4.153133	91	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	175748.1	4.017467	181,890.00	4.02545	97	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	162049.1	3.937883	165,605.00	3.945883	98	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
18MTN S-5 (21K1406-05) Lab File ID: 21K1406-05.d Analyzed: 12/02/21 18:03									
M8FOSA	416726.4	4.04455	516,491.00	4.044533	81	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	143834.3	2.628233	194,541.00	2.644867	74	50 - 150	-0.0166	+/-0.50	
M2PFTA	1358610	4.386567	1,680,862.00	4.394667	81	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	196153.6	3.866867	268,229.00	3.86685	73	50 - 150	0.0000	+/-0.50	
MPFBA	671658.8	1.12495	845,328.00	1.12495	79	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	225391.6	2.93785	273,580.00	2.954083	82	50 - 150	-0.0162	+/-0.50	
M6PFDA	960630.6	3.867367	1,162,829.00	3.867333	83	50 - 150	0.0000	+/-0.50	
M3PFBS	163094.3	2.011083	190,734.00	2.019367	86	50 - 150	-0.0083	+/-0.50	
M7PFUnA	1301653	4.010016	1,596,639.00	4.017983	82	50 - 150	-0.0080	+/-0.50	
M2-6:2FTS	133473.4	3.509633	112,436.00	3.517617	119	50 - 150	-0.0080	+/-0.50	
M5PFPeA	685551.3	1.824533	825,110.00	1.8328	83	50 - 150	-0.0083	+/-0.50	
M5PFHxA	914400.9	2.7145	1,126,300.00	2.730867	81	50 - 150	-0.0164	+/-0.50	
M3PFHxS	127078.4	3.284267	145,931.00	3.2923	87	50 - 150	-0.0080	+/-0.50	
M4PFHpA	943652.6	3.251883	1,097,299.00	3.25995	86	50 - 150	-0.0081	+/-0.50	
M8PFOA	904053.5	3.518167	1,050,193.00	3.52615	86	50 - 150	-0.0080	+/-0.50	
M8PFOS	138964.8	3.708317	156,089.00	3.7083	89	50 - 150	0.0000	+/-0.50	
M9PFNA	870857.8	3.709317	1,109,090.00	3.709283	79	50 - 150	0.0000	+/-0.50	
MPFDoA	1284321	4.15315	1,559,132.00	4.153133	82	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	145669.5	4.017483	181,890.00	4.02545	80	50 - 150	-0.0080	+/-0.50	
d3-NMeFOSAA	141928.9	3.9459	165,605.00	3.945883	86	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
18MTN S-6 (21K1406-06) Lab File ID: 21K1406-06.d Analyzed: 12/02/21 18:18									
M8FOSA	406666.6	4.044533	516,491.00	4.044533	79	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	156561.4	2.628233	194,541.00	2.628217	80	50 - 150	0.0000	+/-0.50	
M2PFTA	1359196	4.394683	1,680,862.00	4.394667	81	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	204140	3.86685	268,229.00	3.86685	76	50 - 150	0.0000	+/-0.50	
MPFBA	685593.8	1.12495	845,328.00	1.12495	81	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	225899.5	2.93785	273,580.00	2.93785	83	50 - 150	0.0000	+/-0.50	
M6PFDA	998099.8	3.86735	1,162,829.00	3.86735	86	50 - 150	0.0000	+/-0.50	
M3PFBS	167625	2.0028	190,734.00	2.002783	88	50 - 150	0.0000	+/-0.50	
M7PFUnA	1340797	4.01	1,596,639.00	4.009984	84	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	136722.1	3.509633	112,436.00	3.509617	122	50 - 150	0.0000	+/-0.50	
M5PFPeA	700312.3	1.816233	825,110.00	1.816233	85	50 - 150	0.0000	+/-0.50	
M5PFHxA	941701.1	2.7145	1,126,300.00	2.7145	84	50 - 150	0.0000	+/-0.50	
M3PFHxS	125163.1	3.284267	145,931.00	3.284267	86	50 - 150	0.0000	+/-0.50	
M4PFHpA	956062.4	3.251867	1,097,299.00	3.251867	87	50 - 150	0.0000	+/-0.50	
M8PFOA	941833	3.51815	1,050,193.00	3.52615	90	50 - 150	-0.0080	+/-0.50	
M8PFOS	136356.5	3.7083	156,089.00	3.7083	87	50 - 150	0.0000	+/-0.50	
M9PFNA	877985.4	3.7093	1,109,090.00	3.7093	79	50 - 150	0.0000	+/-0.50	
MPFDoA	1294071	4.153133	1,559,132.00	4.153133	83	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	152251.5	4.017467	181,890.00	4.017467	84	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	142725.9	3.937883	165,605.00	3.937883	86	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B295330-BLK1)			Lab File ID: B295330-BLK1.d			Analyzed: 12/01/21 13:46			
M8FOSA	501733.6	4.044533	512,758.00	4.044533	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	206777.9	2.6531	241,570.00	2.6531	86	50 - 150	0.0000	+/-0.50	
M2PFTA	1783765	4.4028	2,110,880.00	4.4028	85	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	251456.2	3.875067	272,520.00	3.875083	92	50 - 150	0.0000	+/-0.50	
MPFBA	810621.6	1.12495	885,906.00	1.12495	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	337729.2	2.9622	316,881.00	2.9622	107	50 - 150	0.0000	+/-0.50	
M6PFDA	1203356	3.8756	1,255,948.00	3.8756	96	50 - 150	0.0000	+/-0.50	
M3PFBS	182023.6	2.02765	202,561.00	2.02765	90	50 - 150	0.0000	+/-0.50	
M7PFUnA	1676832	4.025983	1,693,363.00	4.025983	99	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	140721.1	3.517617	156,766.00	3.517617	90	50 - 150	0.0000	+/-0.50	
M5PFPeA	798233.4	1.8411	875,966.00	1.8411	91	50 - 150	0.0000	+/-0.50	
M5PFHxA	1110893	2.73905	1,205,292.00	2.73905	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	147583.4	3.300333	169,009.00	3.30035	87	50 - 150	0.0000	+/-0.50	
M4PFHpA	1093239	3.268033	1,229,550.00	3.268033	89	50 - 150	0.0000	+/-0.50	
M8PFOA	1159567	3.534133	1,277,448.00	3.53415	91	50 - 150	0.0000	+/-0.50	
M8PFOS	167092.1	3.716267	179,836.00	3.716267	93	50 - 150	0.0000	+/-0.50	
M9PFNA	1136827	3.71725	1,303,087.00	3.717267	87	50 - 150	0.0000	+/-0.50	
MPFDoA	1586278	4.1612	1,849,187.00	4.161217	86	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	305668.4	4.03345	331,170.00	4.03345	92	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	266531	3.953867	313,935.00	3.953883	85	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B295330-BS1)			Lab File ID: B295330-BS1.d			Analyzed: 12/01/21 13:39			
M8FOSA	519401.5	4.044533	512,758.00	4.044533	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	207562.4	2.661333	241,570.00	2.6531	86	50 - 150	0.0082	+/-0.50	
M2PFTA	2029890	4.4028	2,110,880.00	4.4028	96	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	333562.4	3.875067	272,520.00	3.875083	122	50 - 150	0.0000	+/-0.50	
MPFBA	840175.4	1.13325	885,906.00	1.12495	95	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	311441.2	2.9622	316,881.00	2.9622	98	50 - 150	0.0000	+/-0.50	
M6PFDA	1316946	3.8756	1,255,948.00	3.8756	105	50 - 150	0.0000	+/-0.50	
M3PFBS	191615	2.035933	202,561.00	2.02765	95	50 - 150	0.0083	+/-0.50	
M7PFUnA	1686527	4.025967	1,693,363.00	4.025983	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	155442.2	3.5256	156,766.00	3.517617	99	50 - 150	0.0080	+/-0.50	
M5PFPeA	838934.9	1.849383	875,966.00	1.8411	96	50 - 150	0.0083	+/-0.50	
M5PFHxA	1160316	2.747233	1,205,292.00	2.73905	96	50 - 150	0.0082	+/-0.50	
M3PFHxS	159817.6	3.300333	169,009.00	3.30035	95	50 - 150	0.0000	+/-0.50	
M4PFHpA	1147625	3.268033	1,229,550.00	3.268033	93	50 - 150	0.0000	+/-0.50	
M8PFOA	1252613	3.534133	1,277,448.00	3.53415	98	50 - 150	0.0000	+/-0.50	
M8PFOS	173061.8	3.716267	179,836.00	3.716267	96	50 - 150	0.0000	+/-0.50	
M9PFNA	1202188	3.717267	1,303,087.00	3.717267	92	50 - 150	0.0000	+/-0.50	
MPFDoA	1704329	4.1612	1,849,187.00	4.161217	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	324710.5	4.03345	331,170.00	4.03345	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	307688.2	3.953867	313,935.00	3.953883	98	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066054-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	425	0.837413	0.7853845		-15.0	30
Perfluorobutanesulfonic acid (PFBS)	A	444	398	0.9707226	0.9442111		-10.3	30
Perfluoropentanoic acid (PFPeA)	A	500	409	0.9163201	0.824339		-18.2	30
Perfluorohexanoic acid (PFHxA)	A	500	417	0.850226	0.8026516		-16.6	30
11Cl-PF3OUdS (F53B Minor)	A	472	392	1.962472	1.579236		-16.9	30
9Cl-PF3ONS (F53B Major)	A	466	440	4.081904	3.656913		-5.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	425	1.487743	1.547491		-10.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	451	0.1341855	0.1194561		-9.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	508	0.7727103	0.8672767		5.9	30
Perfluorodecanoic acid (PFDA)	A	500	430	0.9077273	0.8820731		-14.0	30
Perfluorododecanoic acid (PFDoA)	A	500	460	0.914647	0.7969984		-8.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	388	3.687622	3.233886		-12.9	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	434	0.4723281	0.4370807		-8.9	30
N-EtFOSAA	A	500	443	0.9374896	0.8553092		-11.3	30
N-MeFOSAA	A	500	448	1.054669	1.011031		-10.4	30
Perfluorotetradecanoic acid (PFTA)	A	500	408	0.8552112	0.7786525		-18.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	418	0.9780239	0.9566304		-16.5	30
Perfluorodecanesulfonic acid (PFDS)	A	482	501	0.6371807	0.6960216		4.0	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	429	1.07418	1.108528		-8.3	30
Perfluorooctanesulfonamide (FOSA)	A	500	460	0.810352	0.8194362		-8.0	30
Perfluorononanesulfonic acid (PFNS)	A	481	390	0.3496386	0.3078247		-18.9	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	463	0.346892	0.3302606		-7.5	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	438	0.2988718	0.2864862		-12.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	388	0.9379263	0.8779932		-15.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	431	0.4927369	0.4374185		-13.8	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	448	0.5777971	0.5277828		-10.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	455	1.04777	1.127305		-4.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	407	0.9161502	0.8808931		-13.5	30
Perfluoroundecanoic acid (PFUnA)	A	500	413	0.8584422	0.7956876		-17.4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	467	0.3197121	0.3020298		-6.6	30
Perfluoroheptanoic acid (PFHpA)	A	500	450	0.9034819	0.8349209		-10.0	30
Perfluorooctanoic acid (PFOA)	A	500	438	0.8637994	0.7990697		-12.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	435	0.9743028	1.010044		-6.2	30
Perfluorononanoic acid (PFNA)	A	500	414	0.9320124	0.8017009		-17.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066054-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2390	0.837413	0.8830412		-4.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2300	0.9707226	1.091813		3.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2340	0.9163201	0.9415429		-6.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2330	0.850226	0.8965769		-6.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2210	1.962472	1.798167		-6.5	30
9Cl-PF3ONS (F53B Major)	A	2330	2130	4.081904	3.586545		-8.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2360	1.487743	1.708634		-0.05	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2160	0.1341855	0.1148247		-13.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2930	0.7727103	0.9883285		22.2	30
Perfluorodecanoic acid (PFDA)	A	2500	2600	0.9077273	1.064807		3.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2620	0.914647	0.9324741		4.6	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2300	3.687622	3.884754		3.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2470	0.4723281	0.5018779		3.9	30
N-EtFOSAA	A	2500	2780	0.9374896	1.080759		11.3	30
N-MeFOSAA	A	2500	2760	1.054669	1.245414		10.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2420	0.8552112	0.9179206		-3.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2500	0.9780239	1.13299		-0.09	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2600	1.07418	1.326293		11.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2710	0.6371807	0.7520309		12.4	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2650	0.810352	0.9438734		6.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2090	0.3496386	0.3306844		-12.8	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2550	0.346892	0.367161		2.2	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2460	0.2988718	0.3221433		-1.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2330	0.9379263	1.059855		2.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2520	0.4927369	0.5144703		0.7	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2540	0.5777971	0.6005893		1.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2670	1.04777	1.302673		12.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2410	0.9161502	1.046354		2.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2060	0.8584422	0.7947819		-17.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2680	0.3197121	0.3495568		7.2	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2520	0.9034819	0.937898		0.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2420	0.8637994	0.8847915		-3.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2060	0.9743028	0.9576016		-11.0	30
Perfluorononanoic acid (PFNA)	A	2500	2360	0.9320124	0.91574		-5.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066055-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	411	0.837413	0.7582292		-17.9	30
Perfluorobutanesulfonic acid (PFBS)	A	444	368	0.9707226	0.871473		-17.2	30
Perfluoropentanoic acid (PFPeA)	A	500	471	0.9163201	0.9489503		-5.8	30
Perfluorohexanoic acid (PFHxA)	A	500	387	0.850226	0.7461132		-22.5	30
11Cl-PF3OUdS (F53B Minor)	A	472	398	1.962472	1.602966		-15.7	30
9Cl-PF3ONS (F53B Major)	A	466	416	4.081904	3.454538		-10.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	371	1.487743	1.351		-21.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	443	0.1341855	0.117175		-11.5	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	494	0.7727103	0.8423225		2.9	30
Perfluorodecanoic acid (PFDA)	A	500	395	0.9077273	0.8108739		-20.9	30
Perfluorododecanoic acid (PFDoA)	A	500	423	0.914647	0.7323357		-15.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	384	3.687622	3.207529		-13.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	390	0.4723281	0.3929207		-18.1	30
N-EtFOSAA	A	500	448	0.9374896	0.8638465		-10.4	30
N-MeFOSAA	A	500	422	1.054669	0.953383		-15.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	411	0.8552112	0.785193		-17.7	30
Perfluorotridecanoic acid (PFTrDA)	A	500	419	0.9780239	0.9604953		-16.1	30
Perfluorodecanesulfonic acid (PFDS)	A	482	403	0.6371807	0.5592956		-16.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	413	1.07418	1.068158		-11.7	30
Perfluorooctanesulfonamide (FOSA)	A	500	432	0.810352	0.7700525		-13.6	30
Perfluorononanesulfonic acid (PFNS)	A	481	396	0.3496386	0.3124856		-17.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	513	0.346892	0.3662347		2.6	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	439	0.2988718	0.2866765		-12.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	415	0.9379263	0.9403003		-9.1	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	430	0.4927369	0.4365453		-14.0	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	442	0.5777971	0.5209842		-11.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	420	1.04777	1.039743		-11.8	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	397	0.9161502	0.8591633		-15.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	392	0.8584422	0.7548406		-21.6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	431	0.3197121	0.2788143		-13.8	30
Perfluoroheptanoic acid (PFHpA)	A	500	442	0.9034819	0.8194835		-11.6	30
Perfluorooctanoic acid (PFOA)	A	500	431	0.8637994	0.785329		-13.9	30
Perfluorooctanesulfonic acid (PFOS)	A	464	365	0.9743028	0.8478207		-21.2	30
Perfluorononanoic acid (PFNA)	A	500	563	0.9320124	1.090621		12.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066055-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2410	0.837413	0.8920751		-3.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2160	0.9707226	1.025461		-2.6	30
Perfluoropentanoic acid (PFPeA)	A	2500	2360	0.9163201	0.9506695		-5.6	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.850226	0.8695298		-9.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2520	1.962472	2.056222		6.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2520	4.081904	4.269657		8.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2100	1.487743	1.521078		-11.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2210	0.1341855	0.1177663		-11.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2770	0.7727103	0.9359755		15.6	30
Perfluorodecanoic acid (PFDA)	A	2500	2430	0.9077273	0.9968029		-2.8	30
Perfluorododecanoic acid (PFDoA)	A	2500	2750	0.914647	0.9825628		10.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.687622	3.750878		0.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.4723281	0.5035476		4.3	30
N-EtFOSAA	A	2500	2730	0.9374896	1.061231		9.3	30
N-MeFOSAA	A	2500	2620	1.054669	1.183095		4.8	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2380	0.8552112	0.904166		-4.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2470	0.9780239	1.122773		-1.0	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2470	0.6371807	0.6860403		2.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2460	1.07418	1.253984		5.0	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2480	0.810352	0.8830254		-0.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2360	0.3496386	0.3734927		-1.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2800	0.346892	0.4031396		12.1	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2610	0.2988718	0.3411504		4.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2310	0.9379263	1.048081		1.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.4927369	0.5171246		1.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2550	0.5777971	0.6050966		2.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2630	1.04777	1.284297		10.4	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2410	0.9161502	1.042226		2.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2390	0.8584422	0.9197981		-4.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3197121	0.3285708		0.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2490	0.9034819	0.9262332		-0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2370	0.8637994	0.8657417		-5.4	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2350	0.9743028	1.088631		1.1	30
Perfluorononanoic acid (PFNA)	A	2500	2650	0.9320124	1.02934		5.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S066055-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2380	0.837413	0.8798283		-4.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2210	0.9707226	1.04776		-0.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2350	0.9163201	0.9450071		-6.2	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.850226	0.8707169		-9.6	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2380	1.962472	1.943414		1.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2390	4.081904	4.046533		2.7	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2150	1.487743	1.556015		-9.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	0.1341855	0.1107292		-16.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2680	0.7727103	0.9060422		11.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2390	0.9077273	0.9815372		-4.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2660	0.914647	0.9469303		6.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2200	3.687622	3.704543		-1.0	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2560	0.4723281	0.519493		7.5	30
N-EtFOSAA	A	2500	2590	0.9374896	1.005939		3.6	30
N-MeFOSAA	A	2500	2610	1.054669	1.177888		4.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2450	0.8552112	0.9312582		-1.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2520	0.9780239	1.142908		0.8	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2580	0.6371807	0.7152962		6.9	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2480	1.07418	1.265173		6.0	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2550	0.810352	0.9073167		1.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2050	0.3496386	0.3239326		-14.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2870	0.346892	0.4136978		15.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2590	0.2988718	0.3386194		3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2310	0.9379263	1.050811		1.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2500	0.4927369	0.5115356		0.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2530	0.5777971	0.6003438		1.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2290	1.04777	1.120838		-3.8	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2450	0.9161502	1.059669		4.1	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2330	0.8584422	0.8991582		-6.6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2630	0.3197121	0.3426933		5.1	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2480	0.9034819	0.925299		-0.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2430	0.8637994	0.8881727		-2.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2150	0.9743028	0.9987474		-7.2	30
Perfluorononanoic acid (PFNA)	A	2500	2750	0.9320124	1.069721		10.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

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https://www.pacelabs.com/

1800 Elm Street SE
Minneapolis, MN 55414

Doc # 381 Rev 4_01/08/2020

Page 1 of 1

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Name: Princeton PFAS Project
Project Location: 18 Mountain Road, Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps
Pace Analytical Quote Name/Number: Tighe & Bond
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

Requested Turnaround Time:
7-Day 10-Day
PFAS 10-Day (std) Due Date:
Rush-Approval Required
1-Day 3-Day
2-Day 4-Day
Data Delivery
Format: PDF EXCEL
Other: SOXHLET
CLP Like Data Pkg Required:
Email To: mischerer@tighebond.com
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	Dissolved Metals Samples				Orthophosphate Samples				Pb	PCB ONLY	SOXHLET	NON SOXHLET	Preservation Code
							VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	VIALS	GLASS	PLASTIC					
1	18MTN S-1	11/17/21	12-00	GRAB	S	U													
2	18MTN S-2																		
3	18MTN S-3																		
4	18MTN S-4																		
5	18MTN S-5																		
6	18MTN S-6																		

Client Comments:

Relinquished by: (signature) Date/Time: 11/18/21 1000
Received by: (signature) Date/Time: 11/19/21 710
Relinquished by: (signature) Date/Time: 11/19/21 845
Received by: (signature) Date/Time: 11/20/21 1845
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received by: (signature) Date/Time:

Detection Limit Requirements
MA S-1 MA MCP Required
MCP Certification Form Required
CT CT RCP Required
RCP Certification Form Required
Other: MA State DW Required
PWSID #

Special Requirements
MA MCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State DW Required
PWSID #

Project Entity
Government Municipality
Federal 21 J
City Brownfield
Other: WRTA
 Chromatogram
 AIHA-LAP, LLC

1 Preservation Code
(Courier Use Only)
Total Number Of:
VIALS _____
GLASS _____
PLASTIC _____
BACTERIA _____
ENCORE _____
Glassware in the fridge? Y / N _____
Glassware in freezer? Y / N _____
Prepackaged Cooler? Y / N _____
*Pace Analytical is not responsible for missing samples from prepacked coolers

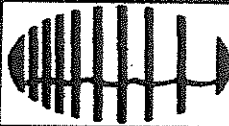
1 Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

2 Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T. J. + Bond
Received By [Signature] Date 11/19/21 Time 1845

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp 2.6
By Blank # _____ Actual Temp _____

Was Custody Seal Intact? na Were Samples Tampered with? na
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____
Is there enough Volume? T

Is there Headspace where applicable? na MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid na Base na

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	60	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

[Empty box for comments]

December 7, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

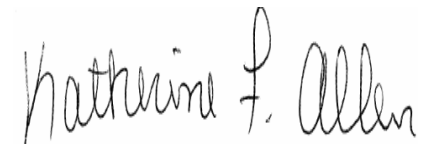
Project Location: 21 Mountain Road, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21K1408

Enclosed are results of analyses for samples as received by the laboratory on November 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 12/7/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21K1408

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 21 Mountain Road, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
21MTN S-1	21K1408-01	Soil		SM 2540G SOP-466 PFAS	
21MTN S-2	21K1408-02	Soil		SM 2540G SOP-466 PFAS	
21MTN S-3	21K1408-03	Soil		SM 2540G SOP-466 PFAS	
21MTN S-4	21K1408-04	Soil		SM 2540G SOP-466 PFAS	
21MTN S-5	21K1408-05	Soil		SM 2540G SOP-466 PFAS	
21MTN S-6	21K1408-06	Soil		SM 2540G SOP-466 PFAS	
21MTN S-7	21K1408-07	Soil		SM 2540G SOP-466 PFAS	
Field Blank	21K1408-08	Water		SOP-454 PFAS	
Equipment Blank	21K1408-09	Water		SOP-454 PFAS	
Rinsate	21K1408-10	Water		SOP-454 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopycinski
Laboratory Director

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-1

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.20	0.48	0.065	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorodecanoic acid (PFDA)	ND	0.48	0.063	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
N-EtFOSAA	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
N-MeFOSAA	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.095	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	0.078	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.075	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluoroheptanoic acid (PFHpA)	0.081	0.48	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorooctanoic acid (PFOA)	0.20	0.48	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorooctanesulfonic acid (PFOS)	0.46	0.48	0.066	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH
Perfluorononanoic acid (PFNA)	0.13	0.48	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:06	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-1

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.0		% Wt	1		SM 2540G	11/25/21	11/26/21 9:41	TDK

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-2

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.17	0.50	0.067	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.50	0.094	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorodecanoic acid (PFDA)	ND	0.50	0.065	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
N-MeFOSAA	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.096	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.098	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.50	0.081	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.095	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.50	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.078	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluoroheptanoic acid (PFHpA)	0.080	0.50	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorooctanoic acid (PFOA)	0.16	0.50	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorooctanesulfonic acid (PFOS)	0.45	0.50	0.068	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH
Perfluorononanoic acid (PFNA)	0.14	0.50	0.083	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:14	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-2

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.5		% Wt	1		SM 2540G	11/25/21	11/26/21 9:27	TDK

Project Location: 21 Mountain Road, Princeton, MA Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-3

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.15	0.54	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoropentanoic acid (PFPeA)	0.12	0.54	0.083	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorohexanoic acid (PFHxA)	0.12	0.54	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
9Cl-PF3ONS (F53B Major)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.54	0.26	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorodecanoic acid (PFDA)	0.11	0.54	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.54	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
N-EtFOSAA	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
N-MeFOSAA	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.54	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.54	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.54	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.54	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.54	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluoroheptanoic acid (PFHpA)	0.098	0.54	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorooctanoic acid (PFOA)	0.23	0.54	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorooctanesulfonic acid (PFOS)	0.72	0.54	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH
Perfluorononanoic acid (PFNA)	0.18	0.54	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:21	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-3

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.5		% Wt	1		SM 2540G	11/25/21	11/26/21 9:27	TDK

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-4

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.49	0.065	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.49	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoropentanoic acid (PFPeA)	0.075	0.49	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.49	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
9Cl-PF3ONS (F53B Major)	ND	0.49	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.49	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.49	0.23	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.49	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorodecanoic acid (PFDA)	0.11	0.49	0.063	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.49	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.49	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
N-EtFOSAA	ND	0.49	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
N-MeFOSAA	ND	0.49	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.49	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.49	0.090	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.49	0.095	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.49	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.49	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.49	0.078	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.49	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.49	0.090	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.49	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.49	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.49	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.49	0.076	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.49	0.070	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorooctanoic acid (PFOA)	0.20	0.49	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorooctanesulfonic acid (PFOS)	1.0	0.49	0.066	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH
Perfluorononanoic acid (PFNA)	0.14	0.49	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:28	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-4

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	77.3		% Wt	1		SM 2540G	11/25/21	11/26/21 9:27	TDK

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-5

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.63	0.57	0.076	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoropentanoic acid (PFPeA)	1.6	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorohexanoic acid (PFHxA)	1.2	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
9Cl-PF3ONS (F53B Major)	ND	0.57	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.57	0.27	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorodecanoic acid (PFDA)	0.15	0.57	0.073	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.57	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.57	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
N-EtFOSAA	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
N-MeFOSAA	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.48	0.57	0.091	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.57	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoroundecanoic acid (PFUnA)	0.15	0.57	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.57	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluoroheptanoic acid (PFHpA)	0.27	0.57	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorooctanoic acid (PFOA)	0.91	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorooctanesulfonic acid (PFOS)	1.9	0.57	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH
Perfluorononanoic acid (PFNA)	0.46	0.57	0.093	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:35	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-5

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.8		% Wt	1		SM 2540G	11/25/21	11/26/21 9:27	TDK

Project Location: 21 Mountain Road, Princeton, MA Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-6

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.21	0.57	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.57	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoropentanoic acid (PFPeA)	0.17	0.57	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorohexanoic acid (PFHxA)	0.22	0.57	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
9Cl-PF3ONS (F53B Major)	ND	0.57	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.57	0.28	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.57	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorodecanoic acid (PFDA)	0.25	0.57	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.57	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.57	0.094	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
N-EtFOSAA	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
N-MeFOSAA	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.57	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.57	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.57	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.78	0.57	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.57	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	1.0	0.57	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.57	0.084	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.57	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.57	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluoroheptanoic acid (PFHpA)	0.21	0.57	0.083	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorooctanoic acid (PFOA)	0.55	0.57	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorooctanesulfonic acid (PFOS)	2.5	0.57	0.078	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH
Perfluorononanoic acid (PFNA)	0.26	0.57	0.094	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:42	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-6

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.8		% Wt	1		SM 2540G	11/25/21	11/26/21 9:27	TDK

Project Location: 21 Mountain Road, Princeton, MA Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-7

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.25	0.54	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoropentanoic acid (PFPeA)	0.15	0.54	0.083	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorohexanoic acid (PFHxA)	0.11	0.54	0.10	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
9Cl-PF3ONS (F53B Major)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.54	0.26	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorodecanoic acid (PFDA)	0.084	0.54	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.54	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
N-EtFOSAA	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
N-MeFOSAA	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.54	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.54	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.54	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.54	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.54	0.084	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluoroheptanoic acid (PFHpA)	0.14	0.54	0.078	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorooctanoic acid (PFOA)	0.46	0.54	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorooctanesulfonic acid (PFOS)	0.83	0.54	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH
Perfluorononanoic acid (PFNA)	0.20	0.54	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	11/30/21 14:49	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: 21MTN S-7

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.7		% Wt	1		SM 2540G	11/25/21	11/26/21 9:28	TDK

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: Field Blank

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-08

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9	0.69	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.22	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.45	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.41	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.21	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.87	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
N-EtFOSAA	ND	1.9	0.58	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
N-MeFOSAA	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.30	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.16	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	1.9	0.18	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.31	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.39	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.24	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.63	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.32	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:34	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: Equipment Blank

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-09

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0	0.73	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.39	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.0	0.38	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.63	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.38	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.24	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	0.60	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.48	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.43	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	0.23	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	0.92	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
N-EtFOSAA	ND	2.0	0.62	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
N-MeFOSAA	ND	2.0	0.75	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	0.27	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	0.32	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorooctanesulfonamide (FOSA)	ND	2.0	0.41	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorononanesulfonic acid (PFNS)	ND	2.0	0.17	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	0.31	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	0.19	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	0.33	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.41	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.25	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.27	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0	0.67	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	0.59	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH
Perfluorononanoic acid (PFNA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:41	BLH

Project Location: 21 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1408

Date Received: 11/19/2021

Field Sample #: Rinsate

Sampled: 11/17/2021 13:00

Sample ID: 21K1408-10

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0	0.74	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.39	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.0	0.38	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.64	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.39	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.35	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.24	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	0.60	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.49	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.44	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.23	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	0.93	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
N-EtFOSAA	ND	2.0	0.62	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
N-MeFOSAA	ND	2.0	0.75	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	0.27	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	0.32	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorooctanesulfonamide (FOSA)	ND	2.0	0.42	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorononanesulfonic acid (PFNS)	ND	2.0	0.17	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	0.31	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	2.0	0.19	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.41	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	0.36	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.26	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.37	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.27	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0	0.68	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	0.60	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH
Perfluorononanoic acid (PFNA)	ND	2.0	0.34	ng/L	1		SOP-454 PFAS	12/1/21	12/3/21 15:48	BLH

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21K1408-01 [21MTN S-1]	B295558	11/25/21
21K1408-02 [21MTN S-2]	B295558	11/25/21
21K1408-03 [21MTN S-3]	B295558	11/25/21
21K1408-04 [21MTN S-4]	B295558	11/25/21
21K1408-05 [21MTN S-5]	B295558	11/25/21
21K1408-06 [21MTN S-6]	B295558	11/25/21
21K1408-07 [21MTN S-7]	B295558	11/25/21

Prep Method: SOP 454-PFAAS-SOP-454 PFAS

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21K1408-08 [Field Blank]	B295771	270	1.00	12/01/21
21K1408-09 [Equipment Blank]	B295771	254	1.00	12/01/21
21K1408-10 [Rinsate]	B295771	252	1.00	12/01/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21K1408-01 [21MTN S-1]	B295633	5.88	5.00	11/29/21
21K1408-02 [21MTN S-2]	B295633	5.92	5.00	11/29/21
21K1408-03 [21MTN S-3]	B295633	5.63	5.00	11/29/21
21K1408-04 [21MTN S-4]	B295633	6.00	5.00	11/29/21
21K1408-05 [21MTN S-5]	B295633	5.60	5.00	11/29/21
21K1408-06 [21MTN S-6]	B295633	5.71	5.00	11/29/21
21K1408-07 [21MTN S-7]	B295633	5.55	5.00	11/29/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295633 - SOP 465-PFAAS

Blank (B295633-BLK1)

Prepared: 11/29/21 Analyzed: 11/30/21

Perfluorobutanoic acid (PFBA)	ND	0.39	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.39	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.39	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.39	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.39	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.39	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.39	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.39	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.39	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.39	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.39	µg/kg wet							
N-EtFOSAA	ND	0.39	µg/kg wet							
N-MeFOSAA	ND	0.39	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.39	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.39	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.39	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.39	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.39	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.39	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.39	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.39	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.39	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.39	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.39	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.39	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.39	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.39	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.39	µg/kg wet							

LCS (B295633-BS1)

Prepared: 11/29/21 Analyzed: 11/30/21

Perfluorobutanoic acid (PFBA)	1.86	0.38	µg/kg wet	2.08		89.3	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.76	0.38	µg/kg wet	1.84		95.3	72-128			
Perfluoropentanoic acid (PFPeA)	1.84	0.38	µg/kg wet	2.08		88.2	69-132			
Perfluorohexanoic acid (PFHxA)	1.78	0.38	µg/kg wet	2.08		85.1	70-132			
11Cl-PF3OUdS (F53B Minor)	1.73	0.38	µg/kg wet	1.96		88.1	50-150			
9Cl-PF3ONS (F53B Major)	1.87	0.38	µg/kg wet	1.94		96.1	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.79	0.38	µg/kg wet	1.96		91.0	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.82	0.38	µg/kg wet	2.08		87.2	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.04	0.38	µg/kg wet	2.00		102	65-137			
Perfluorodecanoic acid (PFDA)	1.83	0.38	µg/kg wet	2.08		87.7	69-133			
Perfluorododecanoic acid (PFDoA)	2.12	0.38	µg/kg wet	2.08		102	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	1.98	0.38	µg/kg wet	1.86		107	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295633 - SOP 465-PFAAS

LCS (B295633-BS1)

Prepared: 11/29/21 Analyzed: 11/30/21

Perfluoroheptanesulfonic acid (PFHpS)	2.05	0.38	µg/kg wet	1.99		103	70-132			
N-EtFOSAA	2.10	0.38	µg/kg wet	2.08		101	61-139			
N-MeFOSAA	2.17	0.38	µg/kg wet	2.08		104	63-144			
Perfluorotetradecanoic acid (PFTA)	1.94	0.38	µg/kg wet	2.08		93.1	69-133			
Perfluorotridecanoic acid (PFTrDA)	1.99	0.38	µg/kg wet	2.08		95.3	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	1.96	0.38	µg/kg wet	1.95		101	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.03	0.38	µg/kg wet	2.01		101	59-134			
Perfluorooctanesulfonamide (FOSA)	1.89	0.38	µg/kg wet	2.08		90.7	67-137			
Perfluorononanesulfonic acid (PFNS)	1.73	0.38	µg/kg wet	2.00		86.2	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.00	0.38	µg/kg wet	2.08		95.8	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	1.97	0.38	µg/kg wet	2.08		94.3	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.82	0.38	µg/kg wet	1.90		95.8	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.19	0.38	µg/kg wet	2.08		105	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.13	0.38	µg/kg wet	2.08		102	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.15	0.38	µg/kg wet	1.98		109	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.86	0.38	µg/kg wet	1.96		95.1	73-123			
Perfluoroundecanoic acid (PFUnA)	1.79	0.38	µg/kg wet	2.08		86.0	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.31	0.38	µg/kg wet	2.08		111	50-150			
Perfluoroheptanoic acid (PFHpA)	1.91	0.38	µg/kg wet	2.08		91.4	71-131			
Perfluorooctanoic acid (PFOA)	1.86	0.38	µg/kg wet	2.08		89.0	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.68	0.38	µg/kg wet	1.93		87.4	68-136			
Perfluorononanoic acid (PFNA)	1.93	0.38	µg/kg wet	2.08		92.4	72-129			

Batch B295771 - SOP 454-PFAAS

Blank (B295771-BLK1)

Prepared: 12/01/21 Analyzed: 12/03/21

Perfluorobutanoic acid (PFBA)	ND	1.8	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.8	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L							
11Cl-PF3OUdS (F53B Minor)	ND	1.8	ng/L							
9Cl-PF3ONS (F53B Major)	ND	1.8	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.8	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L							
N-EtFOSAA	ND	1.8	ng/L							
N-MeFOSAA	ND	1.8	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.8	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.8	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295771 - SOP 454-PFAAS

Blank (B295771-BLK1)

Prepared: 12/01/21 Analyzed: 12/03/21

Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	ng/L
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	ng/L
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	ng/L
Perfluoropetanesulfonic acid (PFPeS)	ND	1.8	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L

LCS (B295771-BS1)

Prepared: 12/01/21 Analyzed: 12/03/21

Perfluorobutanoic acid (PFBA)	8.51	1.8	ng/L	9.20	92.5	73-129
Perfluorobutanesulfonic acid (PFBS)	7.63	1.8	ng/L	8.14	93.7	72-130
Perfluoropentanoic acid (PFPeA)	8.34	1.8	ng/L	9.20	90.7	72-129
Perfluorohexanoic acid (PFHxA)	8.39	1.8	ng/L	9.20	91.2	72-129
11Cl-PF3OUdS (F53B Minor)	7.17	1.8	ng/L	8.67	82.7	50-150
9Cl-PF3ONS (F53B Major)	7.42	1.8	ng/L	8.57	86.5	50-150
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	7.82	1.8	ng/L	8.67	90.2	50-150
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.77	1.8	ng/L	9.20	73.6	50-150
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.00	1.8	ng/L	8.83	102	67-138
Perfluorodecanoic acid (PFDA)	8.39	1.8	ng/L	9.20	91.2	71-129
Perfluorododecanoic acid (PFDoA)	8.33	1.8	ng/L	9.20	90.6	72-134
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	8.17	1.8	ng/L	8.19	99.8	50-150
Perfluoroheptanesulfonic acid (PFHpS)	9.10	1.8	ng/L	8.79	104	69-134
N-EtFOSAA	10.7	1.8	ng/L	9.20	116	61-135
N-MeFOSAA	10.4	1.8	ng/L	9.20	113	65-136
Perfluorotetradecanoic acid (PFTA)	8.05	1.8	ng/L	9.20	87.5	71-132
Perfluorotridecanoic acid (PFTrDA)	8.05	1.8	ng/L	9.20	87.5	65-144
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.54	1.8	ng/L	8.60	99.3	63-143
Perfluorodecanesulfonic acid (PFDS)	7.58	1.8	ng/L	8.88	85.4	53-142
Perfluorooctanesulfonamide (FOSA)	8.39	1.8	ng/L	9.20	91.2	67-137
Perfluorononanesulfonic acid (PFNS)	7.64	1.8	ng/L	8.83	86.5	69-127
Perfluoro-1-hexanesulfonamide (FHxSA)	8.41	1.8	ng/L	9.20	91.5	50-150
Perfluoro-1-butanesulfonamide (FBSA)	8.86	1.8	ng/L	9.20	96.3	50-150
Perfluorohexanesulfonic acid (PFHxS)	7.70	1.8	ng/L	8.37	92.0	68-131
Perfluoro-4-oxapentanoic acid (PFMPA)	8.77	1.8	ng/L	9.20	95.4	50-150
Perfluoro-5-oxahexanoic acid (PFMBA)	8.56	1.8	ng/L	9.20	93.0	50-150
6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.5	1.8	ng/L	8.74	120	64-140
Perfluoropetanesulfonic acid (PFPeS)	7.71	1.8	ng/L	8.65	89.2	71-127
Perfluoroundecanoic acid (PFUnA)	7.68	1.8	ng/L	9.20	83.5	69-133
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.45	1.8	ng/L	9.20	91.9	50-150
Perfluoroheptanoic acid (PFHpA)	8.99	1.8	ng/L	9.20	97.7	72-130
Perfluorooctanoic acid (PFOA)	9.05	1.8	ng/L	9.20	98.3	71-133
Perfluorooctanesulfonic acid (PFOS)	8.26	1.8	ng/L	8.51	97.0	65-140
Perfluorononanoic acid (PFNA)	9.50	1.8	ng/L	9.20	103	69-130

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

TDK Troy D Kapitzke
 SSR Samantha S Runyon
 STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
21MTN S-1 (21K1408-01) Lab File ID: 21K1408-01.d Analyzed: 11/30/21 14:06									
M8FOSA	429973.7	4.044533	489,741.00	4.044533	88	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	172053	2.661333	221,159.00	2.661333	78	50 - 150	0.0000	+/-0.50	
M2PFTA	1642075	4.4028	1,880,988.00	4.402817	87	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	193925.8	3.88305	243,778.00	3.883067	80	50 - 150	0.0000	+/-0.50	
MPFBA	719302.1	1.13325	790,888.00	1.13325	91	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	264021.4	2.970317	272,446.00	2.962217	97	50 - 150	0.0081	+/-0.50	
M6PFDA	1016160	3.8756	1,159,766.00	3.8756	88	50 - 150	0.0000	+/-0.50	
M3PFBS	156811.3	2.035933	175,228.00	2.03595	89	50 - 150	0.0000	+/-0.50	
M7PFUnA	1419653	4.025967	1,533,667.00	4.025983	93	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	145943.3	3.5256	145,801.00	3.525617	100	50 - 150	0.0000	+/-0.50	
M5PFPeA	697464.8	1.849383	775,730.00	1.849383	90	50 - 150	0.0000	+/-0.50	
M5PFHxA	973415.4	2.747233	1,071,260.00	2.747233	91	50 - 150	0.0000	+/-0.50	
M3PFHxS	132635.4	3.300333	145,524.00	3.30035	91	50 - 150	0.0000	+/-0.50	
M4PFHpA	1000060	3.268033	1,120,166.00	3.268033	89	50 - 150	0.0000	+/-0.50	
M8PFOA	1037501	3.534133	1,134,370.00	3.53415	91	50 - 150	0.0000	+/-0.50	
M8PFOS	157955.8	3.716267	164,887.00	3.716283	96	50 - 150	0.0000	+/-0.50	
M9PFNA	1087655	3.725233	1,196,853.00	3.725233	91	50 - 150	0.0000	+/-0.50	
MPFDoA	1479739	4.169267	1,597,778.00	4.1693	93	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	258795.9	4.03345	296,981.00	4.033467	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	254582.3	3.953867	272,401.00	3.953883	93	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
21MTN S-2 (21K1408-02) Lab File ID: 21K1408-02.d Analyzed: 11/30/21 14:14									
M8FOSA	468069.5	4.044533	489,741.00	4.044533	96	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	185020	2.661333	221,159.00	2.661333	84	50 - 150	0.0000	+/-0.50	
M2PFTA	1832914	4.4028	1,880,988.00	4.402817	97	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	219394.1	3.883067	243,778.00	3.883067	90	50 - 150	0.0000	+/-0.50	
MPFBA	776911.4	1.13325	790,888.00	1.13325	98	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	271001.8	2.970333	272,446.00	2.962217	99	50 - 150	0.0081	+/-0.50	
M6PFDA	1186147	3.8756	1,159,766.00	3.8756	102	50 - 150	0.0000	+/-0.50	
M3PFBS	175339.3	2.035933	175,228.00	2.03595	100	50 - 150	0.0000	+/-0.50	
M7PFUnA	1562280	4.025983	1,533,667.00	4.025983	102	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	167965	3.525617	145,801.00	3.525617	115	50 - 150	0.0000	+/-0.50	
M5PFPeA	754717.1	1.849383	775,730.00	1.849383	97	50 - 150	0.0000	+/-0.50	
M5PFHxA	1054814	2.747233	1,071,260.00	2.747233	98	50 - 150	0.0000	+/-0.50	
M3PFHxS	148999.7	3.30035	145,524.00	3.30035	102	50 - 150	0.0000	+/-0.50	
M4PFHpA	1080448	3.268033	1,120,166.00	3.268033	96	50 - 150	0.0000	+/-0.50	
M8PFOA	1151595	3.53415	1,134,370.00	3.53415	102	50 - 150	0.0000	+/-0.50	
M8PFOS	171489.8	3.716267	164,887.00	3.716283	104	50 - 150	0.0000	+/-0.50	
M9PFNA	1195012	3.725233	1,196,853.00	3.725233	100	50 - 150	0.0000	+/-0.50	
MPFDoA	1669696	4.169283	1,597,778.00	4.1693	105	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	276405.6	4.03345	296,981.00	4.033467	93	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	258018.1	3.953883	272,401.00	3.953883	95	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
21MTN S-3 (21K1408-03) Lab File ID: 21K1408-03.d Analyzed: 11/30/21 14:21									
M8FOSA	491953.7	4.044533	489,741.00	4.044533	100	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	188756.9	2.661333	221,159.00	2.661333	85	50 - 150	0.0000	+/-0.50	
M2PFTA	1954493	4.4028	1,880,988.00	4.402817	104	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	208464.7	3.88305	243,778.00	3.883067	86	50 - 150	0.0000	+/-0.50	
MPFBA	802320.7	1.13325	790,888.00	1.13325	101	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	283677.8	2.970317	272,446.00	2.962217	104	50 - 150	0.0081	+/-0.50	
M6PFDA	1247678	3.8756	1,159,766.00	3.8756	108	50 - 150	0.0000	+/-0.50	
M3PFBS	178567.4	2.035933	175,228.00	2.03595	102	50 - 150	0.0000	+/-0.50	
M7PFUnA	1640548	4.025983	1,533,667.00	4.025983	107	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	176867.3	3.5256	145,801.00	3.525617	121	50 - 150	0.0000	+/-0.50	
M5PFPeA	792395.4	1.849383	775,730.00	1.849383	102	50 - 150	0.0000	+/-0.50	
M5PFHxA	1097908	2.747233	1,071,260.00	2.747233	102	50 - 150	0.0000	+/-0.50	
M3PFHxS	146729.3	3.300333	145,524.00	3.30035	101	50 - 150	0.0000	+/-0.50	
M4PFHpA	1119577	3.268033	1,120,166.00	3.268033	100	50 - 150	0.0000	+/-0.50	
M8PFOA	1176675	3.534133	1,134,370.00	3.53415	104	50 - 150	0.0000	+/-0.50	
M8PFOS	168178.3	3.716267	164,887.00	3.716283	102	50 - 150	0.0000	+/-0.50	
M9PFNA	1185099	3.717267	1,196,853.00	3.725233	99	50 - 150	-0.0080	+/-0.50	
MPFDoA	1641320	4.161217	1,597,778.00	4.1693	103	50 - 150	-0.0081	+/-0.50	
d5-NEtFOSAA	280889.3	4.03345	296,981.00	4.033467	95	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	252719.5	3.953867	272,401.00	3.953883	93	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
21MTN S-4 (21K1408-04)									
			Lab File ID: 21K1408-04.d			Analyzed: 11/30/21 14:28			
M8FOSA	506866.9	4.044533	489,741.00	4.044533	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	194094.3	2.661333	221,159.00	2.661333	88	50 - 150	0.0000	+/-0.50	
M2PFTA	2013769	4.4028	1,880,988.00	4.402817	107	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	225469.9	3.883067	243,778.00	3.883067	92	50 - 150	0.0000	+/-0.50	
MPFBA	836046.4	1.13325	790,888.00	1.13325	106	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	301468.9	2.970317	272,446.00	2.962217	111	50 - 150	0.0081	+/-0.50	
M6PFDA	1272680	3.8756	1,159,766.00	3.8756	110	50 - 150	0.0000	+/-0.50	
M3PFBS	189051.6	2.035933	175,228.00	2.03595	108	50 - 150	0.0000	+/-0.50	
M7PFUnA	1760460	4.025983	1,533,667.00	4.025983	115	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	176942.7	3.5256	145,801.00	3.525617	121	50 - 150	0.0000	+/-0.50	
M5PFPeA	822486.3	1.849383	775,730.00	1.849383	106	50 - 150	0.0000	+/-0.50	
M5PFHxA	1147303	2.747233	1,071,260.00	2.747233	107	50 - 150	0.0000	+/-0.50	
M3PFHxS	157534	3.300333	145,524.00	3.30035	108	50 - 150	0.0000	+/-0.50	
M4PFHpA	1191897	3.268033	1,120,166.00	3.268033	106	50 - 150	0.0000	+/-0.50	
M8PFOA	1226411	3.534133	1,134,370.00	3.53415	108	50 - 150	0.0000	+/-0.50	
M8PFOS	177447.9	3.716267	164,887.00	3.716283	108	50 - 150	0.0000	+/-0.50	
M9PFNA	1232586	3.717267	1,196,853.00	3.725233	103	50 - 150	-0.0080	+/-0.50	
MPFDoA	1754133	4.1612	1,597,778.00	4.1693	110	50 - 150	-0.0081	+/-0.50	
d5-NEtFOSAA	283507.1	4.03345	296,981.00	4.033467	95	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	279428.7	3.953867	272,401.00	3.953883	103	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
21MTN S-5 (21K1408-05) Lab File ID: 21K1408-05.d Analyzed: 11/30/21 14:35									
M8FOSA	489257.2	4.044533	489,741.00	4.044533	100	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	189776	2.661333	221,159.00	2.661333	86	50 - 150	0.0000	+/-0.50	
M2PFTA	1867169	4.4028	1,880,988.00	4.402817	99	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	226341.3	3.883067	243,778.00	3.883067	93	50 - 150	0.0000	+/-0.50	
MPFBA	808824.3	1.13325	790,888.00	1.13325	102	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	285944.4	2.970333	272,446.00	2.962217	105	50 - 150	0.0081	+/-0.50	
M6PFDA	1206404	3.8756	1,159,766.00	3.8756	104	50 - 150	0.0000	+/-0.50	
M3PFBS	181025.2	2.035933	175,228.00	2.03595	103	50 - 150	0.0000	+/-0.50	
M7PFUnA	1587742	4.025983	1,533,667.00	4.025983	104	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	174558	3.525617	145,801.00	3.525617	120	50 - 150	0.0000	+/-0.50	
M5PFPeA	793433.6	1.849383	775,730.00	1.849383	102	50 - 150	0.0000	+/-0.50	
M5PFHxA	1102999	2.747233	1,071,260.00	2.747233	103	50 - 150	0.0000	+/-0.50	
M3PFHxS	153471.1	3.30035	145,524.00	3.30035	105	50 - 150	0.0000	+/-0.50	
M4PFHpA	1141903	3.268033	1,120,166.00	3.268033	102	50 - 150	0.0000	+/-0.50	
M8PFOA	1230833	3.53415	1,134,370.00	3.53415	109	50 - 150	0.0000	+/-0.50	
M8PFOS	172978	3.716283	164,887.00	3.716283	105	50 - 150	0.0000	+/-0.50	
M9PFNA	1200329	3.725233	1,196,853.00	3.725233	100	50 - 150	0.0000	+/-0.50	
MPFDoA	1695868	4.169283	1,597,778.00	4.1693	106	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	279428.5	4.03345	296,981.00	4.033467	94	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	261652.3	3.953883	272,401.00	3.953883	96	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
21MTN S-6 (21K1408-06)									
			Lab File ID: 21K1408-06.d			Analyzed: 11/30/21 14:42			
M8FOSA	450501.8	4.044533	489,741.00	4.044533	92	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	168967.3	2.661333	221,159.00	2.661333	76	50 - 150	0.0000	+/-0.50	
M2PFTA	1714224	4.4028	1,880,988.00	4.402817	91	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	201556.7	3.883067	243,778.00	3.883067	83	50 - 150	0.0000	+/-0.50	
MPFBA	753401.8	1.13325	790,888.00	1.13325	95	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	259695.7	2.970333	272,446.00	2.962217	95	50 - 150	0.0081	+/-0.50	
M6PFDA	1131552	3.8756	1,159,766.00	3.8756	98	50 - 150	0.0000	+/-0.50	
M3PFBS	166109.1	2.035933	175,228.00	2.03595	95	50 - 150	0.0000	+/-0.50	
M7PFUnA	1443854	4.025983	1,533,667.00	4.025983	94	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	147931.6	3.525617	145,801.00	3.525617	101	50 - 150	0.0000	+/-0.50	
M5PFPeA	733038	1.849383	775,730.00	1.849383	94	50 - 150	0.0000	+/-0.50	
M5PFHxA	1021774	2.747233	1,071,260.00	2.747233	95	50 - 150	0.0000	+/-0.50	
M3PFHxS	138274.8	3.30035	145,524.00	3.30035	95	50 - 150	0.0000	+/-0.50	
M4PFHpA	1052177	3.268033	1,120,166.00	3.268033	94	50 - 150	0.0000	+/-0.50	
M8PFOA	1123680	3.53415	1,134,370.00	3.53415	99	50 - 150	0.0000	+/-0.50	
M8PFOS	152717.7	3.716267	164,887.00	3.716283	93	50 - 150	0.0000	+/-0.50	
M9PFNA	1144107	3.717267	1,196,853.00	3.725233	96	50 - 150	-0.0080	+/-0.50	
MPFDoA	1566795	4.169283	1,597,778.00	4.1693	98	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	257382	4.03345	296,981.00	4.033467	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	253699.8	3.953883	272,401.00	3.953883	93	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<div style="display: flex; justify-content: space-between;"> 21MTN S-7 (21K1408-07) Lab File ID: 21K1408-07.d Analyzed: 11/30/21 14:49 </div>									
M8FOSA	346572.8	4.044533	489,741.00	4.044533	71	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	163723.8	2.661333	221,159.00	2.661333	74	50 - 150	0.0000	+/-0.50	
M2PFTA	1710951	4.4028	1,880,988.00	4.402817	91	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	197968	3.883067	243,778.00	3.883067	81	50 - 150	0.0000	+/-0.50	
MPFBA	694740	1.13325	790,888.00	1.13325	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	254804.1	2.9622	272,446.00	2.962217	94	50 - 150	0.0000	+/-0.50	
M6PFDA	1108321	3.8756	1,159,766.00	3.8756	96	50 - 150	0.0000	+/-0.50	
M3PFBS	159103.1	2.035933	175,228.00	2.03595	91	50 - 150	0.0000	+/-0.50	
M7PFUnA	1445908	4.025983	1,533,667.00	4.025983	94	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	148571.7	3.525617	145,801.00	3.525617	102	50 - 150	0.0000	+/-0.50	
M5PFPeA	685625.4	1.849383	775,730.00	1.849383	88	50 - 150	0.0000	+/-0.50	
M5PFHxA	980351.3	2.747233	1,071,260.00	2.747233	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	136606.8	3.30035	145,524.00	3.30035	94	50 - 150	0.0000	+/-0.50	
M4PFHpA	993346.1	3.268033	1,120,166.00	3.268033	89	50 - 150	0.0000	+/-0.50	
M8PFOA	1064947	3.53415	1,134,370.00	3.53415	94	50 - 150	0.0000	+/-0.50	
M8PFOS	157626.6	3.716267	164,887.00	3.716283	96	50 - 150	0.0000	+/-0.50	
M9PFNA	1054353	3.725233	1,196,853.00	3.725233	88	50 - 150	0.0000	+/-0.50	
MPFDoA	1652438	4.169283	1,597,778.00	4.1693	103	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	284652.4	4.03345	296,981.00	4.033467	96	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	248145.7	3.953867	272,401.00	3.953883	91	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Field Blank (21K1408-08)									
			Lab File ID: 21K1408-08.d			Analyzed: 12/03/21 15:34			
M8FOSA	304454.9	4.044533	429,719.00	4.04455	71	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	153251.8	2.628217	160,164.00	2.628233	96	50 - 150	0.0000	+/-0.50	
M2PFTA	1081251	4.38655	1,346,753.00	4.3947	80	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	197515.8	3.86685	207,185.00	3.866867	95	50 - 150	0.0000	+/-0.50	
MPFBA	726434.7	1.12495	652,131.00	1.12495	111	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	266369.6	2.945967	222,261.00	2.945983	120	50 - 150	0.0000	+/-0.50	
M6PFDA	1014593	3.86735	928,822.00	3.86735	109	50 - 150	0.0000	+/-0.50	
M3PFBS	160234.4	2.011067	152,918.00	2.011067	105	50 - 150	0.0000	+/-0.50	
M7PFUnA	1270712	4.01	1,275,447.00	4.01	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	98843.42	3.509633	92,628.00	3.509633	107	50 - 150	0.0000	+/-0.50	
M5PFPeA	679741.6	1.824517	646,075.00	1.824517	105	50 - 150	0.0000	+/-0.50	
M5PFHxA	926499.1	2.7145	871,759.00	2.7145	106	50 - 150	0.0000	+/-0.50	
M3PFHxS	126887.6	3.284267	117,508.00	3.284267	108	50 - 150	0.0000	+/-0.50	
M4PFHpA	950221.1	3.251867	889,252.00	3.251883	107	50 - 150	0.0000	+/-0.50	
M8PFOA	963652.6	3.51815	849,740.00	3.526167	113	50 - 150	-0.0080	+/-0.50	
M8PFOS	135469.2	3.7083	130,542.00	3.708317	104	50 - 150	0.0000	+/-0.50	
M9PFNA	840083.4	3.7093	892,260.00	3.7093	94	50 - 150	0.0000	+/-0.50	
MPFDoA	1146662	4.153133	1,234,415.00	4.153167	93	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	142030.6	4.017467	148,710.00	4.017483	96	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	135181	3.937883	146,252.00	3.9459	92	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Equipment Blank (21K1408-09)			Lab File ID: 21K1408-09.d			Analyzed: 12/03/21 15:41			
M8FOSA	358498.8	4.044533	429,719.00	4.04455	83	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	144006.6	2.628217	160,164.00	2.628233	90	50 - 150	0.0000	+/-0.50	
M2PFTA	1024490	4.38655	1,346,753.00	4.3947	76	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	183338.2	3.86685	207,185.00	3.866867	88	50 - 150	0.0000	+/-0.50	
MPFBA	671324.7	1.12495	652,131.00	1.12495	103	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	224706.9	2.945967	222,261.00	2.945983	101	50 - 150	0.0000	+/-0.50	
M6PFDA	892741.6	3.86735	928,822.00	3.86735	96	50 - 150	0.0000	+/-0.50	
M3PFBS	144218.1	2.011067	152,918.00	2.011067	94	50 - 150	0.0000	+/-0.50	
M7PFUnA	1172319	4.01	1,275,447.00	4.01	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	88636.86	3.509633	92,628.00	3.509633	96	50 - 150	0.0000	+/-0.50	
M5PFPeA	626952.5	1.824517	646,075.00	1.824517	97	50 - 150	0.0000	+/-0.50	
M5PFHxA	847338.1	2.7145	871,759.00	2.7145	97	50 - 150	0.0000	+/-0.50	
M3PFHxS	114234.5	3.284267	117,508.00	3.284267	97	50 - 150	0.0000	+/-0.50	
M4PFHpA	872650.8	3.251867	889,252.00	3.251883	98	50 - 150	0.0000	+/-0.50	
M8PFOA	869537.9	3.518167	849,740.00	3.526167	102	50 - 150	-0.0080	+/-0.50	
M8PFOS	122418.6	3.7083	130,542.00	3.708317	94	50 - 150	0.0000	+/-0.50	
M9PFNA	841175.9	3.7093	892,260.00	3.7093	94	50 - 150	0.0000	+/-0.50	
MPFDoA	982587.5	4.15315	1,234,415.00	4.153167	80	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	129541.7	4.017467	148,710.00	4.017483	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	121242.3	3.937883	146,252.00	3.9459	83	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Rinsate (21K1408-10)									
			Lab File ID: 21K1408-10.d			Analyzed: 12/03/21 15:48			
M8FOSA	352274.1	4.044533	429,719.00	4.04455	82	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	146681.2	2.628217	160,164.00	2.628233	92	50 - 150	0.0000	+/-0.50	
M2PFTA	943022.9	4.394667	1,346,753.00	4.3947	70	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	182798.5	3.86685	207,185.00	3.866867	88	50 - 150	0.0000	+/-0.50	
MPFBA	675184.7	1.12495	652,131.00	1.12495	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	227353.8	2.945967	222,261.00	2.945983	102	50 - 150	0.0000	+/-0.50	
M6PFDA	905022.5	3.86735	928,822.00	3.86735	97	50 - 150	0.0000	+/-0.50	
M3PFBS	144133.2	2.011067	152,918.00	2.011067	94	50 - 150	0.0000	+/-0.50	
M7PFUnA	1167099	4.009984	1,275,447.00	4.01	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	91852.1	3.509617	92,628.00	3.509633	99	50 - 150	0.0000	+/-0.50	
M5PFPeA	628878.9	1.824517	646,075.00	1.824517	97	50 - 150	0.0000	+/-0.50	
M5PFHxA	852465.6	2.7145	871,759.00	2.7145	98	50 - 150	0.0000	+/-0.50	
M3PFHxS	109497	3.28425	117,508.00	3.284267	93	50 - 150	0.0000	+/-0.50	
M4PFHpA	884773.9	3.251867	889,252.00	3.251883	99	50 - 150	0.0000	+/-0.50	
M8PFOA	875566.8	3.51815	849,740.00	3.526167	103	50 - 150	-0.0080	+/-0.50	
M8PFOS	119770.2	3.7083	130,542.00	3.708317	92	50 - 150	0.0000	+/-0.50	
M9PFNA	837706.4	3.7093	892,260.00	3.7093	94	50 - 150	0.0000	+/-0.50	
MPFDoA	989860.8	4.153133	1,234,415.00	4.153167	80	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	131988.6	4.017467	148,710.00	4.017483	89	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	115355.2	3.937883	146,252.00	3.9459	79	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B295633-BLK1)			Lab File ID: B295633-BLK1.d			Analyzed: 11/30/21 12:47			
M8FOSA	440776.4	4.04455	489,741.00	4.04455	90	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	197351.4	2.670733	221,159.00	2.678933	89	50 - 150	-0.0082	+/-0.50	
M2PFTA	1674771	4.41095	1,880,988.00	4.41095	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	200673.2	3.883083	243,778.00	3.883067	82	50 - 150	0.0000	+/-0.50	
MPFBA	728809.9	1.13325	790,888.00	1.13325	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	243011.3	2.970317	272,446.00	2.97845	89	50 - 150	-0.0081	+/-0.50	
M6PFDA	1134064	3.8836	1,159,766.00	3.883583	98	50 - 150	0.0000	+/-0.50	
M3PFBS	161838.8	2.044217	175,228.00	2.044217	92	50 - 150	0.0000	+/-0.50	
M7PFUnA	1431965	4.034	1,533,667.00	4.033983	93	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	149598.3	3.525633	145,801.00	3.525617	103	50 - 150	0.0000	+/-0.50	
M5PFPeA	708892.5	1.857667	775,730.00	1.857667	91	50 - 150	0.0000	+/-0.50	
M5PFHxA	980418.7	2.7636	1,071,260.00	2.7636	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	133296.6	3.3084	145,524.00	3.308383	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1043440	3.277267	1,120,166.00	3.27725	93	50 - 150	0.0000	+/-0.50	
M8PFOA	1039888	3.54215	1,134,370.00	3.542133	92	50 - 150	0.0000	+/-0.50	
M8PFOS	156133.4	3.724267	164,887.00	3.72425	95	50 - 150	0.0000	+/-0.50	
M9PFNA	1115823	3.725267	1,196,853.00	3.72525	93	50 - 150	0.0000	+/-0.50	
MPFDoA	1477734	4.1693	1,597,778.00	4.1693	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	253176.2	4.041467	296,981.00	4.041467	85	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	232011.8	3.961883	272,401.00	3.961883	85	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B295633-BS1)									
			Lab File ID: B295633-BS1.d			Analyzed: 11/30/21 12:40			
M8FOSA	545434.6	4.044533	489,741.00	4.04455	111	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	224094.6	2.67895	221,159.00	2.678933	101	50 - 150	0.0000	+/-0.50	
M2PFTA	1980798	4.410933	1,880,988.00	4.41095	105	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	354268.3	3.883067	243,778.00	3.883067	145	50 - 150	0.0000	+/-0.50	
MPFBA	870080	1.141567	790,888.00	1.13325	110	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	305777.9	2.97845	272,446.00	2.97845	112	50 - 150	0.0000	+/-0.50	
M6PFDA	1422715	3.883583	1,159,766.00	3.883583	123	50 - 150	0.0000	+/-0.50	
M3PFBS	193814.2	2.054933	175,228.00	2.044217	111	50 - 150	0.0107	+/-0.50	
M7PFUnA	1792382	4.033983	1,533,667.00	4.033983	117	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	191227.8	3.525617	145,801.00	3.525617	131	50 - 150	0.0000	+/-0.50	
M5PFPeA	863702.4	1.857667	775,730.00	1.857667	111	50 - 150	0.0000	+/-0.50	
M5PFHxA	1198761	2.7636	1,071,260.00	2.7636	112	50 - 150	0.0000	+/-0.50	
M3PFHxS	162596.5	3.308383	145,524.00	3.308383	112	50 - 150	0.0000	+/-0.50	
M4PFHpA	1258986	3.27725	1,120,166.00	3.27725	112	50 - 150	0.0000	+/-0.50	
M8PFOA	1298910	3.542133	1,134,370.00	3.542133	115	50 - 150	0.0000	+/-0.50	
M8PFOS	178241.7	3.72425	164,887.00	3.72425	108	50 - 150	0.0000	+/-0.50	
M9PFNA	1225830	3.725233	1,196,853.00	3.72525	102	50 - 150	0.0000	+/-0.50	
MPFDoA	1767600	4.169283	1,597,778.00	4.1693	111	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	330480.3	4.04145	296,981.00	4.041467	111	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	312699.7	3.961867	272,401.00	3.961883	115	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B295771-BLK1)									
			Lab File ID: B295771-BLK1.d			Analyzed: 12/03/21 15:12			
M8FOSA	402042.4	4.044533	429,719.00	4.04455	94	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	165716.9	2.628233	160,164.00	2.628233	103	50 - 150	0.0000	+/-0.50	
M2PFTA	1195968	4.38655	1,346,753.00	4.3947	89	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	203274.8	3.86685	207,185.00	3.866867	98	50 - 150	0.0000	+/-0.50	
MPFBA	710543.6	1.12495	652,131.00	1.12495	109	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	233959.8	2.945967	222,261.00	2.945983	105	50 - 150	0.0000	+/-0.50	
M6PFDA	990139.6	3.86735	928,822.00	3.86735	107	50 - 150	0.0000	+/-0.50	
M3PFBS	156441.7	2.011083	152,918.00	2.011067	102	50 - 150	0.0000	+/-0.50	
M7PFUnA	1226689	4.01	1,275,447.00	4.01	96	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	98072.58	3.509633	92,628.00	3.509633	106	50 - 150	0.0000	+/-0.50	
M5PFPeA	676193.4	1.824533	646,075.00	1.824517	105	50 - 150	0.0000	+/-0.50	
M5PFHxA	922933.1	2.7145	871,759.00	2.7145	106	50 - 150	0.0000	+/-0.50	
M3PFHxS	123599.3	3.284267	117,508.00	3.284267	105	50 - 150	0.0000	+/-0.50	
M4PFHpA	949221.4	3.251867	889,252.00	3.251883	107	50 - 150	0.0000	+/-0.50	
M8PFOA	966682.1	3.52615	849,740.00	3.526167	114	50 - 150	0.0000	+/-0.50	
M8PFOS	131310.6	3.7083	130,542.00	3.708317	101	50 - 150	0.0000	+/-0.50	
M9PFNA	905093.6	3.7093	892,260.00	3.7093	101	50 - 150	0.0000	+/-0.50	
MPFDoA	928919.8	4.153133	1,234,415.00	4.153167	75	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	137779.7	4.017467	148,710.00	4.017483	93	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	127704.2	3.937883	146,252.00	3.9459	87	50 - 150	-0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B295771-BS1)			Lab File ID: B295771-BS1.d			Analyzed: 12/03/21 15:05			
M8FOSA	361543.2	4.04455	429,719.00	4.04455	84	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	169579.9	2.628233	160,164.00	2.628233	106	50 - 150	0.0000	+/-0.50	
M2PFTA	1197766	4.394683	1,346,753.00	4.3947	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	204142.4	3.866867	207,185.00	3.866867	99	50 - 150	0.0000	+/-0.50	
MPFBA	714171.3	1.12495	652,131.00	1.12495	110	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	250597.9	2.945967	222,261.00	2.945983	113	50 - 150	0.0000	+/-0.50	
M6PFDA	991958.3	3.86735	928,822.00	3.86735	107	50 - 150	0.0000	+/-0.50	
M3PFBS	153916.9	2.011067	152,918.00	2.011067	101	50 - 150	0.0000	+/-0.50	
M7PFUnA	1264791	4.01	1,275,447.00	4.01	99	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	89691.86	3.509633	92,628.00	3.509633	97	50 - 150	0.0000	+/-0.50	
M5PFPeA	670516.4	1.824517	646,075.00	1.824517	104	50 - 150	0.0000	+/-0.50	
M5PFHxA	927578.9	2.722683	871,759.00	2.7145	106	50 - 150	0.0082	+/-0.50	
M3PFHxS	121535.6	3.284267	117,508.00	3.284267	103	50 - 150	0.0000	+/-0.50	
M4PFHpA	937404.9	3.251867	889,252.00	3.251883	105	50 - 150	0.0000	+/-0.50	
M8PFOA	930296.9	3.526167	849,740.00	3.526167	109	50 - 150	0.0000	+/-0.50	
M8PFOS	131976.7	3.708317	130,542.00	3.708317	101	50 - 150	0.0000	+/-0.50	
M9PFNA	870160.9	3.7093	892,260.00	3.7093	98	50 - 150	0.0000	+/-0.50	
MPFDoA	1174308	4.15315	1,234,415.00	4.153167	95	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	136204.1	4.017483	148,710.00	4.017483	92	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	130135.7	3.945883	146,252.00	3.9459	89	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S065864-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	417	0.837413	0.7710471		-16.5	30
Perfluorobutanesulfonic acid (PFBS)	A	444	386	0.9707226	0.9144017		-13.1	30
Perfluoropentanoic acid (PFPeA)	A	500	437	0.9163201	0.8803979		-12.6	30
Perfluorohexanoic acid (PFHxA)	A	500	404	0.850226	0.7776626		-19.2	30
11Cl-PF3OUdS (F53B Minor)	A	472	447	1.962472	1.800102		-5.3	30
9Cl-PF3ONS (F53B Major)	A	466	414	4.081904	3.441073		-11.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	385	1.487743	1.401269		-18.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	365	0.1341855	9.660717E-02		-27.0	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	510	0.7727103	0.8703765		6.3	30
Perfluorodecanoic acid (PFDA)	A	500	403	0.9077273	0.826363		-19.4	30
Perfluorododecanoic acid (PFDoA)	A	500	497	0.914647	0.8618863		-0.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	400	3.687622	3.335153		-10.2	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	409	0.4723281	0.4126137		-14.0	30
N-EtFOSAA	A	500	505	0.9374896	0.9740219		1.0	30
N-MeFOSAA	A	500	470	1.054669	1.060253		-6.1	30
Perfluorotetradecanoic acid (PFTA)	A	500	422	0.8552112	0.805364		-15.6	30
Perfluorotridecanoic acid (PFTrDA)	A	500	413	0.9780239	0.9458359		-17.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	419	1.07418	1.081764		-10.5	30
Perfluorodecanesulfonic acid (PFDS)	A	482	390	0.6371807	0.5417871		-19.0	30
Perfluorooctanesulfonamide (FOSA)	A	500	443	0.810352	0.7886328		-11.5	30
Perfluorononanesulfonic acid (PFNS)	A	481	342	0.3496386	0.269878		-28.9	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	445	0.346892	0.3176064		-11.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	437	0.2988718	0.285666		-12.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	391	0.9379263	0.8857703		-14.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	435	0.4927369	0.4417822		-13.0	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	449	0.5777971	0.5293303		-10.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	463	1.04777	1.14519		-2.8	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	387	0.9161502	0.8373459		-17.8	30
Perfluoroundecanoic acid (PFUnA)	A	500	435	0.8584422	0.8372085		-13.0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	450	0.3197121	0.2908264		-10.1	30
Perfluoroheptanoic acid (PFHpA)	A	500	433	0.9034819	0.8025392		-13.5	30
Perfluorooctanoic acid (PFOA)	A	500	424	0.8637994	0.7730046		-15.2	30
Perfluorooctanesulfonic acid (PFOS)	A	464	436	0.9743028	1.011908		-6.0	30
Perfluorononanoic acid (PFNA)	A	500	411	0.9320124	0.7945669		-17.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S065864-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2390	0.837413	0.8814925		-4.5	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2210	0.9707226	1.04936		-0.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2310	0.9163201	0.9317778		-7.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2240	0.850226	0.864343		-10.2	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2290	1.962472	1.864208		-3.1	30
9Cl-PF3ONS (F53B Major)	A	2330	2240	4.081904	3.778616		-4.0	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2270	1.487743	1.644676		-3.8	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2090	0.1341855	0.1113583		-16.2	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2820	0.7727103	0.9503553		17.4	30
Perfluorodecanoic acid (PFDA)	A	2500	2280	0.9077273	0.9338956		-8.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2750	0.914647	0.9830376		10.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2310	3.687622	3.890182		3.9	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2560	0.4723281	0.5204973		7.8	30
N-EtFOSAA	A	2500	2730	0.9374896	1.05917		9.1	30
N-MeFOSAA	A	2500	3060	1.054669	1.383006		22.5	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2400	0.8552112	0.9103357		-4.1	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2370	0.9780239	1.076568		-5.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2480	1.07418	1.263321		5.8	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2500	0.6371807	0.6929334		3.6	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2570	0.810352	0.9163111		2.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2140	0.3496386	0.3389637		-10.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2320	0.346892	0.3329519		-7.3	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2450	0.2988718	0.3208264		-1.8	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2210	0.9379263	1.00356		-3.0	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2500	0.4927369	0.5107976		0.03	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2580	0.5777971	0.6104197		3.1	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2670	1.04777	1.306338		12.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2240	0.9161502	0.9721475		-4.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2340	0.8584422	0.9002384		-6.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2610	0.3197121	0.3401623		4.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2500	0.9034819	0.9317361		0.01	30
Perfluorooctanoic acid (PFOA)	A	2500	2460	0.8637994	0.8996293		-1.7	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2220	0.9743028	1.031813		-4.1	30
Perfluorononanoic acid (PFNA)	A	2500	2370	0.9320124	0.920212		-5.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S065864-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2380	0.837413	0.8773331		-5.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2250	0.9707226	1.068423		1.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2340	0.9163201	0.9420384		-6.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2340	0.850226	0.9022817		-6.3	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2210	1.962472	1.798646		-6.4	30
9Cl-PF3ONS (F53B Major)	A	2330	2220	4.081904	3.748869		-4.7	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2380	1.487743	1.725387		0.9	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2100	0.1341855	0.1116016		-16.1	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2840	0.7727103	0.9570799		18.3	30
Perfluorodecanoic acid (PFDA)	A	2500	2380	0.9077273	0.9745115		-5.0	30
Perfluorododecanoic acid (PFDoA)	A	2500	2710	0.914647	0.9652738		8.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2280	3.687622	3.846435		2.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2530	0.4723281	0.5124433		6.1	30
N-EtFOSAA	A	2500	2930	0.9374896	1.138729		17.2	30
N-MeFOSAA	A	2500	2800	1.054669	1.264567		12.0	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2480	0.8552112	0.9396917		-0.9	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2500	0.9780239	1.13289		-0.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2680	0.6371807	0.7430336		11.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2490	1.07418	1.271514		6.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2440	0.810352	0.8694809		-2.4	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2250	0.3496386	0.3553558		-6.3	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2450	0.346892	0.3526449		-1.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2480	0.2988718	0.3246558		-0.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2510	0.9379263	1.13907		10.1	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2490	0.4927369	0.508942		-0.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2490	0.5777971	0.5894326		-0.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2660	1.04777	1.30143		11.9	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2390	0.9161502	1.03605		1.7	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2320	0.8584422	0.8925827		-7.3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2620	0.3197121	0.341931		4.9	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2450	0.9034819	0.9118273		-2.1	30
Perfluorooctanoic acid (PFOA)	A	2500	2440	0.8637994	0.8916373		-2.5	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2110	0.9743028	0.9808224		-8.9	30
Perfluorononanoic acid (PFNA)	A	2500	2440	0.9320124	0.9477641		-2.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066112-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2270	0.8472492	0.8283493		-9.0	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2030	0.9856688	0.9683261		-8.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2240	0.9047224	0.8667534		-10.4	30
Perfluorohexanoic acid (PFHxA)	A	2500	2300	0.8409581	0.8359435		-8.1	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2150	1.784283	1.69995		-8.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2160	3.673611	3.557585		-7.5	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2180	1.518953	1.445795		-7.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2100	0.1274152	0.1132746		-16.1	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2310	0.7783292	0.8247937		-3.7	30
Perfluorodecanoic acid (PFDA)	A	2500	2410	0.9470336	0.9724675		-3.7	30
Perfluorododecanoic acid (PFDoA)	A	2500	2210	0.9610104	0.9163567		-11.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2070	3.533021	3.365553		-6.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2090	0.4718273	0.4381512		-12.1	30
N-EtFOSAA	A	2500	2360	1.005149	1.002722		-5.6	30
N-MeFOSAA	A	2500	2240	1.206216	1.138911		-10.2	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2330	0.8851226	0.8888083		-6.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2150	1.083603	1.04966		-14.1	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2150	0.6370601	0.6097952		-11.0	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2280	1.077521	1.157807		-2.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2150	0.8304158	0.7803671		-13.8	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2090	0.3339405	0.3060065		-13.1	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2420	0.4137913	0.3969529		-3.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2290	0.3253943	0.3155026		-8.5	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2050	0.9568499	0.9277435		-10.1	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2340	0.5062041	0.4894526		-6.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2330	0.5900583	0.5684785		-6.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2100	1.092115	1.056857		-11.9	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2160	0.9749723	0.9700318		-7.9	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2120	0.8892146	0.8199157		-15.1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2300	0.3322395	0.3197026		-7.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2360	0.9054834	0.8585269		-5.4	30
Perfluorooctanoic acid (PFOA)	A	2500	2530	0.8635398	0.8874429		1.0	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2090	0.9387098	0.9203076		-10.1	30
Perfluorononanoic acid (PFNA)	A	2500	2430	0.9638787	0.9193333		-2.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066112-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	430	0.8472492	0.7821649		-14.1	30
Perfluorobutanesulfonic acid (PFBS)	A	444	373	0.9856688	0.8885421		-15.9	30
Perfluoropentanoic acid (PFPeA)	A	500	434	0.9047224	0.8399889		-13.1	30
Perfluorohexanoic acid (PFHxA)	A	500	417	0.8409581	0.7576642		-16.7	30
11Cl-PF3OUdS (F53B Minor)	A	472	397	1.784283	1.559618		-15.9	30
9Cl-PF3ONS (F53B Major)	A	466	414	3.673611	3.400198		-11.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	409	1.518953	1.350005		-13.3	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	426	0.1274152	0.1148393		-14.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	436	0.7783292	0.7856965		-9.2	30
Perfluorodecanoic acid (PFDA)	A	500	448	0.9470336	0.9038068		-10.5	30
Perfluorododecanoic acid (PFDoA)	A	500	440	0.9610104	0.9122431		-11.9	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	375	3.533021	3.025921		-15.7	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	444	0.4718273	0.4639139		-6.7	30
N-EtFOSAA	A	500	374	1.005149	0.7923907		-25.3	30
N-MeFOSAA	A	500	423	1.206216	1.073795		-15.4	30
Perfluorotetradecanoic acid (PFTA)	A	500	411	0.8851226	0.7840385		-17.7	30
Perfluorotridecanoic acid (PFTrDA)	A	500	399	1.083603	0.9773611		-20.3	30
Perfluorodecanesulfonic acid (PFDS)	A	482	379	0.6370601	0.5381053		-21.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	429	1.077521	1.101701		-8.3	30
Perfluorooctanesulfonamide (FOSA)	A	500	450	0.8304158	0.8153992		-10.0	30
Perfluorononanesulfonic acid (PFNS)	A	481	470	0.3339405	0.3438425		-2.3	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	439	0.4137913	0.3558534		-12.2	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	428	0.3253943	0.2952925		-14.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	370	0.9568499	0.8357711		-19.0	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	430	0.5062041	0.4472439		-14.1	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	429	0.5900583	0.5212308		-14.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	411	1.092115	1.047096		-13.7	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	384	0.9749723	0.8613677		-18.2	30
Perfluoroundecanoic acid (PFUnA)	A	500	396	0.8892146	0.7654094		-20.7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	427	0.3322395	0.2955108		-14.6	30
Perfluoroheptanoic acid (PFHpA)	A	500	455	0.9054834	0.8206591		-9.0	30
Perfluorooctanoic acid (PFOA)	A	500	475	0.8635398	0.8300802		-5.0	30
Perfluorooctanesulfonic acid (PFOS)	A	464	409	0.9387098	0.9025144		-11.8	30
Perfluorononanoic acid (PFNA)	A	500	562	0.9638787	1.05649		12.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066112-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2280	0.8472492	0.8299553		-8.8	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2080	0.9856688	0.9891439		-6.4	30
Perfluoropentanoic acid (PFPeA)	A	2500	2230	0.9047224	0.861387		-10.9	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.8409581	0.8214545		-9.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2110	1.784283	1.662441		-10.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2060	3.673611	3.397744		-11.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2220	1.518953	1.472146		-5.9	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2200	0.1274152	0.1185462		-12.2	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2470	0.7783292	0.8822132		3.1	30
Perfluorodecanoic acid (PFDA)	A	2500	2170	0.9470336	0.8746436		-13.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2180	0.9610104	0.9019919		-12.9	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2140	3.533021	3.47404		-3.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2050	0.4718273	0.4289939		-13.9	30
N-EtFOSAA	A	2500	2470	1.005149	1.048013		-1.4	30
N-MeFOSAA	A	2500	2500	1.206216	1.267357		-0.1	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2170	0.8851226	0.8275176		-13.3	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2110	1.083603	1.033707		-15.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2380	1.077521	1.207452		1.7	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2280	0.6370601	0.647357		-5.5	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2360	0.8304158	0.8547661		-5.6	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2010	0.3339405	0.2953681		-16.1	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2380	0.4137913	0.3897294		-4.9	30
Perfluoro-1-butanefulfonamide (FBSA)	A	2500	2290	0.3253943	0.3152275		-8.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2130	0.9568499	0.9636814		-6.6	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2340	0.5062041	0.4900046		-6.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2330	0.5900583	0.5671753		-6.9	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2480	1.092115	1.245828		4.1	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2170	0.9749723	0.9706794		-7.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2230	0.8892146	0.8615372		-10.8	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2350	0.3322395	0.3261837		-6.0	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2440	0.9054834	0.8878779		-2.2	30
Perfluorooctanoic acid (PFOA)	A	2500	2340	0.8635398	0.8219345		-6.4	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2200	0.9387098	0.9697839		-5.3	30
Perfluorononanoic acid (PFNA)	A	2500	2600	0.9638787	0.9859967		4.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-454 PFAS

S066112-CCV4

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2260	0.8472492	0.8246401		-9.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2040	0.9856688	0.969564		-8.3	30
Perfluoropentanoic acid (PFPeA)	A	2500	2270	0.9047224	0.8784821		-9.2	30
Perfluorohexanoic acid (PFHxA)	A	2500	2200	0.8409581	0.8002001		-12.0	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2270	1.784283	1.793929		-3.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2160	3.673611	3.566084		-7.3	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2230	1.518953	1.477107		-5.6	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	1970	0.1274152	0.1065958		-21.0	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2300	0.7783292	0.8204862		-4.2	30
Perfluorodecanoic acid (PFDA)	A	2500	2210	0.9470336	0.8910809		-11.7	30
Perfluorododecanoic acid (PFDoA)	A	2500	2210	0.9610104	0.9166494		-11.5	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2130	3.533021	3.465383		-4.0	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2380	0.4718273	0.4976512		-0.2	30
N-EtFOSAA	A	2500	2280	1.005149	0.9707284		-8.6	30
N-MeFOSAA	A	2500	2320	1.206216	1.180014		-7.0	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2250	0.8851226	0.8599893		-9.9	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2140	1.083603	1.047398		-14.3	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2190	0.6370601	0.6230389		-9.1	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2270	1.077521	1.153285		-2.9	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2280	0.8304158	0.8250154		-8.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2100	0.3339405	0.307576		-12.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2480	0.4137913	0.4063502		-0.9	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2270	0.3253943	0.3136859		-9.0	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2050	0.9568499	0.9266033		-10.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2310	0.5062041	0.4839777		-7.4	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2330	0.5900583	0.5687445		-6.7	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2260	1.092115	1.13663		-5.2	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2080	0.9749723	0.931967		-11.5	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2180	0.8892146	0.8422713		-12.8	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2320	0.3322395	0.3212955		-7.4	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2350	0.9054834	0.8550808		-5.8	30
Perfluorooctanoic acid (PFOA)	A	2500	2290	0.8635398	0.8040291		-8.4	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2220	0.9387098	0.9788039		-4.4	30
Perfluorononanoic acid (PFNA)	A	2500	2570	0.9638787	0.9750323		3.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SOP-466 PFAS in Soil	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-466 PFAS in Soil	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

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Page 1 of 1

Pace Analytical
2/K1458

Contact: <https://www.pacelabs.com/contact-us/contact-environmental-sciences/>
Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Name: Princeton PFAS Project
Project Location: 21 Mountain Road, Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps
Pace Analytical Quote Name/Number: Tighe & Bond
Invoice Recipient: M. Scherer
Sampled By:

Requested Turnaround Time: 7-Day 10-Day
PFAS 10-Day (std) Due Date:
Rush-Approval Required: 1-Day 3-Day
2-Day 4-Day
Format: PDF EXCEL
Other: SOXHLET
CLP Like Data Pkg Required:
Email To: mjscherer@tighebond.com
Fax To #:

ANALYSIS REQUESTED

Matrix Code	MA MCP Required	MCP Certification Form Required	CT RCP Required	RCP Certification Form Required	MA State DW Required	Other
GW = Ground Water	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WW = Waste Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DW = Drinking Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A = Air	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S = Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SL = Sludge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOL = Solid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O = Other (please define)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Preservation Code: Courter Use Only
Total Number Of: 10
VIALS: GLASS, BACTERIA, ENCORE
Glassware in the fridge? Y/N
Glassware in freezer? Y/N
Prepackaged Cooler? Y/N
*Pace Analytical is not responsible for missing samples from prepacked coolers
1 Matrix Codes: GW = Ground Water, WW = Waste Water, DW = Drinking Water, A = Air, S = Soil, SL = Sludge, SOL = Solid, O = Other (please define)
2 Preservation Codes: I = Iced, H = HCL, M = Methanol, N = Nitric Acid, S = Sulfuric Acid, B = Sodium Bisulfate, X = Sodium Hydroxide, T = Sodium Thiosulfate, O = Other (please define)

Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Cont. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS by Isotope Dilution
21MTN S-1	11/17/21	1300	GRAB	S	U	1					X
21MTN S-2											X
21MTN S-3											X
21MTN S-4											X
21MTN S-5											X
21MTN S-6											X
21MTN S-7											X
Field Blank											X
Equipment Blank											X
Rinse											X

Client Comments: NOTE: THIS BLANK SUBMITTED UNDER SEPARATE CLOC AS TB - 11/17/2021

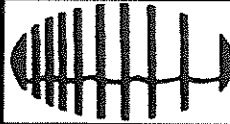
Relinquished by (signature): [Signature] Date/Time: 11/18/21 1000
Received by (signature): [Signature] Date/Time: 11/19/21 710
Relinquished by (signature): [Signature] Date/Time: 11/19/21 1845
Received by (signature): [Signature] Date/Time: 11/20/21 1505
Relinquished by (signature): [Signature] Date/Time: []
Received by (signature): [Signature] Date/Time: []
Relinquished by (signature): [Signature] Date/Time: []
Received by (signature): [Signature] Date/Time: []

Project Entity: Government Federal City
Municipality: 21 J
City: Brownfield
MWRSA School MBTA
WRTA
Other: Chromatogram AIHA-LAP, LLC

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Tight + Bond
 Received By [Signature] Date 11/19/21 Time 1845

How were the samples received?
 In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp - 2.6
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? na Were Samples Tampered with? na
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client F Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? na MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid na Base na

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	10	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

December 6, 2021

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

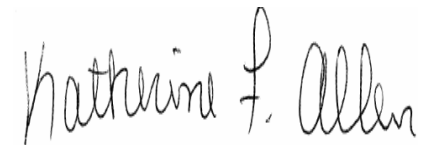
Project Location: 19 Mountain Road, Princeton, MA
Client Job Number:
Project Number: P-0534017
Laboratory Work Order Number: 21K1409

Enclosed are results of analyses for samples as received by the laboratory on November 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Michael Scherer

REPORT DATE: 12/6/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534017

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21K1409

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 19 Mountain Road, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
19MTN S-1	21K1409-01	Soil		SM 2540G SOP-466 PFAS	
19MTN S-2	21K1409-02	Soil		SM 2540G SOP-466 PFAS	
19MTN S-3	21K1409-03	Soil		SM 2540G SOP-466 PFAS	
19MTN S-4	21K1409-04	Soil		SM 2540G SOP-466 PFAS	
19MTN S-5	21K1409-05	Soil		SM 2540G SOP-466 PFAS	
19MTN S-1 (DUP)	21K1409-06	Soil		SM 2540G SOP-466 PFAS	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is fluid and cursive, with a large initial "T" and "K".

Tod E. Kopycinski
Laboratory Director

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-1

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.10	0.48	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.48	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoropentanoic acid (PFPeA)	0.10	0.48	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.48	0.090	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
9Cl-PF3ONS (F53B Major)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.48	0.23	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.48	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorodecanoic acid (PFDA)	0.17	0.48	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorododecanoic acid (PFDoA)	0.12	0.48	0.074	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.48	0.079	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
N-EtFOSAA	ND	0.48	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
N-MeFOSAA	ND	0.48	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.48	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.48	0.094	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.48	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.48	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.48	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.48	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.48	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.48	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.48	0.070	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoroundecanoic acid (PFUnA)	0.14	0.48	0.088	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.48	0.075	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.48	0.069	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorooctanoic acid (PFOA)	0.18	0.48	0.14	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorooctanesulfonic acid (PFOS)	0.72	0.48	0.065	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH
Perfluorononanoic acid (PFNA)	0.10	0.48	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:25	BLH

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-1

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.6		% Wt	1		SM 2540G	11/25/21	11/26/21 9:28	TDK

Project Location: 19 Mountain Road, Princeton, MA Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-2

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.50	0.067	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.50	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
9Cl-PF3ONS (F53B Major)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.50	0.24	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.50	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorodecanoic acid (PFDA)	0.19	0.50	0.064	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.50	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.50	0.082	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
N-EtFOSAA	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
N-MeFOSAA	ND	0.50	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.50	0.096	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.50	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.50	0.098	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.50	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.50	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.50	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.50	0.094	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.50	0.092	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.50	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.50	0.073	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoroundecanoic acid (PFUnA)	0.18	0.50	0.091	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.50	0.078	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluoroheptanoic acid (PFHpA)	ND	0.50	0.072	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorooctanoic acid (PFOA)	ND	0.50	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorooctanesulfonic acid (PFOS)	1.4	0.50	0.068	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH
Perfluorononanoic acid (PFNA)	0.11	0.50	0.082	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:32	BLH

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-2

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.2		% Wt	1		SM 2540G	11/25/21	11/26/21 9:28	TDK

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-3

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.30	0.54	0.072	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
9Cl-PF3ONS (F53B Major)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.54	0.26	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.54	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorodecanoic acid (PFDA)	0.22	0.54	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.54	0.083	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.54	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
N-EtFOSAA	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
N-MeFOSAA	ND	0.54	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.54	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.54	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.54	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.54	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.54	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.54	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.54	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.54	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoroundecanoic acid (PFUnA)	0.12	0.54	0.099	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.54	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluoroheptanoic acid (PFHpA)	0.20	0.54	0.079	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorooctanoic acid (PFOA)	0.59	0.54	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorooctanesulfonic acid (PFOS)	1.8	0.54	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH
Perfluorononanoic acid (PFNA)	0.37	0.54	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:39	BLH

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-3

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	71.3		% Wt	1		SM 2540G	11/25/21	11/26/21 9:28	TDK

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-4

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.17	0.58	0.077	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.58	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoropentanoic acid (PFPeA)	0.11	0.58	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.58	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
9Cl-PF3ONS (F53B Major)	ND	0.58	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.58	0.19	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.58	0.28	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.58	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorodecanoic acid (PFDA)	0.31	0.58	0.075	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorododecanoic acid (PFDoA)	0.17	0.58	0.089	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.58	0.095	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.58	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
N-EtFOSAA	ND	0.58	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
N-MeFOSAA	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.58	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.58	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.58	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.58	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.58	0.18	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.58	0.093	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.58	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.58	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.58	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoroundecanoic acid (PFUnA)	0.28	0.58	0.11	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.58	0.090	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluoroheptanoic acid (PFHpA)	0.10	0.58	0.084	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorooctanoic acid (PFOA)	0.41	0.58	0.16	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorooctanesulfonic acid (PFOS)	2.2	0.58	0.079	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH
Perfluorononanoic acid (PFNA)	0.23	0.58	0.095	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:46	BLH

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-4

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	67.9		% Wt	1		SM 2540G	11/25/21	11/26/21 9:28	TDK

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-5

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.064	0.46	0.062	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoropentanoic acid (PFPeA)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorohexanoic acid (PFHxA)	ND	0.46	0.087	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
9Cl-PF3ONS (F53B Major)	ND	0.46	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.46	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.46	0.22	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.46	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorodecanoic acid (PFDA)	0.11	0.46	0.060	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorododecanoic acid (PFDoA)	ND	0.46	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.46	0.076	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.46	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
N-EtFOSAA	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
N-MeFOSAA	ND	0.46	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.46	0.089	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorotridecanoic acid (PFTTrDA)	ND	0.46	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.46	0.086	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.46	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.46	0.091	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.46	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.46	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.46	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.46	0.074	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.46	0.088	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.46	0.086	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.46	0.11	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.46	0.068	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoroundecanoic acid (PFUnA)	ND	0.46	0.085	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.46	0.072	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluoroheptanoic acid (PFHpA)	0.078	0.46	0.067	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorooctanoic acid (PFOA)	0.21	0.46	0.13	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorooctanesulfonic acid (PFOS)	0.28	0.46	0.063	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH
Perfluorononanoic acid (PFNA)	0.21	0.46	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 18:54	BLH

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-5

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.7		% Wt	1		SM 2540G	11/25/21	11/26/21 9:28	TDK

Project Location: 19 Mountain Road, Princeton, MA Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-1 (DUP)

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	0.073	0.52	0.070	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	0.52	0.080	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoropentanoic acid (PFPeA)	0.28	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorohexanoic acid (PFHxA)	0.14	0.52	0.098	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
11Cl-PF3OUdS (F53B Minor)	ND	0.52	0.15	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
9Cl-PF3ONS (F53B Major)	ND	0.52	0.13	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.52	0.25	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorodecanoic acid (PFDA)	0.34	0.52	0.068	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorododecanoic acid (PFDoA)	0.26	0.52	0.080	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.52	0.086	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
N-EtFOSAA	0.22	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
N-MeFOSAA	ND	0.52	0.095	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorotetradecanoic acid (PFTA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorotridecanoic acid (PFTrDA)	0.13	0.52	0.12	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorooctanesulfonamide (FOSA)	ND	0.52	0.10	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorononanesulfonic acid (PFNS)	ND	0.52	0.14	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.52	0.16	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoro-1-butanefulfonamide (FBSA)	ND	0.52	0.17	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	0.52	0.084	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.52	0.099	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.52	0.097	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.52	0.12	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	0.52	0.077	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoroundecanoic acid (PFUnA)	0.28	0.52	0.095	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.52	0.081	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluoroheptanoic acid (PFHpA)	0.083	0.52	0.076	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorooctanoic acid (PFOA)	0.45	0.52	0.15	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorooctanesulfonic acid (PFOS)	1.2	0.52	0.071	µg/kg dry	1		SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH
Perfluorononanoic acid (PFNA)	0.22	0.52	0.086	µg/kg dry	1	J	SOP-466 PFAS	11/29/21	12/2/21 19:01	BLH

Project Location: 19 Mountain Road, Princeton, MA

Sample Description:

Work Order: 21K1409

Date Received: 11/19/2021

Field Sample #: 19MTN S-1 (DUP)

Sampled: 11/17/2021 11:00

Sample ID: 21K1409-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.3		% Wt	1		SM 2540G	11/25/21	11/26/21 9:29	TDK

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
21K1409-01 [19MTN S-1]	B295558	11/25/21
21K1409-02 [19MTN S-2]	B295558	11/25/21
21K1409-03 [19MTN S-3]	B295558	11/25/21
21K1409-04 [19MTN S-4]	B295558	11/25/21
21K1409-05 [19MTN S-5]	B295558	11/25/21
21K1409-06 [19MTN S-1 (DUP)]	B295558	11/25/21

Prep Method: SOP 465-PFAAS-SOP-466 PFAS

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21K1409-01 [19MTN S-1]	B295330	5.74	5.00	11/29/21
21K1409-02 [19MTN S-2]	B295330	5.99	5.00	11/29/21
21K1409-03 [19MTN S-3]	B295330	5.80	5.00	11/29/21
21K1409-04 [19MTN S-4]	B295330	5.72	5.00	11/29/21
21K1409-05 [19MTN S-5]	B295330	5.65	5.00	11/29/21
21K1409-06 [19MTN S-1 (DUP)]	B295330	5.86	5.00	11/29/21

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295330 - SOP 465-PFAAS

Blank (B295330-BLK1)

Prepared: 11/29/21 Analyzed: 12/01/21

Perfluorobutanoic acid (PFBA)	ND	0.40	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.40	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.40	µg/kg wet							
11Cl-PF3OUdS (F53B Minor)	ND	0.40	µg/kg wet							
9Cl-PF3ONS (F53B Major)	ND	0.40	µg/kg wet							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.40	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.40	µg/kg wet							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	0.40	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.40	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.40	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	0.40	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.40	µg/kg wet							
N-EtFOSAA	ND	0.40	µg/kg wet							
N-MeFOSAA	ND	0.40	µg/kg wet							
Perfluorotetradecanoic acid (PFTA)	ND	0.40	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.40	µg/kg wet							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	0.40	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.40	µg/kg wet							
Perfluorooctanesulfonamide (FOSA)	ND	0.40	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.40	µg/kg wet							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	0.40	µg/kg wet							
Perfluoro-1-butanesulfonamide (FBSA)	ND	0.40	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.40	µg/kg wet							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	0.40	µg/kg wet							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	0.40	µg/kg wet							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	0.40	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.40	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.40	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.40	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.40	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.40	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.40	µg/kg wet							

LCS (B295330-BS1)

Prepared: 11/29/21 Analyzed: 12/01/21

Perfluorobutanoic acid (PFBA)	2.00	0.39	µg/kg wet	2.18		91.9	71-135			
Perfluorobutanesulfonic acid (PFBS)	1.87	0.39	µg/kg wet	1.92		97.4	72-128			
Perfluoropentanoic acid (PFPeA)	1.92	0.39	µg/kg wet	2.18		88.4	69-132			
Perfluorohexanoic acid (PFHxA)	1.95	0.39	µg/kg wet	2.18		89.4	70-132			
11Cl-PF3OUdS (F53B Minor)	1.97	0.39	µg/kg wet	2.05		96.1	50-150			
9Cl-PF3ONS (F53B Major)	1.94	0.39	µg/kg wet	2.03		95.7	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.97	0.39	µg/kg wet	2.05		96.2	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.94	0.39	µg/kg wet	2.18		89.0	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	2.29	0.39	µg/kg wet	2.09		109	65-137			
Perfluorodecanoic acid (PFDA)	1.99	0.39	µg/kg wet	2.18		91.3	69-133			
Perfluorododecanoic acid (PFDoA)	2.36	0.39	µg/kg wet	2.18		109	69-135			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	2.10	0.39	µg/kg wet	1.94		109	50-150			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B295330 - SOP 465-PFAAS

LCS (B295330-BS1)

Prepared: 11/29/21 Analyzed: 12/01/21

Perfluoroheptanesulfonic acid (PFHpS)	2.16	0.39	µg/kg wet	2.08		104	70-132			
N-EtFOSAA	2.90	0.39	µg/kg wet	2.18		133	61-139			
N-MeFOSAA	2.75	0.39	µg/kg wet	2.18		126	63-144			
Perfluorotetradecanoic acid (PFTA)	2.03	0.39	µg/kg wet	2.18		93.3	69-133			
Perfluorotridecanoic acid (PFTrDA)	1.96	0.39	µg/kg wet	2.18		89.9	66-139			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	2.04	0.39	µg/kg wet	2.04		99.9	62-145			
Perfluorodecanesulfonic acid (PFDS)	2.19	0.39	µg/kg wet	2.10		104	59-134			
Perfluorooctanesulfonamide (FOSA)	2.05	0.39	µg/kg wet	2.18		94.4	67-137			
Perfluorononanesulfonic acid (PFNS)	1.73	0.39	µg/kg wet	2.09		83.1	69-125			
Perfluoro-1-hexanesulfonamide (FHxSA)	2.12	0.39	µg/kg wet	2.18		97.4	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	2.26	0.39	µg/kg wet	2.18		104	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.84	0.39	µg/kg wet	1.98		93.1	67-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	2.25	0.39	µg/kg wet	2.18		103	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	2.16	0.39	µg/kg wet	2.18		99.4	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	2.28	0.39	µg/kg wet	2.07		110	64-140			
Perfluoropentanesulfonic acid (PFPeS)	1.91	0.39	µg/kg wet	2.05		93.2	73-123			
Perfluoroundecanoic acid (PFUnA)	2.02	0.39	µg/kg wet	2.18		92.7	64-136			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.23	0.39	µg/kg wet	2.18		102	50-150			
Perfluoroheptanoic acid (PFHpA)	2.15	0.39	µg/kg wet	2.18		99.0	71-131			
Perfluorooctanoic acid (PFOA)	2.10	0.39	µg/kg wet	2.18		96.4	69-133			
Perfluorooctanesulfonic acid (PFOS)	1.78	0.39	µg/kg wet	2.01		88.5	68-136			
Perfluorononanoic acid (PFNA)	2.03	0.39	µg/kg wet	2.18		93.4	72-129			

Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

ANALYST

TDK Troy D Kapitzke
 SSR Samantha S Runyon
 STATION PDF Management Station
 JFC James F. Constantino
 JLH Jessica L. Hoffman

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
19MTN S-1 (21K1409-01) Lab File ID: 21K1409-01.d Analyzed: 12/02/21 18:25									
M8FOSA	432131.5	4.044533	516,491.00	4.044533	84	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	157186.1	2.620017	194,541.00	2.628217	81	50 - 150	-0.0082	+/-0.50	
M2PFTA	1395924	4.386567	1,680,862.00	4.394667	83	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	221093.1	3.86685	268,229.00	3.86685	82	50 - 150	0.0000	+/-0.50	
MPFBA	708433.1	1.12495	845,328.00	1.12495	84	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	242090.1	2.93785	273,580.00	2.93785	88	50 - 150	0.0000	+/-0.50	
M6PFDA	1001054	3.86735	1,162,829.00	3.86735	86	50 - 150	0.0000	+/-0.50	
M3PFBS	174618.6	2.002783	190,734.00	2.002783	92	50 - 150	0.0000	+/-0.50	
M7PFUnA	1293139	4.01	1,596,639.00	4.009984	81	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	150415.8	3.509633	112,436.00	3.509617	134	50 - 150	0.0000	+/-0.50	
M5PFPeA	742542.4	1.816233	825,110.00	1.816233	90	50 - 150	0.0000	+/-0.50	
M5PFHxA	993709.8	2.7145	1,126,300.00	2.7145	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	134265.6	3.284267	145,931.00	3.284267	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	1003811	3.251867	1,097,299.00	3.251867	91	50 - 150	0.0000	+/-0.50	
M8PFOA	993984.2	3.518167	1,050,193.00	3.52615	95	50 - 150	-0.0080	+/-0.50	
M8PFOS	141839.2	3.7083	156,089.00	3.7083	91	50 - 150	0.0000	+/-0.50	
M9PFNA	878868.8	3.7093	1,109,090.00	3.7093	79	50 - 150	0.0000	+/-0.50	
MPFDoA	1242774	4.15315	1,559,132.00	4.153133	80	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	147379.2	4.017467	181,890.00	4.017467	81	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	140632.7	3.937883	165,605.00	3.937883	85	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
19MTN S-2 (21K1409-02) Lab File ID: 21K1409-02.d Analyzed: 12/02/21 18:32									
M8FOSA	394839.3	4.044533	516,491.00	4.044533	76	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	150065	2.62	194,541.00	2.628217	77	50 - 150	-0.0082	+/-0.50	
M2PFTA	1267230	4.386567	1,680,862.00	4.394667	75	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	187749.1	3.86685	268,229.00	3.86685	70	50 - 150	0.0000	+/-0.50	
MPFBA	637834.4	1.12495	845,328.00	1.12495	75	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	223951	2.937833	273,580.00	2.93785	82	50 - 150	0.0000	+/-0.50	
M6PFDA	900694.3	3.86735	1,162,829.00	3.86735	77	50 - 150	0.0000	+/-0.50	
M3PFBS	158237.1	2.002783	190,734.00	2.002783	83	50 - 150	0.0000	+/-0.50	
M7PFUnA	1161449	4.01	1,596,639.00	4.009984	73	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	134859.9	3.509617	112,436.00	3.509617	120	50 - 150	0.0000	+/-0.50	
M5PFPeA	644917.3	1.816233	825,110.00	1.816233	78	50 - 150	0.0000	+/-0.50	
M5PFHxA	853226	2.7145	1,126,300.00	2.7145	76	50 - 150	0.0000	+/-0.50	
M3PFHxS	121935.3	3.28425	145,931.00	3.284267	84	50 - 150	0.0000	+/-0.50	
M4PFHpA	873040.8	3.251867	1,097,299.00	3.251867	80	50 - 150	0.0000	+/-0.50	
M8PFOA	898899.1	3.51815	1,050,193.00	3.52615	86	50 - 150	-0.0080	+/-0.50	
M8PFOS	128775.9	3.7083	156,089.00	3.7083	83	50 - 150	0.0000	+/-0.50	
M9PFNA	788449.9	3.7093	1,109,090.00	3.7093	71	50 - 150	0.0000	+/-0.50	
MPFDoA	1178884	4.15315	1,559,132.00	4.153133	76	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	139470.6	4.017467	181,890.00	4.017467	77	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	123863.3	3.937883	165,605.00	3.937883	75	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
19MTN S-3 (21K1409-03) Lab File ID: 21K1409-03.d Analyzed: 12/02/21 18:39									
M8FOSA	361276.5	4.04455	516,491.00	4.044533	70	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	143050.7	2.628233	194,541.00	2.628217	74	50 - 150	0.0000	+/-0.50	
M2PFTA	1298806	4.386567	1,680,862.00	4.394667	77	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	203085.4	3.86685	268,229.00	3.86685	76	50 - 150	0.0000	+/-0.50	
MPFBA	662787.1	1.12495	845,328.00	1.12495	78	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	222754.2	2.93785	273,580.00	2.93785	81	50 - 150	0.0000	+/-0.50	
M6PFDA	912212.8	3.86735	1,162,829.00	3.86735	78	50 - 150	0.0000	+/-0.50	
M3PFBS	155587.6	2.002783	190,734.00	2.002783	82	50 - 150	0.0000	+/-0.50	
M7PFUnA	1201154	4.01	1,596,639.00	4.009984	75	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	133206.3	3.509633	112,436.00	3.509617	118	50 - 150	0.0000	+/-0.50	
M5PFPeA	660789.2	1.816233	825,110.00	1.816233	80	50 - 150	0.0000	+/-0.50	
M5PFHxA	887052.6	2.7145	1,126,300.00	2.7145	79	50 - 150	0.0000	+/-0.50	
M3PFHxS	116816.3	3.284267	145,931.00	3.284267	80	50 - 150	0.0000	+/-0.50	
M4PFHpA	888371.3	3.251867	1,097,299.00	3.251867	81	50 - 150	0.0000	+/-0.50	
M8PFOA	939223.6	3.518167	1,050,193.00	3.52615	89	50 - 150	-0.0080	+/-0.50	
M8PFOS	132453	3.7083	156,089.00	3.7083	85	50 - 150	0.0000	+/-0.50	
M9PFNA	781304.4	3.7093	1,109,090.00	3.7093	70	50 - 150	0.0000	+/-0.50	
MPFDoA	1151733	4.15315	1,559,132.00	4.153133	74	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	142903.8	4.017483	181,890.00	4.017467	79	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	125367.3	3.937883	165,605.00	3.937883	76	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
19MTN S-4 (21K1409-04) Lab File ID: 21K1409-04.d Analyzed: 12/02/21 18:46									
M8FOSA	442469.3	4.036533	516,491.00	4.044533	86	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	159708.3	2.62	194,541.00	2.628217	82	50 - 150	-0.0082	+/-0.50	
M2PFTA	1398727	4.38655	1,680,862.00	4.394667	83	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	205771.9	3.86685	268,229.00	3.86685	77	50 - 150	0.0000	+/-0.50	
MPFBA	690074.1	1.12495	845,328.00	1.12495	82	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	235430.2	2.937833	273,580.00	2.93785	86	50 - 150	0.0000	+/-0.50	
M6PFDA	969482.8	3.867333	1,162,829.00	3.86735	83	50 - 150	0.0000	+/-0.50	
M3PFBS	166919.8	2.002783	190,734.00	2.002783	88	50 - 150	0.0000	+/-0.50	
M7PFUnA	1359246	4.009984	1,596,639.00	4.009984	85	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	143566.5	3.509617	112,436.00	3.509617	128	50 - 150	0.0000	+/-0.50	
M5PFPeA	686819.3	1.816233	825,110.00	1.816233	83	50 - 150	0.0000	+/-0.50	
M5PFHxA	934232.1	2.7145	1,126,300.00	2.7145	83	50 - 150	0.0000	+/-0.50	
M3PFHxS	132328.8	3.28425	145,931.00	3.284267	91	50 - 150	0.0000	+/-0.50	
M4PFHpA	957652.6	3.251867	1,097,299.00	3.251867	87	50 - 150	0.0000	+/-0.50	
M8PFOA	972488.9	3.51815	1,050,193.00	3.52615	93	50 - 150	-0.0080	+/-0.50	
M8PFOS	144936.5	3.7083	156,089.00	3.7083	93	50 - 150	0.0000	+/-0.50	
M9PFNA	841139.1	3.709283	1,109,090.00	3.7093	76	50 - 150	0.0000	+/-0.50	
MPFDoA	1316343	4.153133	1,559,132.00	4.153133	84	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	147888.2	4.017467	181,890.00	4.017467	81	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	142576.3	3.937883	165,605.00	3.937883	86	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
19MTN S-5 (21K1409-05) Lab File ID: 21K1409-05.d Analyzed: 12/02/21 18:54									
M8FOSA	398525.7	4.044533	516,491.00	4.044533	77	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	172184.4	2.620017	194,541.00	2.628217	89	50 - 150	-0.0082	+/-0.50	
M2PFTA	1456461	4.38655	1,680,862.00	4.394667	87	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	212319.3	3.866867	268,229.00	3.86685	79	50 - 150	0.0000	+/-0.50	
MPFBA	716410.1	1.12495	845,328.00	1.12495	85	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	249410	2.93785	273,580.00	2.93785	91	50 - 150	0.0000	+/-0.50	
M6PFDA	1011120	3.86735	1,162,829.00	3.86735	87	50 - 150	0.0000	+/-0.50	
M3PFBS	171201.5	2.002783	190,734.00	2.002783	90	50 - 150	0.0000	+/-0.50	
M7PFUnA	1363678	4.01	1,596,639.00	4.009984	85	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	136113.2	3.509633	112,436.00	3.509617	121	50 - 150	0.0000	+/-0.50	
M5PFPeA	720836.3	1.816233	825,110.00	1.816233	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	979410.9	2.706317	1,126,300.00	2.7145	87	50 - 150	-0.0082	+/-0.50	
M3PFHxS	132400.1	3.284267	145,931.00	3.284267	91	50 - 150	0.0000	+/-0.50	
M4PFHpA	980467.2	3.251867	1,097,299.00	3.251867	89	50 - 150	0.0000	+/-0.50	
M8PFOA	991677.4	3.518167	1,050,193.00	3.52615	94	50 - 150	-0.0080	+/-0.50	
M8PFOS	144169.3	3.7083	156,089.00	3.7083	92	50 - 150	0.0000	+/-0.50	
M9PFNA	859255.2	3.7093	1,109,090.00	3.7093	77	50 - 150	0.0000	+/-0.50	
MPFDoA	1341642	4.15315	1,559,132.00	4.153133	86	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	156935.3	4.017467	181,890.00	4.017467	86	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	139944.7	3.9379	165,605.00	3.937883	85	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
19MTN S-1 (DUP) (21K1409-06)			Lab File ID: 21K1409-06.d			Analyzed: 12/02/21 19:01			
M8FOSA	368615.1	4.036533	516,491.00	4.044533	71	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	146552.9	2.62	194,541.00	2.628217	75	50 - 150	-0.0082	+/-0.50	
M2PFTA	1213432	4.38655	1,680,862.00	4.394667	72	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	208646.2	3.86685	268,229.00	3.86685	78	50 - 150	0.0000	+/-0.50	
MPFBA	654961.9	1.12495	845,328.00	1.12495	77	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	229225.2	2.937833	273,580.00	2.93785	84	50 - 150	0.0000	+/-0.50	
M6PFDA	949371.5	3.859383	1,162,829.00	3.86735	82	50 - 150	-0.0080	+/-0.50	
M3PFBS	168369.8	2.002783	190,734.00	2.002783	88	50 - 150	0.0000	+/-0.50	
M7PFUnA	1252514	4.01	1,596,639.00	4.009984	78	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	147483.6	3.509617	112,436.00	3.509617	131	50 - 150	0.0000	+/-0.50	
M5PFPeA	686530.2	1.816233	825,110.00	1.816233	83	50 - 150	0.0000	+/-0.50	
M5PFHxA	923157.6	2.706317	1,126,300.00	2.7145	82	50 - 150	-0.0082	+/-0.50	
M3PFHxS	131503.7	3.28425	145,931.00	3.284267	90	50 - 150	0.0000	+/-0.50	
M4PFHpA	958826.2	3.251867	1,097,299.00	3.251867	87	50 - 150	0.0000	+/-0.50	
M8PFOA	963771.9	3.51815	1,050,193.00	3.52615	92	50 - 150	-0.0080	+/-0.50	
M8PFOS	140873.7	3.7083	156,089.00	3.7083	90	50 - 150	0.0000	+/-0.50	
M9PFNA	817377.8	3.709283	1,109,090.00	3.7093	74	50 - 150	0.0000	+/-0.50	
MPFDoA	1225021	4.14485	1,559,132.00	4.153133	79	50 - 150	-0.0083	+/-0.50	
d5-NEtFOSAA	142858	4.017467	181,890.00	4.017467	79	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	133402.8	3.937883	165,605.00	3.937883	81	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B295330-BLK1)			Lab File ID: B295330-BLK1.d			Analyzed: 12/01/21 13:46			
M8FOSA	501733.6	4.044533	512,758.00	4.044533	98	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	206777.9	2.6531	241,570.00	2.6531	86	50 - 150	0.0000	+/-0.50	
M2PFTA	1783765	4.4028	2,110,880.00	4.4028	85	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	251456.2	3.875067	272,520.00	3.875083	92	50 - 150	0.0000	+/-0.50	
MPFBA	810621.6	1.12495	885,906.00	1.12495	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	337729.2	2.9622	316,881.00	2.9622	107	50 - 150	0.0000	+/-0.50	
M6PFDA	1203356	3.8756	1,255,948.00	3.8756	96	50 - 150	0.0000	+/-0.50	
M3PFBS	182023.6	2.02765	202,561.00	2.02765	90	50 - 150	0.0000	+/-0.50	
M7PFUnA	1676832	4.025983	1,693,363.00	4.025983	99	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	140721.1	3.517617	156,766.00	3.517617	90	50 - 150	0.0000	+/-0.50	
M5PFPeA	798233.4	1.8411	875,966.00	1.8411	91	50 - 150	0.0000	+/-0.50	
M5PFHxA	1110893	2.73905	1,205,292.00	2.73905	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	147583.4	3.300333	169,009.00	3.30035	87	50 - 150	0.0000	+/-0.50	
M4PFHpA	1093239	3.268033	1,229,550.00	3.268033	89	50 - 150	0.0000	+/-0.50	
M8PFOA	1159567	3.534133	1,277,448.00	3.53415	91	50 - 150	0.0000	+/-0.50	
M8PFOS	167092.1	3.716267	179,836.00	3.716267	93	50 - 150	0.0000	+/-0.50	
M9PFNA	1136827	3.71725	1,303,087.00	3.717267	87	50 - 150	0.0000	+/-0.50	
MPFDoA	1586278	4.1612	1,849,187.00	4.161217	86	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	305668.4	4.03345	331,170.00	4.03345	92	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	266531	3.953867	313,935.00	3.953883	85	50 - 150	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

SOP-466 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B295330-BS1)			Lab File ID: B295330-BS1.d		Analyzed: 12/01/21 13:39				
M8FOSA	519401.5	4.044533	512,758.00	4.044533	101	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	207562.4	2.661333	241,570.00	2.6531	86	50 - 150	0.0082	+/-0.50	
M2PFTA	2029890	4.4028	2,110,880.00	4.4028	96	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	333562.4	3.875067	272,520.00	3.875083	122	50 - 150	0.0000	+/-0.50	
MPFBA	840175.4	1.13325	885,906.00	1.12495	95	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	311441.2	2.9622	316,881.00	2.9622	98	50 - 150	0.0000	+/-0.50	
M6PFDA	1316946	3.8756	1,255,948.00	3.8756	105	50 - 150	0.0000	+/-0.50	
M3PFBS	191615	2.035933	202,561.00	2.02765	95	50 - 150	0.0083	+/-0.50	
M7PFUnA	1686527	4.025967	1,693,363.00	4.025983	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	155442.2	3.5256	156,766.00	3.517617	99	50 - 150	0.0080	+/-0.50	
M5PFPeA	838934.9	1.849383	875,966.00	1.8411	96	50 - 150	0.0083	+/-0.50	
M5PFHxA	1160316	2.747233	1,205,292.00	2.73905	96	50 - 150	0.0082	+/-0.50	
M3PFHxS	159817.6	3.300333	169,009.00	3.30035	95	50 - 150	0.0000	+/-0.50	
M4PFHpA	1147625	3.268033	1,229,550.00	3.268033	93	50 - 150	0.0000	+/-0.50	
M8PFOA	1252613	3.534133	1,277,448.00	3.53415	98	50 - 150	0.0000	+/-0.50	
M8PFOS	173061.8	3.716267	179,836.00	3.716267	96	50 - 150	0.0000	+/-0.50	
M9PFNA	1202188	3.717267	1,303,087.00	3.717267	92	50 - 150	0.0000	+/-0.50	
MPFDoA	1704329	4.1612	1,849,187.00	4.161217	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	324710.5	4.03345	331,170.00	4.03345	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	307688.2	3.953867	313,935.00	3.953883	98	50 - 150	0.0000	+/-0.50	

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066054-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	425	0.837413	0.7853845		-15.0	30
Perfluorobutanesulfonic acid (PFBS)	A	444	398	0.9707226	0.9442111		-10.3	30
Perfluoropentanoic acid (PFPeA)	A	500	409	0.9163201	0.824339		-18.2	30
Perfluorohexanoic acid (PFHxA)	A	500	417	0.850226	0.8026516		-16.6	30
11Cl-PF3OUdS (F53B Minor)	A	472	392	1.962472	1.579236		-16.9	30
9Cl-PF3ONS (F53B Major)	A	466	440	4.081904	3.656913		-5.6	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	425	1.487743	1.547491		-10.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	451	0.1341855	0.1194561		-9.8	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	508	0.7727103	0.8672767		5.9	30
Perfluorodecanoic acid (PFDA)	A	500	430	0.9077273	0.8820731		-14.0	30
Perfluorododecanoic acid (PFDoA)	A	500	460	0.914647	0.7969984		-8.0	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	388	3.687622	3.233886		-12.9	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	434	0.4723281	0.4370807		-8.9	30
N-EtFOSAA	A	500	443	0.9374896	0.8553092		-11.3	30
N-MeFOSAA	A	500	448	1.054669	1.011031		-10.4	30
Perfluorotetradecanoic acid (PFTA)	A	500	408	0.8552112	0.7786525		-18.4	30
Perfluorotridecanoic acid (PFTrDA)	A	500	418	0.9780239	0.9566304		-16.5	30
Perfluorodecanesulfonic acid (PFDS)	A	482	501	0.6371807	0.6960216		4.0	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	429	1.07418	1.108528		-8.3	30
Perfluorooctanesulfonamide (FOSA)	A	500	460	0.810352	0.8194362		-8.0	30
Perfluorononanesulfonic acid (PFNS)	A	481	390	0.3496386	0.3078247		-18.9	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	463	0.346892	0.3302606		-7.5	30
Perfluoro-1-butanefulfonamide (FBSA)	A	500	438	0.2988718	0.2864862		-12.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	388	0.9379263	0.8779932		-15.2	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	431	0.4927369	0.4374185		-13.8	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	448	0.5777971	0.5277828		-10.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	455	1.04777	1.127305		-4.3	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	407	0.9161502	0.8808931		-13.5	30
Perfluoroundecanoic acid (PFUnA)	A	500	413	0.8584422	0.7956876		-17.4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	467	0.3197121	0.3020298		-6.6	30
Perfluoroheptanoic acid (PFHpA)	A	500	450	0.9034819	0.8349209		-10.0	30
Perfluorooctanoic acid (PFOA)	A	500	438	0.8637994	0.7990697		-12.4	30
Perfluorooctanesulfonic acid (PFOS)	A	464	435	0.9743028	1.010044		-6.2	30
Perfluorononanoic acid (PFNA)	A	500	414	0.9320124	0.8017009		-17.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SOP-466 PFAS

S066054-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2390	0.837413	0.8830412		-4.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2300	0.9707226	1.091813		3.7	30
Perfluoropentanoic acid (PFPeA)	A	2500	2340	0.9163201	0.9415429		-6.5	30
Perfluorohexanoic acid (PFHxA)	A	2500	2330	0.850226	0.8965769		-6.9	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2210	1.962472	1.798167		-6.5	30
9Cl-PF3ONS (F53B Major)	A	2330	2130	4.081904	3.586545		-8.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2360	1.487743	1.708634		-0.05	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2160	0.1341855	0.1148247		-13.6	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2930	0.7727103	0.9883285		22.2	30
Perfluorodecanoic acid (PFDA)	A	2500	2600	0.9077273	1.064807		3.9	30
Perfluorododecanoic acid (PFDoA)	A	2500	2620	0.914647	0.9324741		4.6	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2300	3.687622	3.884754		3.8	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2470	0.4723281	0.5018779		3.9	30
N-EtFOSAA	A	2500	2780	0.9374896	1.080759		11.3	30
N-MeFOSAA	A	2500	2760	1.054669	1.245414		10.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2420	0.8552112	0.9179206		-3.2	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2500	0.9780239	1.13299		-0.09	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2600	1.07418	1.326293		11.2	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2710	0.6371807	0.7520309		12.4	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2650	0.810352	0.9438734		6.0	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2090	0.3496386	0.3306844		-12.8	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2550	0.346892	0.367161		2.2	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2460	0.2988718	0.3221433		-1.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2330	0.9379263	1.059855		2.4	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2520	0.4927369	0.5144703		0.7	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2540	0.5777971	0.6005893		1.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2670	1.04777	1.302673		12.0	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2410	0.9161502	1.046354		2.8	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2060	0.8584422	0.7947819		-17.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2680	0.3197121	0.3495568		7.2	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2520	0.9034819	0.937898		0.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2420	0.8637994	0.8847915		-3.3	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2060	0.9743028	0.9576016		-11.0	30
Perfluorononanoic acid (PFNA)	A	2500	2360	0.9320124	0.91574		-5.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066055-CCV1

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	500	411	0.837413	0.7582292		-17.9	30
Perfluorobutanesulfonic acid (PFBS)	A	444	368	0.9707226	0.871473		-17.2	30
Perfluoropentanoic acid (PFPeA)	A	500	471	0.9163201	0.9489503		-5.8	30
Perfluorohexanoic acid (PFHxA)	A	500	387	0.850226	0.7461132		-22.5	30
11Cl-PF3OUdS (F53B Minor)	A	472	398	1.962472	1.602966		-15.7	30
9Cl-PF3ONS (F53B Major)	A	466	416	4.081904	3.454538		-10.8	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	472	371	1.487743	1.351		-21.5	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	500	443	0.1341855	0.117175		-11.5	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	480	494	0.7727103	0.8423225		2.9	30
Perfluorodecanoic acid (PFDA)	A	500	395	0.9077273	0.8108739		-20.9	30
Perfluorododecanoic acid (PFDoA)	A	500	423	0.914647	0.7323357		-15.4	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	445	384	3.687622	3.207529		-13.6	30
Perfluoroheptanesulfonic acid (PFHpS)	A	476	390	0.4723281	0.3929207		-18.1	30
N-EtFOSAA	A	500	448	0.9374896	0.8638465		-10.4	30
N-MeFOSAA	A	500	422	1.054669	0.953383		-15.6	30
Perfluorotetradecanoic acid (PFTA)	A	500	411	0.8552112	0.785193		-17.7	30
Perfluorotridecanoic acid (PFTrDA)	A	500	419	0.9780239	0.9604953		-16.1	30
Perfluorodecanesulfonic acid (PFDS)	A	482	403	0.6371807	0.5592956		-16.4	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	468	413	1.07418	1.068158		-11.7	30
Perfluorooctanesulfonamide (FOSA)	A	500	432	0.810352	0.7700525		-13.6	30
Perfluorononanesulfonic acid (PFNS)	A	481	396	0.3496386	0.3124856		-17.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	500	513	0.346892	0.3662347		2.6	30
Perfluoro-1-butanesulfonamide (FBSA)	A	500	439	0.2988718	0.2866765		-12.3	30
Perfluorohexanesulfonic acid (PFHxS)	A	457	415	0.9379263	0.9403003		-9.1	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	500	430	0.4927369	0.4365453		-14.0	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	500	442	0.5777971	0.5209842		-11.5	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	476	420	1.04777	1.039743		-11.8	30
Perfluoropentanesulfonic acid (PFPeS)	A	470	397	0.9161502	0.8591633		-15.6	30
Perfluoroundecanoic acid (PFUnA)	A	500	392	0.8584422	0.7548406		-21.6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	500	431	0.3197121	0.2788143		-13.8	30
Perfluoroheptanoic acid (PFHpA)	A	500	442	0.9034819	0.8194835		-11.6	30
Perfluorooctanoic acid (PFOA)	A	500	431	0.8637994	0.785329		-13.9	30
Perfluorooctanesulfonic acid (PFOS)	A	464	365	0.9743028	0.8478207		-21.2	30
Perfluorononanoic acid (PFNA)	A	500	563	0.9320124	1.090621		12.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066055-CCV2

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2410	0.837413	0.8920751		-3.4	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2160	0.9707226	1.025461		-2.6	30
Perfluoropentanoic acid (PFPeA)	A	2500	2360	0.9163201	0.9506695		-5.6	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.850226	0.8695298		-9.7	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2520	1.962472	2.056222		6.7	30
9Cl-PF3ONS (F53B Major)	A	2330	2520	4.081904	4.269657		8.2	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2100	1.487743	1.521078		-11.1	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2210	0.1341855	0.1177663		-11.4	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2770	0.7727103	0.9359755		15.6	30
Perfluorodecanoic acid (PFDA)	A	2500	2430	0.9077273	0.9968029		-2.8	30
Perfluorododecanoic acid (PFDoA)	A	2500	2750	0.914647	0.9825628		10.1	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2230	3.687622	3.750878		0.3	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2480	0.4723281	0.5035476		4.3	30
N-EtFOSAA	A	2500	2730	0.9374896	1.061231		9.3	30
N-MeFOSAA	A	2500	2620	1.054669	1.183095		4.8	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2380	0.8552112	0.904166		-4.7	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2470	0.9780239	1.122773		-1.0	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2470	0.6371807	0.6860403		2.5	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2460	1.07418	1.253984		5.0	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2480	0.810352	0.8830254		-0.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2360	0.3496386	0.3734927		-1.5	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2800	0.346892	0.4031396		12.1	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2610	0.2988718	0.3411504		4.4	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2310	0.9379263	1.048081		1.3	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2530	0.4927369	0.5171246		1.3	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2550	0.5777971	0.6050966		2.2	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2630	1.04777	1.284297		10.4	30
Perfluoropetanesulfonic acid (PFPeS)	A	2350	2410	0.9161502	1.042226		2.4	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2390	0.8584422	0.9197981		-4.5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2520	0.3197121	0.3285708		0.8	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2490	0.9034819	0.9262332		-0.6	30
Perfluorooctanoic acid (PFOA)	A	2500	2370	0.8637994	0.8657417		-5.4	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2350	0.9743028	1.088631		1.1	30
Perfluorononanoic acid (PFNA)	A	2500	2650	0.9320124	1.02934		5.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
SOP-466 PFAS

S066055-CCV3

COMPOUND	TYPE	CONC. (ng/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Perfluorobutanoic acid (PFBA)	A	2500	2380	0.837413	0.8798283		-4.7	30
Perfluorobutanesulfonic acid (PFBS)	A	2220	2210	0.9707226	1.04776		-0.5	30
Perfluoropentanoic acid (PFPeA)	A	2500	2350	0.9163201	0.9450071		-6.2	30
Perfluorohexanoic acid (PFHxA)	A	2500	2260	0.850226	0.8707169		-9.6	30
11Cl-PF3OUdS (F53B Minor)	A	2360	2380	1.962472	1.943414		1.0	30
9Cl-PF3ONS (F53B Major)	A	2330	2390	4.081904	4.046533		2.7	30
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	A	2360	2150	1.487743	1.556015		-9.0	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	A	2500	2080	0.1341855	0.1107292		-16.7	30
8:2 Fluorotelomersulfonic acid (8:2FTS A)	A	2400	2680	0.7727103	0.9060422		11.9	30
Perfluorodecanoic acid (PFDA)	A	2500	2390	0.9077273	0.9815372		-4.3	30
Perfluorododecanoic acid (PFDoA)	A	2500	2660	0.914647	0.9469303		6.2	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEES)	A	2220	2200	3.687622	3.704543		-1.0	30
Perfluoroheptanesulfonic acid (PFHpS)	A	2380	2560	0.4723281	0.519493		7.5	30
N-EtFOSAA	A	2500	2590	0.9374896	1.005939		3.6	30
N-MeFOSAA	A	2500	2610	1.054669	1.177888		4.3	30
Perfluorotetradecanoic acid (PFTA)	A	2500	2450	0.8552112	0.9312582		-1.8	30
Perfluorotridecanoic acid (PFTrDA)	A	2500	2520	0.9780239	1.142908		0.8	30
Perfluorodecanesulfonic acid (PFDS)	A	2410	2580	0.6371807	0.7152962		6.9	30
4:2 Fluorotelomersulfonic acid (4:2FTS A)	A	2340	2480	1.07418	1.265173		6.0	30
Perfluorooctanesulfonamide (FOSA)	A	2500	2550	0.810352	0.9073167		1.9	30
Perfluorononanesulfonic acid (PFNS)	A	2400	2050	0.3496386	0.3239326		-14.6	30
Perfluoro-1-hexanesulfonamide (FHxSA)	A	2500	2870	0.346892	0.4136978		15.0	30
Perfluoro-1-butanesulfonamide (FBSA)	A	2500	2590	0.2988718	0.3386194		3.6	30
Perfluorohexanesulfonic acid (PFHxS)	A	2280	2310	0.9379263	1.050811		1.5	30
Perfluoro-4-oxapentanoic acid (PFMPA)	A	2500	2500	0.4927369	0.5115356		0.2	30
Perfluoro-5-oxahexanoic acid (PFMBA)	A	2500	2530	0.5777971	0.6003438		1.4	30
6:2 Fluorotelomersulfonic acid (6:2FTS A)	A	2380	2290	1.04777	1.120838		-3.8	30
Perfluoropentanesulfonic acid (PFPeS)	A	2350	2450	0.9161502	1.059669		4.1	30
Perfluoroundecanoic acid (PFUnA)	A	2500	2330	0.8584422	0.8991582		-6.6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	A	2500	2630	0.3197121	0.3426933		5.1	30
Perfluoroheptanoic acid (PFHpA)	A	2500	2480	0.9034819	0.925299		-0.7	30
Perfluorooctanoic acid (PFOA)	A	2500	2430	0.8637994	0.8881727		-2.9	30
Perfluorooctanesulfonic acid (PFOS)	A	2320	2150	0.9743028	0.9987474		-7.2	30
Perfluorononanoic acid (PFNA)	A	2500	2750	0.9320124	1.069721		10.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SOP-466 PFAS in Soil</i>	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanefulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01610
Phone: 508-754-2201
Project Name: Princeton PFAS Project
Project Location: 19 Mountain Road, Princeton, MA
Project Number: P-0534017
Project Manager: Jeff Arps
Pace Analytical Quote Name/Number:
Invoice Recipient: Tighe & Bond
Sampled By: M Scherer

Requested Turnaround Time
 7-Day 10-Day
 PFAS 10-Day (std) Due Date: _____

Dissolved Metals Samples
 Field Filtered
 Lab to Filter

Rush-Approval Required
 1-Day 3-Day
 2-Day 4-Day

Orthophosphate Samples
 Field Filtered
 Lab to Filter

Data Delivery
 Format: PDF EXCEL
 Other: _____
 CLP Like Data Pkg Required:
 Email To: mjscherer@tighebond.com
 Fax To #: _____

PCB ONLY
 SOXHLET
 NON SOXHLET

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFAS by Isotope Dilution
	19MTN S-1	11/17/21	1100	GRAB	S	U			1			X
	19MTN S-2								1			X
	19MTN S-3								1			X
	19MTN S-4								1			X
	19MTN S-5								1			X

Preservation Code
 Courier Use Only
 Total Number Of:
 VIALS _____
 GLASS _____
 PLASTIC **6**
 BACTERIA _____
 ENCORE _____

Glassware in the fridge? Y / N
 Glassware in freezer? Y / N
 Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

Relinquished by: (signature) *M Scherer* Date/Time: 11/18/21 1000
 Received by: (signature) *[Signature]* Date/Time: 11/19/21 710
 Relinquished by: (signature) *[Signature]* Date/Time: 11/19/21 1845
 Received by: (signature) *[Signature]* Date/Time: 2.6 11/19/21 1845
 Relinquished by: (signature) _____ Date/Time: _____
 Received by: (signature) _____ Date/Time: _____
 Relinquished by: (signature) _____ Date/Time: _____
 Received by: (signature) _____ Date/Time: _____

Client Comments:

Detection Limit Requirements
 MA S-1

Special Requirements
 MA MCP Required
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required

Other: _____ PWSID # _____

Project Entity
 Government Municipality MWRA WRTA
 Federal 21 J School
 City Brownfield MBTA

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Other
 Chromatogram
 AIHA-LAP, LLC

Comments: Per client run duplicate sample that was submitted. JLH 11/22/2021

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Tight + Bond
 Received By [Signature] Date 11/19/21 Time 1845

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp - 2.6
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
 Was COC Relinquished? T Does Chain Agree With Samples? F

Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client F Analysis T Sampler Name F
 Project T ID's F Collection Dates/Times T

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid n/a Base n/a

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	<u>6</u>	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

Received sample 19 MTN 5-1 (DUP)