



2025 PFAS Characterization

Evaluation of PFAS Sampling Results from Madison Metropolitan Sewerage District's Nine Springs Wastewater Treatment Plant

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A handwritten signature in blue ink, reading "Lydia Auner".

Lydia Auner
Project Geologist

Prepared For:

Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713

Prepared By:

TRC
999 Fourier Dr., Suite 101
Madison, Wisconsin 53717

A handwritten signature in black ink, reading "Michael S. Ursin".

Michael S. Ursin, PG
Program Manager, Area Leader

A handwritten signature in black ink, reading "Elizabeth Denly".

Elizabeth Denly
Vice President, PFAS Initiative Leader &
Chemistry Director



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ACRONYM LIST

AFFF	aqueous film-forming foam
CSM	conceptual site model
EGLE	Michigan Department of Environment, Great Lakes, and Energy
EIS	extracted internal standard
FTCAs	fluorotelomer carboxylic acids
FTSs	fluorotelomer sulfonic acids
LDPE	low-density polyethylene
mg	milligrams
mg/L	milligrams per liter
mL	milliliters
NELAP	National Environmental Laboratory Accreditation Program
ng/L	nanograms per liter
PFAAs	perfluoroalkyl acids
PFAS	per- and polyfluoroalkyl substances
PFCAs	perfluorocarboxylic acids
PFECAs	per- and polyfluoroether carboxylic acids
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
PFSAs	perfluorosulfonic acids
ppb	parts per billion
ppt	parts per trillion
PVC	polyvinyl chloride
SM	Standard Methods
SOP	standard operating procedure
SPE	solid phase extraction
TOP	total oxidizable precursor
TSS	total suspended solids
ug/kg	micrograms per kilogram
USEPA	United States Environmental Protection Agency
WAC	Wisconsin Administrative Code
WDNR	Wisconsin Department of Natural Resources
WPDES	Wisconsin Pollution Discharge Elimination System
WWTP	wastewater treatment plant

Note, a full list of PFAS compound names and acronyms is included in Table 4.

EXECUTIVE SUMMARY

The Madison Metropolitan Sewerage District (District) operates the Nine Springs Wastewater Treatment Plant (WWTP), which provides wastewater collection and treatment for over 440,000 people, 27 significant industrial users, along with numerous commercial and other industrial operations in a 190-square-mile service area.

The first phase of PFAS sampling at the Nine Springs WWTP was performed in 2021 by TRC Environmental Corporation (TRC) and the District. Results from the 2021 sampling are summarized in the Phase 1: Initial PFAS Characterization report (TRC, 2021). Following the initial characterization sampling, the District and TRC performed additional PFAS characterization activities, consisting of monthly sampling events starting in March 2022 that have continued through the present. Results from the PFAS sampling performed in 2022, 2023, and 2024 have been summarized in annual reports (TRC, 2023; TRC, 2024; and TRC, 2025). In general, the sampling results from 2021-2024 have indicated that PFAS are present in the WWTP influent, effluent, and biosolids at concentrations similar to those observed in other municipal WWTPs that service urbanized areas without significant industrial sources.

This report summarizes results from the sampling completed in 2025. Starting in 2025, PFAS analysis was performed following USEPA Method 1633/1633A, with reporting of 40 analytes compared to the 33 analytes previously reported. Results from the 2025 sampling indicate that PFAS were detected in the WWTP influent, effluent, and biosolids at concentrations generally similar to the 2021-2024 results for the PFAS that were also analyzed in those years.

- The 2025 effluent results for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were below the NR 102 surface water standards.
- The 2025 Class B biosolids results for the sum of PFOA +PFOS for each quarter sampled were below 20 micrograms per kilogram (ug/kg), corresponding with a recommendation for land application per the normal approach based on the Wisconsin Department of Natural Resources (WDNR) Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS guidance document (WDNR, 2024), which was advisory only at the time of sampling.
- The Class A cake results for the piles generated in 2024 and 2025 for the median sum of PFOA + PFOS were over 20 ug/kg but below 50 ug/kg, for which the advisory 2024 WDNR Interim Biosolids Strategy recommends implementing PFAS source investigation and reduction efforts as well as effluent sampling and other actions, as described in this report.
- The Class A cake results from the pile generated in 2023 had a median sum of PFOS + PFOA over 50 ug/kg but below 150 ug/kg, for which the advisory 2024 WDNR Interim Biosolids Strategy recommends implementing certain actions including reducing land application rates, source investigation and reduction, and effluent sampling.

1.0 Introduction

1.1 Overview of Plant Operations

The Madison Metropolitan Sewerage District (District) operates the Nine Springs Wastewater Treatment Plant (WWTP), which provides wastewater collection and treatment for over 440,000 people, 27 significant industrial users, along with numerous commercial and other (non-significant) industrial operations in a 190-square-mile service area. The current list of significant industrial users includes landfills, metal finishers, and pharmaceutical manufacturers, as well as other types of facilities.

A majority (approximately 99%) of the influent to Nine Springs WWTP enters through five force mains, and the remainder arrives as hauled waste. The five force mains that route to the Nine Springs WWTP receive wastewater from other force mains within the collection system. Depending on operational needs, the District may alter how flow is routed between some force mains.

Wastewater received by the District proceeds through an advanced treatment process. Outputs from the Nine Springs WWTP include liquid effluent, biosolids, and struvite. District effluent is currently discharged to Badfish Creek. Biosolids include Class A cake, which can be used directly by farmers as fertilizer and soil conditioner; and Class B liquid biosolids (Metrogro), which is recycled to agricultural land in the fall, summer, and spring as fertilizer and soil conditioner. The Class B biosolids are typically produced year-round and are usually hauled out for land application within a few months of production. The Class A cake is typically produced between January and March and hauled out in July or August for land application after it meets the applicable requirements for bacterial pathogen limits. The Class A cake is around 23% solids and the Class B biosolids are around 5% solids. Struvite is an inorganic nutrient (magnesium ammonium phosphate) that is harvested from liquid filtrates from the treatment processes and sold as a slow-release fertilizer. Refer to the PFAS Fate and Transport Report (TRC, 2020a) for a more detailed description of the Nine Springs WWTP treatment processes and a discussion of environmental cycling.

1.2 Previous PFAS Investigation and Research

Based on an internal review completed by the District, significant industrial sources of PFAS have not been identified in the District's service area.

The District previously retained TRC to develop a PFAS Fate and Transport report (TRC, 2020a), conceptual site model (CSM), and PFAS Sampling and Analysis Blueprint (TRC, 2020b) to support their PFAS action plan, all of which were completed in early 2020.

TRC and the District completed an initial phase of PFAS sampling in 2021, which included sampling of influent, effluent, polymers, biosolids, and struvite in May, followed by resampling of the Class B biosolids in July. In general, the 2021 sampling results indicated that PFAS were present in the WWTP influent, effluent, and biosolids at concentrations similar to those observed in other municipal WWTPs that service urbanized areas without significant industrial sources. Results from the 2021 sampling are summarized in the Phase 1: Initial PFAS Characterization report (TRC, 2021). Prior to the sampling, TRC prepared a standard operating procedure (SOP)

for PFAS sampling at the District's Nine Springs WWTP, which was included as an appendix in the Phase 1 report (TRC, 2021).

Following the initial characterization sampling in 2021, the District and TRC performed additional PFAS characterization activities, including monthly sampling events starting in March 2022 that have continued through the present. Results from prior monitoring in 2022, 2023, and 2024 were summarized in the Phase 2: Additional PFAS Characterization (2022) report (TRC, 2023), the 2023 PFAS Characterization Report (TRC, 2024), and the 2024 PFAS Characterization Report (TRC, 2025).

1.3 Scope and Purpose

PFAS monitoring activities were continued throughout 2025, as described in this report. The purpose of this report is to summarize the results of the 2025 sampling in the context of the current regulatory landscape, the District's PFAS Action Plan (MMSD, 2019), the CSM, and the previous PFAS sampling results from 2021–2024.

2.0 Sampling and Analysis Program

2.1 Sampling Scope, Schedule, Methods, and Rationale

Monthly sampling events were completed between January and December 2025. Sampling was performed by the District. A high-level overview of the 2025 PFAS sampling schedule is provided in Table 1. Sample collection methods, sample naming methods, and sampling rationale for each type of media and blank samples are summarized in Table 2.

- **Influent:** Influent sampling included monthly collection of flow-weighted composite influent samples and quarterly collection of influent samples from the five individual force mains. Additionally, a second influent composite sample was collected in January 2025 for the purpose of comparing laboratory preparation methods. The flow rates used for the flow-weighted composite influent samples are included in Table 3.
- **Effluent:** Effluent sampling was completed monthly. In January 2025, one composite effluent sample was collected; four effluent grab samples were collected at different times throughout the day for the purpose of assessing potential variation in concentrations. Starting in February 2025, monthly effluent grab sampling was performed and effluent composite sampling was discontinued. The change to grab sampling was made due to the anticipated requirement for grab sampling upon reissuance of the District's Wisconsin Pollution Discharge Elimination System (WPDES) permit. Prior comparison of grab and composite effluent samples performed for six months in 2024 indicated similar results for both methods, as discussed in the 2024 annual report (TRC, 2025).
- **Class B Liquid Biosolids:** Sampled quarterly.
- **Class A Cake Biosolids:** Each pile of Class A cake is only sampled for PFAS after it has passed the bacteria test, which is required prior to distribution of the material, as sampling prior to this point may not be representative of material that would be land applied. The Class A cake samples are collected as composites following the methods described in Table 2. The Class A cake pile that was initially generated in 2023 was sampled for the first three quarterly events in 2025. This pile was not sampled in December 2025 due to having become too hardened to be able to sample. The Class A cake pile that was generated in 2024 was sampled quarterly. The Class A cake pile that was generated in 2025 was first sampled in July 2025, after passing the bacteria test, and then was sampled quarterly thereafter. (Note, the piles of Class A cake are sometimes referred to based on the year in which they were generated. For example, the pile generated in 2023 may be referred to as the 2023 Class A cake.)
- **Equipment Blanks:** Equipment blanks were collected in association with the Class A cake sampling, which uses non-dedicated sampling equipment. Equipment blanks were not collected for the other sample types, which either do not involve sampling equipment (such as the effluent grab samples and Class B biosolids grab samples) or use dedicated equipment (such as the influent and effluent composite samples). It is not feasible to collect equipment blanks for the internal components of the composite samplers for the influent and effluent, as these samplers operate continuously; however, comparison of grab vs. composite sample results for effluent have not indicated obvious contamination from the composite sampling equipment. An equipment blank was previously collected for one of the LDPE composite sampler carboys in 2021 when it was new and unused to assess potential contamination from the LDPE material and PFAS were not detected in that equipment blank.

2.2 Laboratory Analysis

Samples were shipped under chain-of-custody to Eurofins in West Sacramento, California for laboratory analysis.

2.2.1 Analytical Methods

Samples were analyzed using one or more of the following analytical methods:

- Analysis of PFAS was performed following EPA Method 1633/1633A. EPA Method 1633 was used for the January 2025 samples. EPA Method 1633A was used starting in February 2025 in accordance with a WDNR requirement that laboratories use the final version of EPA 1633A by February 1, 2025. Results were reported for 40 PFAS compounds, as listed in Table 4 and further discussed below.
- Analysis of total suspended solids (TSS) was performed using Standard Methods (SM) 2540D. The laboratory does not hold National Environmental Laboratory Accreditation Program (NELAP) or Wisconsin accreditation for TSS.
- Analysis of total solids was performed using EPA Method 1633A for the biosolids samples. PFAS results are reported on a dry weight basis in biosolids samples, meaning that the results represent a concentration that has been corrected for percent solids. The laboratory does not hold NELAP accreditation for total solids.
- Total Oxidizable Precursor (TOP) assay was performed using modified EPA Method 537 and the laboratory SOP using Isotope Dilution/WI Method Criteria. Results were reported for the same 40 PFAS compounds listed in Table 4 and further discussed below.

2.2.2 PFAS Analyte List

The list of 40 PFAS analyzed using EPA Method 1633/1633A is summarized in Table 4. This list includes the 33 PFAS in the Wisconsin Method Criteria established by the WDNR (EA-19-0001), which was used for the previous PFAS sampling at the Nine Springs WWTP, along with 7 additional PFAS not analyzed prior to 2025, as noted below and indicated in Table 4. The target analyte list of 40 PFAS includes terminal PFAS, which do not transform under typical environmental conditions, along with precursor PFAS, which do have the potential to transform to other PFAS, as noted below and indicated in Table 4. The list of 40 PFAS in EPA Method 1633/1633A can be categorized into the following groupings:

- 19 perfluoroalkyl acids (PFAAs), including 11 perfluorocarboxylic acids (PFCAs) and 8 perfluorosulfonic acids (PFSAs), which are terminal PFAS
- 3 fluorotelomer sulfonic acids (FTSs), which are precursor PFAS that have PFCAs as potential terminal transformation products
- 3 perfluorooctane sulfonamides, 2 perfluorooctane sulfonamidoacetic acids, and 2 perfluorooctane sulfonamide ethanol, which are precursor PFAS that have the potential to transform to terminal PFAS including PFCAs and PFSAs such as PFOA and PFOS
- 5 per- and polyfluoroether carboxylic acids (PFECAs), which includes 4 terminal PFAS and 1 precursor PFAS (DONA, which has PFCAs as potential terminal transformation products), as indicated in Table 4. This group includes three compounds not analyzed prior to 2025: PFMPA, PFMBA, and PFPE-3.

- 3 ether sulfonic acids, which include both terminal and precursor PFAS. This group includes one compound not analyzed prior to 2025: PFEESA.
- 3 fluorotelomer carboxylic acids (FTCAs), which are precursor PFAS that have PFCAs as potential terminal transformation products. These three compounds (3:3 FTCA, 5:3 FTCA, and 7:3 FTCA) were not analyzed prior to 2025.

2.2.3 Sample Preparation Procedures and Samples with High Solids Content

According to EPA Method 1633A, because aqueous samples are processed with solid phase extraction (SPE) cartridges that can be clogged by suspended solids in the sample, the method recommends a limit of 50 milligrams (mg) of solids in the total volume of sample that is processed by SPE. For an aqueous sample volume of 125 milliliters (mL), as used for this project, the limit of 50 mg of solids corresponds to 400 milligrams per liter (mg/L) TSS. Methods for the determination of TSS in aqueous matrices described in Method 1633A include quantitative evaluation using a 10 mL sample aliquot or visual comparison of the sample to examples maintained in the laboratory. If the sample volume is suspected to contain more than 50 mg of TSS, the analyst may choose to use a second SPE cartridge in the event of clogging or, subject to project-specific approval, laboratories may utilize other documented strategies.

For the purpose of comparing sample preparation procedures to help ensure more representative data, a second composite influent sample was collected in January 2025 using the same sampling methods as the first sample. These samples are identified as INF-COMP-202501 and INF-COMP-202501_ALTERNATE in Table 5, although they were both identified as INF-COMP-202501 in their respective laboratory reports. The TSS result for the sample identified as INF-COMP-202501 in Table 5 was 250 mg/L. TSS was not analyzed for the “alternate” sample. These samples were prepared as follows:

- The sample identified as INF-COMP-202501 in Table 5 was prepared using the standard preparation procedures: the sample was fortified with extracted internal standard (EIS) and the entire contents of the sample container was extracted per SPE procedures without being centrifuged.
- The other “alternate” sample was prepared using project-specific instructions. The sample was fortified with EIS and then centrifuged. The supernatant (aqueous layer) was decanted into a new container and extracted per standard SPE procedures. The residual solids (particulate fraction) were then extracted via solvent rinse with basic methanol and the resulting extract was added to the SPE column to generate a combined extract of both aqueous and particulate fractions. The final combined extract, consisting of PFAS from both the aqueous and particulate fractions, underwent analysis.

PFAS results from these two analyses were generally similar. Based on these results, it was decided that the standard procedures would be used for aqueous samples without high levels of solids.

Starting with the samples collected in February 2025, preparation methods for aqueous samples were determined based on visual screening for TSS performed by Eurofins. Samples that appeared to have TSS <400 mg/L were prepared using the standard preparation procedures, as described above. If clogging of the SPE column occurred, the procedures for elevated TSS were used. Samples that appeared to have TSS ≥400 mg/L were prepared using the “alternate” preparation methods including centrifugation, as described above.

2.3 Deviations from Sampling SOP

A copy of the SOP for PFAS sampling at the District's Nine Spring's WWTP was included as an appendix in the Phase 1 report (TRC, 2021).

As referenced in prior reports for the PFAS sampling performed in 2021 through 2024 (TRC, 2021; TRC, 2023; TRC, 2024; TRC, 2025), the following deviations from the Sampling SOP also pertain to the 2025 PFAS sampling:

- The SOP states that the sample containers in the dedicated composite samplers should be evaluated to ensure that they are PFAS-free and should be replaced with PFAS-free containers if they are not. It also states certain materials including low-density polyethylene (LDPE) should not be in contact with samples unless known to be PFAS-free. The composite sampler carboys are made of LDPE. An equipment blank was collected as a rinsate sample of one of the carboys during the 2021 sampling to assess the potential for contamination of the sample from the LDPE carboy. PFAS were not detected in the equipment blank.
- The SOP states that specific components of the dedicated composite samplers should be decontaminated or replaced prior to sampling in order to prevent potential contamination from the dedicated samplers, as follows: the strainer should be decontaminated or replaced between each sampling event and the suction line, distribution nozzle and sample bottle should be replaced between each sampling event. The composite sampler suction line tubing, strainers, and distribution nozzles were not decontaminated or replaced prior to PFAS sample collection. The suction line tubing used within the composite samplers was confirmed to be polyvinyl chloride (PVC) and silicone, which are approved materials for PFAS sampling.

These deviations did not adversely impact the final PFAS results.

2.4 Modifications to Sampling Plan

Modifications to the sampling plan included the following:

- The analysis of TSS as part of this monitoring was discontinued after June 2025, as it was decided to be unnecessary for the interpretation of PFAS results. Additionally, the District analyzes TSS daily for the composite influent, individual force main influent, and composite effluent samples.
- December 2025: The 2023 Class A cake pile was not sampled due to having become too hardened to be able to sample.
- June, September, and December 2025: An extra equipment blank for the Class A cake was collected.

These modifications did not adversely impact the final PFAS results.

3.0 Regulatory Landscape

For the purpose of this report, effluent and biosolids sample results from the 2025 sampling are compared to relevant guidance and/or regulatory requirements that were available during 2025, as described below. Updated guidance and regulations from 2026 are also discussed in this section; however, this is for informational purposes only and not for comparison to the 2025 sampling results.

3.1 Surface Water and Effluent

Revisions to several chapters in Wisconsin Administrative Code (WAC) related to the regulation of PFOA and PFOS in surface water and effluent were made effective August 1, 2022. These revisions included the addition of surface water quality criteria for PFOA and PFOS and the revision of the WPDES permitting program to include PFOA and PFOS monitoring, reporting, and pollutant minimization plan requirements, as described below.

The surface water criteria for PFOA and PFOS per WAC ch. NR 102.04(8)(d) are summarized as follows:

- PFOS: 8 nanograms per liter (ng/L) for all waters except those that cannot naturally support fish and do not have downstream waters that support fish.
- PFOA: 20 ng/L in waters classified as public water supplies under WAC ch. NR 104, and 95 ng/L for other surface waters.

Permit requirements for PFOS and PFOA wastewater effluent discharges to surface water are outlined under NR 106 Subchapter VIII, which include “procedures for determining when a permitted discharge has the reasonable potential to cause or contribute to an exceedance of the PFOS or PFOA” surface water criteria and determination of the need for a PFOS and PFOA minimization plan. Permit requirements for monitoring and reporting PFOS and PFOA are included upon first reissuance of a WPDES permit after August 1, 2022 for up to 2 years, as specified in WAC ch. NR 106.98(2), except if a waiver has been granted or reduced frequency is approved.

The District’s WPDES permit (WI-0024597-09-2) was renewed May 1, 2020, and expired on March 31, 2025. The District applied to renew its WPDES permit in October 2024 and the new permit (WI-0024597-10-0) was reissued effective May 1, 2026. The previous permit (expired March 31, 2025) did not include monitoring requirements for PFOS or PFOA, but the new permit (effective May 1, 2026) includes monthly effluent sampling for PFOS and PFOA and annual biosolids sampling for PFAS. The current permit indicates that the District “does not need the PFOS/PFOA Minimization Plan Determination of Need Schedule, that the Department has been including in permits for similar facilities, because MMSD has been voluntarily monitoring for PFOS/PFOA since 2021.”

Because the new permit was not effective until 2026, it is not considered to be applicable to the 2025 sampling results discussed in this report. For the purpose of this report, effluent results are compared directly to the surface water criteria noted above. The effluent from the Nine Springs WWTP is discharged into waters that are not classified as a public water supply; therefore, the relevant PFOA surface water criterion is 95 ng/L. The relevant criterion for PFOS is 8 ng/L.

3.2 Biosolids

For the purpose of this report, biosolids results were compared to the tiered approach outlined in the WDNR's Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS (WDNR, revised March 1, 2024), referred to here as the 2024 WDNR Interim Biosolids Strategy, as this was the most up-to-date version of this guidance available as of the 2025 sampling. This guidance was advisory only at the time of sampling.

The 2024 WDNR Interim Biosolids Strategy is intended to provide guidance to permitted land spreaders to "limit land application of municipal biosolids and industrial sludges that are significantly impacted by PFAS compounds" as the WDNR awaits finalization of United States Environmental Protection Agency's (USEPA's) risk assessment for PFOS and PFOA in biosolids. USEPA released the *Draft Sewage Sludge Risk Assessment for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonic Acid (PFOS)* for public comment on January 14, 2025 (USEPA, 2025). The public comment period ended on August 14, 2025; however, a final version has not been published. In the absence of a final risk assessment, the USEPA published draft guidance for reducing risk from PFOA and PFOS in biosolids dated June 29, 2026 (Docket ID no. EPA-HQ-OW-2026-2509) (USEPA, 2026). This draft USEPA guidance does not include specific numeric limits for PFOA and PFOS in biosolids, but rather discusses general considerations and approaches for risk mitigation.

The 2024 WDNR Interim Biosolids Strategy was developed using a similar approach as the Michigan Department of Environment, Great Lakes, and Energy (EGLE's) Interim Strategy for Land Application of Biosolids Containing PFAS, which was finalized in March 2021 and updated most recently on January 1, 2024 (EGLE, 2024). The EGLE guidance established recommendations for actions based on non-risk-based tiers of PFOS or PFOA concentrations in biosolids. The 2024 WDNR Interim Biosolids Strategy adopted a similar tiered approach; however, the criteria for the tiers and other details vary between the WDNR and EGLE guidance. For example, the WDNR guidance defines thresholds based on the sum of PFOS+PFOA, whereas the EGLE guidance thresholds are based on concentrations of either PFOS or PFOA. Additionally, the 2024 WDNR Interim Biosolids Strategy notes that "these target thresholds are approximate values to be used by the department in conjunction with site-specific knowledge of the characteristics of the biosolids, the proposed disposal option, the characteristics of any proposed land application site (e.g., soil type, depth to groundwater, proximity to sensitive receptors like drinking water wells or surface water, etc.), type of method and equipment used for land application, etc." (WDNR, 2024).

The approach from the 2024 WDNR Interim Biosolids Strategy is summarized below:

- Sum of PFOS+PFOA generally ≥ 150 ug/kg: Considered to be at levels of "significant concern" and should not be approved for new or transfer land application sites. Notify WDNR staff immediately. Sample effluent and investigate potential PFAS sources to develop a source reduction program if not done already. Arrange alternative treatment or disposal of biosolids besides land application.
- Sum of PFOS+PFOA generally > 50 ug/kg but < 150 ug/kg: Reduce land application rates to no more than 1.5 dry tons per acre (or get WDNR approval of an alternative strategy). Notify WDNR staff immediately. Sample effluent and investigate potential PFAS sources to develop a source reduction program, if not done already. Notify landowner/farmer of PFAS results prior to initial land application and track application rates for each site.

- Sum of PFOS+PFOA generally >20 ug/kg but <50 ug/kg: If over a median concentration of 20 ug/kg but below 50 ug/kg, implement PFAS source investigation and reduction efforts as well as effluent sampling. Notify landowner/farmer of PFAS results prior to initial land application and track application rates for each site. If the proposed application rate is greater than or equal to 8 tons per acre, consult with the WDNR to detail concentrations and recommended tonnages per acre.
- Sum of PFOS+PFOA generally <20 ug/kg: Land apply per normal approach consistent with WAC ch. NR 204.

A revised Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS (Version 3) was published by the WDNR on June 29, 2026. This version of the guidance presents a similar tiered framework as the 2024 guidance, but has some differences in the thresholds for the tiers and the specific recommendations for each tier. This version is not used for comparison to the biosolids results from the 2025 sampling because it was not published until 2026.

3.3 2025 Wisconsin Act 200 & 201

Assembly Bill (AB) 130 and 131 were passed by the Wisconsin Legislature and signed into law by the Governor in April 2026. These bills, now known as 2025 Wisconsin Act 200 (AB 130) and 2025 Wisconsin Act 201 (AB 131), provide funding and create new programs and requirements related to PFAS. 2025 Wisconsin Act 201 requires the WDNR to include limitations or conditions for PFAS in a permit for the land application of sewage sludge and specifies that if the average of at least 2 sample results exceeds 20 ug/kg for PFOA and PFOS combined, the WDNR shall include a limitation or condition on PFAS unless there is an enforcement standard promulgated under ch. 160 for PFOA and PFOS. WDNR is in the process of developing and implementing the programs and requirements specified under the new laws. This includes WDNR's publication of the revised Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS (Version 3) published June 29, 2026 (referenced above). Because the new laws were not passed until 2026, and the implementation of them has not occurred, they are not considered to be applicable to the discussion of the 2025 sampling results in this report. Reference to the new laws in this report is an acknowledgement only at this time since it is a new regulatory change that may have implications for the District in the future.

4.0 Results and Discussion

Sample results from the 2025 sampling are summarized in Tables 5 through 12. Laboratory reports from the 2025 sampling are included in Appendix A. Graphs of select results are included as Figures 1 through 8. Results for the sampling performed in previous years, including laboratory reports, can be found in the reports summarizing the 2021 sampling (TRC, 2021), 2022 sampling (TRC, 2023), 2023 sampling (TRC, 2024), and 2024 sampling (TRC, 2025).

Results that were not detected are reported as less than the detection limit. Results for influent and effluent are reported in ng/L, which are equivalent to parts per trillion (ppt). Results for biosolids are reported in ug/kg, which are equivalent to parts per billion (ppb). PFAS results for biosolids samples are reported on a dry weight basis, meaning that the results represent a concentration that has been corrected for percent solids.

Graphs include column charts, stacked column charts, and time series graphs of concentration vs. time data.

- The time series (concentration vs. time) graphs include data from 2021-2025 and display nondetect results using hollow symbols.
- The column charts show results for detected concentrations only. Due to the change in the PFAS analyte list starting in January 2025, the column charts include only results from the 2025 sampling. On the column charts, sample results are labeled using identifiers based on the sample type (as summarized in the table below) and the sampling event date (formatted as YYYY-MM).

Graph Label Starts With	Sample Type
INF-CALC	Calculated influent
INF-COMP	Composite influent
INF-##	Influent from individual force main
EFF	Effluent composite
EFF-G	Effluent grab
BIO-A-23	Class A cake (2023 pile)
BIO-A-24	Class A cake (2024 pile)
BIO-A-25	Class A cake (2025 pile)
BIO-B	Class B biosolids

- The color coding for the stacked column charts uses blue for PFCAs and orange for PFASs, where increasing chain lengths are depicted using increasingly darker shades; red to black for the FTSS; and various shades of green, gray, purple, pink, and teal for the other PFAS analyzed; as shown in the graph legends. This color coding is also shown in Table 4.

4.1 Data Review

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations, Document #EA 19 0001, WDNR, December 2019¹, and USEPA Method 1633/1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. Data quality and usability review summaries and Qualified Form 1s for each monthly sampling event are provided in Appendix B.

4.2 Influent

Influent sampling included monthly collection of flow-weighted composite influent samples and quarterly collection of influent samples from the five individual force mains. Although influent sampling is not required by the permit, influent sample results are useful for the purpose of understanding the presence of PFAS being received by the District, assessing variation in influent concentrations over time, and for comparing to effluent results to understand potential transformation and partitioning.

At this time, there are no regulatory criteria for PFAS that apply to the District influent.

4.2.1 Calculated and Composite Influent Results

Flow-weighted composite influent samples were collected monthly and are referred to here as “Composite Influent”. A second composite influent sample was collected in January 2025 for the purpose of comparing sample preparation procedures, as discussed previously. Influent samples were also collected from the five individual force mains on a quarterly basis. The results from the individual force main samples were used to calculate flow-weighted averages for the purpose of comparing to the Composite Influent samples. The flow-weighted averages are referred to as “Calculated Influent” and are calculated as an average of the results from the five influent force main samples weighted by their respective flow rates, with nondetect results represented by concentrations of zero for the purpose of the calculation.

Results for the Composite Influent and Calculated Influent from 2025 are provided in Table 5 and shown as a stacked column chart on Figure 1 and a column chart on Figure 5a.

The individual PFAS compounds that typically had the highest concentrations in the Composite Influent in 2025 included several PFCAs (PFBA, PFHxA, and PFOA), several PFSAAs (PFBS, PFHxS, and PFOS), and 5:3 FTCA (Figure 5a). Of these compounds, only 5:3 FTCA had not been analyzed prior to 2025. The 2025 Composite Influent and Calculated Influent results were generally similar to the results from 2021-2024 for most PFAS that were also analyzed in previous years.

¹ The Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations were used to evaluate the TOP assay data only since the laboratory did not analyze the TOP assay samples using USEPA Method 1633A.

Atypical or notable results for the Composite Influent included:

- The August 2025 5:3 FTCA concentration of 56 ng/L appears anomalously high relative to other results for 5:3 FTCA in the influent samples (Figure 1).
- PFPeA was detected less frequently in the Composite Influent in 2025 than in previous years. In 2025, PFPeA was detected in only six of the 13 samples analyzed. However, PFPeA was detected in every sample collected between 2022 and 2024 except one sample that had elevated detection limits.

Results or patterns of detections for the Calculated Influent were generally similar to the Composite Influent.

Composite Influent PFOA concentrations from 2025 ranged from 4.1 ng/L to 7.7 ng/L and PFOS concentrations ranged from 4.1 ng/L to 8.8 ng/L.

4.2.2 Individual Force Mains

Influent results from the individual force mains are included in Table 6. The types of PFAS regularly detected are generally similar between the five individual force mains; however, the relative concentrations vary between force mains. In general, higher concentrations of PFAS are detected in samples from Influent-07 and Influent-18 relative to the other force mains, as observed in previous years. The highest concentrations detected of any individual PFAS were of 5:3 FTCA in Influent-07, with concentrations ranging from 60-110 ng/L. Concentrations of 5:3 FTCA were <10 ng/L in the other force main samples. In general, results for other PFAS in samples from Influent-07 and Influent-18 were less than 30 ng/L, and results for PFAS in samples from Influent-02, Influent-08, and Influent-11 were less than 10 ng/L.

Time series graphs of PFOA and PFOS for influent from individual force mains are shown on Figures 2a and 2b, respectively. Individual force main results from 2025 indicate PFOA concentrations ranging from 2.0 ng/L to 8.4 ng/L and PFOS concentrations ranging from not detected to 11 ng/L. In general, PFOA and PFOS concentrations were higher in the Influent-18 samples relative to the other force mains.

4.3 Effluent

Effluent sampling was completed monthly in 2025. In January 2025, one composite effluent sample was collected and four effluent grab samples were collected at different times throughout the day for the purpose of assessing potential variation in concentrations. Starting in February 2026, monthly effluent grab sampling was performed and effluent composite sampling was discontinued.

Effluent sample results are provided in Table 7. Results for detected PFAS are shown as column charts in Figure 3 and Figure 5b. Time series graphs for PFOA and PFOS are shown on Figures 4a and 4b, respectively.

The monthly effluent PFAS results indicated generally consistent PFAS concentrations over time. The individual PFAS regularly detected at the highest concentrations in the effluent samples were generally similar to those in the influent samples, as shown in Figures 5a/b, which included several PFCAs (PFBA, PFPeA, PFHxA, and PFOA) and PFASs (PFBS, PFHxS, and PFOS), although results for 5:3 FTCA were notably lower in the effluent than in the influent. Of these compounds,

only 5:3 FTCA had not been analyzed prior to 2025. The effluent PFOA and PFOS results for 2025 were generally similar to results from 2021–2024 (Figures 4a and 4b).

Results from the four effluent grab samples collected at different times throughout one day in January 2025 were generally consistent with each other, suggesting low variability throughout the day. Therefore, composite sampling was discontinued.

4.3.1 Comparison of Effluent Results to WDNR Surface Water Standards

The 2025 effluent results for PFOA and PFOS were less than the applicable NR 102 surface water criteria. Effluent PFOA concentrations from 2025 ranged from 4.5 ng/L to 9.4 ng/L, compared to the surface water criteria of 95 ng/L (Figure 4a). Effluent PFOS results from 2025 ranged from 1.8 ng/L to 6.1 ng/L, compared to the surface water criteria of 8 ng/L (Figure 4b).

4.4 Class B Biosolids

Class B biosolids were sampled quarterly during the March, June, September, and December 2025 sampling events. Class B biosolids sample results are included in Table 8. Class B biosolids PFAS results are shown in column chart form on Figure 5c and in stacked column chart form on Figure 6. Time series graphs of PFOA and PFOS detected in Class B biosolids samples are shown on Figure 7a.

The quarterly PFAS results indicated generally consistent PFAS concentrations over time. The individual PFAS compounds generally detected at the highest concentrations included 5:3 FTCA, which was detected at concentrations of 120-170 ug/kg, followed by other PFAS detected at concentrations up to 16 ug/kg including PFOS, NMeFOSAA, NEtFOSAA, NMeFOSE, and 7:3 FTCA (Figure 5c). Both 5:3 FTCA and 7:3 FTCA had not been analyzed prior to 2025. The PFAS results from 2025 were generally similar to the results from 2021–2024 in terms of the types of PFAS detected and the magnitude of the concentrations for the PFAS that were also analyzed in previous years.

The Class B biosolids results from 2025 for PFOA were detected at estimated concentrations less than or equal to 1.3 ug/kg or were not detected (<2.1 ug/kg) and PFOS results ranged from 5.1 ug/kg to 8.1 ug/kg (Figure 7a).

4.4.1 Comparison of Class B Biosolids Results to 2024 WDNR Interim Biosolids Strategy

The 2025 Class B biosolids results for the sum of PFOA + PFOS ranged from 6.01 ug/kg to 9.4 ug/kg, as shown in Table 8. According to the 2024 WDNR Interim Biosolids strategy, results generally below 20 ug/kg PFOS+PFOA qualify for land application following the normal approach consistent with WAC ch. NR 204 and do not require PFAS source investigation or reduction efforts or effluent sampling.

4.5 Class A Cake

Class A cake was generated in 2023, 2024, and 2025 and set aside in separate piles each year they were generated for the purpose of the PFAS characterization sampling. The 2023 Class A cake pile was sampled for the first three quarterly events in 2025. This pile could not be sampled during the last quarterly event in December 2025 due to having become too hardened to be able

to sample. The 2024 Class A cake pile was sampled quarterly. The 2025 Class A cake pile was first sampled in July 2025, after passing the bacteria test, and then was sampled quarterly thereafter.

Results from the 2025 sampling of the Class A cake piles generated in 2023, 2024, and 2025 are included in Table 9. PFAS results for the Class A cake piles are shown in stacked column chart form on Figures 8a/b/c and in column chart form on Figure 5d. Time series graphs of PFOA and PFOS are shown on Figures 7b/c/d.

In general, the types of PFAS and relative amounts detected in the Class A cake samples collected in 2025 had similarities between the different piles of Class A cake that were generated in different years, although the exact concentrations and ratios varied between piles and between sampling events. The individual PFAS compounds detected at the highest concentrations in the 2025 samples generally included 5:3 FTCA and 7:3 FTCA (both which were not analyzed prior to 2025), PFHxA, PFOA, and NMeFOSAA (Figure 5d). The variation in results between sampling events may be due in part to transformation, but may also be due to other factors, as discussed in Section 5.4.

The range of concentrations for PFOA and PFOS detected in 2025 for each Class A cake pile are summarized below. The piles are referred to in the table based on the year in which they were generated (e.g., the 2023 Class A cake pile refers to the pile of cake generated in 2023). The data shown in the table are based on the results from the 2025 sampling only.

Class A Cake Pile	Range of PFOA Results (ug/kg) from 2025 Sampling	Range of PFOS Results (ug/kg) from 2025 Sampling
2023 Class A cake pile	25 - 58	8.9 - 17
2024 Class A cake pile	9.6 - 27	6.2 - 15
2025 Class A cake pile	7.7 - 14	8 - 11

4.5.1 Comparison of Class A Cake Results to 2024 WDNR Interim Biosolids Strategy

The range of values for the sum of PFOS+PFOA and the median sum of PFOS+PFOA are summarized below for the 2025 sampling results for each of the three Class A cake piles that were sampled in 2025. The piles are referred to in the table based on the year in which they were generated (e.g., the 2023 Class A cake pile refers to the pile of cake generated in 2023). The data shown in the table are based on the results from the 2025 sampling only.

Class A Cake Pile	Range of PFOS+PFOA (ug/kg) from 2025 Sampling	Median of PFOS+PFOA (ug/kg) from 2025 Sampling
2023 Class A cake pile	33.9 - 75	58
2024 Class A cake pile	18.1 - 42	28.6
2025 Class A cake pile	16.2 - 22	21

Based on the 2025 sample results, the median sums of PFOS+PFOA for the 2024 and 2025 Class A cake piles were each greater than 20 ug/kg but below 50 ug/kg, whereas the median sum of PFOS+PFOA for the 2023 cake pile was above 50 ug/kg but below 150 ug/kg.

According to the 2024 WDNR Interim Biosolids Strategy, if the sum of PFOS+PFOA is generally above 20 ug/kg but below 50 ug/kg, certain actions are recommended. Because the Class A cake results from the 2025 sampling of the 2024 and 2025 Class A cake piles have median PFOS+PFOA concentrations greater than 20 ug/kg but below 50 ug/kg, implementation of source investigation and reduction efforts as well as effluent sampling may be recommended. The other actions listed for sums of PFOS+PFOA “generally above 20 ug/kg but below 50 ug/kg” in the 2024 WDNR Interim Biosolids Strategy are also anticipated to apply based on the 2025 sample results for the 2024 and 2025 Class A cake piles.

According to the 2024 WDNR Interim Biosolids Strategy, if the sum of PFOS+PFOA is generally above 50 ug/kg but below 150 ug/kg, the following actions are recommended: reduce land application rates to no more than 1.5 dry tons per acre (or get WDNR approval of an alternative strategy); notify WDNR staff immediately; sample effluent and investigate potential PFAS sources to develop a source reduction program, if not done already; and notify landowner/farmer of PFAS results prior to initial land application and track application rates for each site. Because the Class A cake results from the 2025 sampling of the 2023 Class A cake pile had some samples with PFOS+PFOA concentrations greater than 50 ug/kg but below 150 ug/kg, these actions may be considered to apply for the 2023 Class A cake pile. However, it should be noted that Class A cake material is not typically stored for multiple years prior to land application, and previous results from this cake pile generally had lower concentrations of PFOS+PFOA.

4.6 TOP Assay

In 2025, effluent and/or biosolids samples were collected for TOP assay during the March, June, July, September, and December sampling events, as indicated in Table 1.

TOP assay subjects a sample to artificially (non-environmentally occurring) forced oxidation using heat and strong oxidants, which can result in the transformation of precursor PFAS compounds to terminal PFAAs and possibly other PFAS. As such, the TOP assay can be used to (1) identify the potential presence of precursor PFAS that are and are not part of the target analyte list and (2) determine if these precursors will transform during the TOP assay to PFAS included in the target analyte list of 40 PFAS. The extent of transformation and specific transformation products indicated by the post-oxidation TOP assay results are not necessarily indicative of the transformation that would be expected for the same sampled material in the natural environment or in WWTP influent, effluent, or biosolids. As such, the individual concentrations of PFAS detected in the post-oxidation TOP assay results are also not intended to be compared to environmental standards or screening criteria.

The forced oxidation used in the TOP assay has the potential to transform precursors to PFCAs but will not result in transformation to PFSAAs. Therefore, increased concentrations of PFCAs post-oxidation indicate precursor transformation, but concentrations of PFSAAs are not expected to change substantially post-oxidation, even if the precursor can potentially transform to PFSAAs in the environment.

4.6.1 Effluent TOP Assay

Effluent TOP assay results are provided in Table 10.

Due to sampling error during the March 2025 sampling event, insufficient effluent sample volume was submitted to the lab for both the pre- and post-oxidation TOP assay analysis. As a result,

only the post-oxidation TOP assay analysis was completed. In the absence of pre-oxidation TOP assay results, the effluent sample results analyzed using Method 1633A have been used as “pre-oxidation” results for the purpose of comparison to the post-oxidation results because they also represent PFAS concentrations in the effluent without forced oxidation. Note that the TOP assay analysis used modified EPA Method 537 and the laboratory SOP using Isotope Dilution/WI Method Criteria, so procedures differed slightly from Method 1633A. The non-TOP assay (Method 1633A) results from March 2025 are included in Table 10 for the purpose of this comparison.

In general, the effluent TOP assay results show some increases in PFCA concentrations post-oxidation, indicating transformation of precursors. However, these results suggest that it is unlikely that there is a large mass of unidentified precursors present in the effluent samples. Therefore, although there is the potential for an increase in terminal PFAS in the environment after effluent discharge due to precursor transformation, such an increase is not expected to be significant based on the TOP assay results.

4.6.2 Class B Biosolids TOP Assay

TOP assay results for the Class B biosolids are included in Table 11. The Class B biosolids TOP assay results show increases in PFCA concentrations post-oxidation, indicating precursor transformation, along with decreased concentrations of target precursors such as NMeFOSAA, NEtFOSAA, NMeFOSE, NEtFOSE, 5:3 FTCA, and 7:3 FTCA. Overall, these results are consistent with the presence of precursors in the Class B biosolids samples.

4.6.3 Class A Cake TOP Assay

TOP assay results for the 2023, 2024, and 2025 Class A cake piles are included in Table 11. The Class A cake TOP assay results show increases in PFCA concentrations post-oxidation, indicating precursor transformation, along with decreased concentrations of target precursors similar to the TOP assay results for the Class B biosolids. Overall, these results are consistent with the presence of precursors in the Class A cake samples.

4.7 Blank Samples

The blank samples collected in 2025 consisted only of equipment blanks for the Class A cake sampling. These equipment blanks were collected as rinsate samples of the equipment used for the Class A cake sampling during each event when Class A cake was sampled. Results for these samples are provided in Table 12.

Equipment blank results were evaluated as part of the data quality and usability reviews (Appendix B). PFAS were detected in three equipment blank samples from 2025, in June, July, and September. The detection of PFBA in the July equipment blank resulted in the qualification of the pre-TOP assay result for PFBA in the 2025 Class A cake sample as an estimated nondetect (UJ) at the reported concentration. No other validation actions were required based on the equipment blank detections. PFAS were not detected in the other equipment blanks from 2025.

5.0 Additional Discussion

5.1 Possible Sources of PFAS

Results from the 2025 sampling confirm PFAS in the WWTP influent, effluent, and biosolids at concentrations generally similar to the 2021–2024 results for the target analytes that were also analyzed in previous years. These results are generally consistent with a large municipal WWTP that does not receive highly concentrated PFAS from industrial dischargers. Results for 5:3 FTCA, which had not been analyzed prior to 2025, may be indicative of a landfill source or of the breakdown of aqueous film-forming foam that includes 6:2 FTS, which has the potential to transform to 5:3 FTCA as an intermediate transformation product. Many of the PFAS compounds detected in the influent received by the District are likely the result of the prevalence of PFAS in society's use and commercial products that enter the municipal sanitary waste stream.

As discussed in the Influent results section, higher concentrations of PFAS were generally observed in the Influent-07 and Influent-18 samples, as has been observed in previous sampling. Concentrations of 5:3 FTCA were highest in the Influent-07 samples relative to the samples from the other force mains. Force Main 7 and Force Main 18 receive wastewater from a large geographic area that includes many different types of industries, including leachate from an active landfill, as well as sites where AFFF was likely used in the past, such as an air national guard training facility and several large petroleum storage terminals. These industries are potential sources of 5:3 FTCA, but have not been confirmed or identified by the District as sources.

5.2 Temporal Trends for Influent and Effluent

PFAS concentrations in influent and effluent varied somewhat month-to-month during 2025, but no overall trends were observed in the 2025 results (Figures 1 and 3). Concentrations of PFOA and PFOS in 2025 were generally similar to concentrations detected in 2021–2024 (Figures 2a/b and Figures 4a/b). Concentrations of PFHxA in effluent appear to have a generally decreasing trend over the last several years: concentrations were typically 15 ug/L to 30 ug/L during 2021–2023 and have since decreased to generally <15 ug/L in 2025. The small decrease in PFHxA concentrations in the effluent could potentially be related to a decrease in PFHxA in the influent and/or decreased concentrations of precursors that have the potential to transform to PFHxA.

5.3 Transformation and Partitioning

5.3.1 Influent vs. Effluent

Influent and effluent sample results may be compared to assess potential transformation and/or partitioning of PFAS within the WWTP, as shown for the 2025 results included in Figure 5a/b. Relative to the results for Calculated Influent and Composite Influent, the effluent results tend to have higher concentrations of several PFCAs (PFPeA, PFHxA, and PFOA), lower concentrations of PFOS, and lower concentrations or fewer detections of most precursors analyzed, including 5:3 FTCA. These differences could be due to simultaneous transformation of precursors within the WWTP process and preferential partitioning of certain PFAS to the solid phase of the biosolids from the liquid phase of the influent/effluent. Transformation of precursors to terminal PFAS would result in lower concentrations of those precursors and can result in higher concentrations of terminal PFAS. In general, short-chain PFAS generally prefer the aqueous phase and long-chain

PFAS (including long-chain precursors) and PFASs generally adsorb and partition to organic carbon in the solid phase.

5.3.2 Effluent vs. Biosolids

This difference in composition between the effluent and biosolids can be visualized by comparing the relative distributions of PFAS from the 2025 sampling, as shown in Figure 5b/c/d. The effluent results from 2025 generally contain higher proportions of PFAAs relative to the biosolids results. The biosolids results show higher proportions of 5:3 FTCA, 7:3 FTCA, NMeFOSAA, NEtFOSAA, NMeFOSE, and NEtFOSE compared to the effluent sample results. The higher proportion of long chain PFAS precursors (7:3 FTCA, NMeFOSAA, NEtFOSAA, NMeFOSE, and NEtFOSE) in biosolids is consistent with the expected partitioning of longer chain PFAS to solids based on greater sorption potential for these compounds.

5.4 Variation in Class A Cake Biosolids Results

Results from the individual piles of Class A cake generated in different years show some variation in concentrations between sampling events. Some of this variation may result from transformation of precursors. However, not all of the variation can be explained by transformation. For example, sample results from the 2023 Class A cake pile generally show higher concentrations of PFOA during the last four sampling events relative to previous sampling events, which could be due at least in part to transformation of precursors. However, transformation cannot explain the decrease in PFOA results between the March and June 2025 events for this cake pile. Results from the 2023 Class A cake pile for several other PFCAs also showed generally increasing concentrations over the past years.

Factors other than transformation that could result in variation in PFAS results between sampling events include, but are not limited to:

- Heterogeneity within the pile (even though sampling procedures are intended to minimize the effects of heterogeneity within the pile by compositing multiple grab samples, it is still possible that heterogeneity within the pile may affect sample results)
- Homogenization procedures in the field and/or in the laboratory
- Potential variability from the low mass of sample used in the laboratory analysis (i.e., the lab utilizes a 1-5 gram aliquot of sample for extraction) in combination with a high level of moisture (approximately 60-80% moisture). Analysis of such a small mass may affect the representativeness of sample results.

6.0 Conclusions

The following conclusions are made based on the 2025 PFAS sampling at the Nine Springs WWTP, with a focus on the effluent and biosolids results:

- Effluent results for PFOA and PFOS were below the applicable NR 102 surface water criteria.
- Class B biosolids sample results for the sums of PFOS+PFOA were below 20 ug/kg, for which the 2024 WDNR Interim Biosolids Strategy (advisory only at the time of sampling) recommends land application following the normal approach consistent with WAC ch. NR 204.
- Class A cake results from the pile generated in 2023 had a median sum of PFOS+PFOA over 50 ug/kg but below 150 ug/kg, for which the 2024 WDNR Interim Biosolids Strategy (advisory only at the time of sampling) recommends implementing certain actions including reducing land application rates, source investigation and reduction, and effluent sampling.
- Class A cake results from the piles generated in 2024 and 2025 show that the median sums of PFOS+PFOA were above 20 ug/kg but below 50 ug/kg, for which the 2024 WDNR Interim Biosolids Strategy (advisory only at the time of sampling) recommends implementing certain actions including source investigation and reduction efforts as well as effluent sampling.

7.0 References

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Table 1: PFAS Sampling Overview (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Sampling Event (Month-Year)	Influent (Five Individual Force Mains)	Influent (Composite)	Effluent (Composite)	Effluent (Grab)	Class B Biosolids	Class A Cake (2023 Pile)	Class A Cake (2024 Pile)	Class A Cake (2025 Pile)	Equipment Blank(s)
Jan-2025	--	PFAS x2 ⁽¹⁾	PFAS	PFAS x4 ⁽²⁾	--	--	--	--	--
Feb-2025	--	PFAS	--	PFAS	--	--	--	--	--
Mar-2025	PFAS	PFAS	--	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS, TOP	--	PFAS
Apr-2025	--	PFAS	--	PFAS	--	--	--	--	--
May-2025	--	PFAS	--	PFAS	--	--	--	--	--
Jun-2025	PFAS	PFAS	--	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS, TOP	--	PFAS x2
Jul-2025	--	PFAS	--	PFAS	--	--	--	PFAS, TOP	PFAS
Aug-2025	--	PFAS	--	PFAS	--	--	--	--	--
Sep-2025	PFAS	PFAS	--	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS x2
Oct-2025	--	PFAS	--	PFAS	--	--	--	--	--
Nov-2025	--	PFAS	--	PFAS	--	--	--	--	--
Dec-2025	PFAS	PFAS	--	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS, TOP	PFAS x2

Notes:

PFAS = PFAS analysis following EPA Method 1633/1633A for 40 PFAS.

TOP = Total oxidizable precursor assay

~~Strikethrough~~ = Sampling was planned but was not completed

-- = Not sampled

Footnotes:

⁽¹⁾ Different prep methods were used for these samples as described in the report

⁽²⁾ Four effluent grab samples were collected at different times throughout the day.

Updated by: L. Auner, 6/24/2026

Checked by: M. Ursin, 6/26/2026

Table 2: Sampling Methods and Rationale (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Sample Category	Sample ID Starts With	Sampling Scope and Schedule	Sample Collection Notes	Equipment Used	Lab Analysis	Goal/Rationale
Influent and Effluent						
Influent - 5 Individual Force Mains	INF-##	Quarterly	Pour-offs from composite sampler carboys	LDPE carboy (for each influent sample)	PFAS (Method 1633A), TSS*	Assess variation of influent concentrations over time and variation between the five force mains (could be used to guide potential future efforts for source identification). In January 2025, a second sample was collected for the purpose of comparing lab preparation methods.
Influent - Composite sampling	INF-COMP	Monthly (plus second sample collected in January)	Sample composited from five force mains by MMSD lab staff. Composite sample weighted based on flow rates for force mains.	LDPE carboy (for each influent sample), 4 L HDPE jug for composite, glass graduated cylinder	PFAS (Method 1633/1633A), TSS*	
Effluent (Composite)	EFF	January	Pour-off from composite sampler carboy. Collected day after influent sample collection to reflect 24-hour residence time for treatment.	LDPE carboy	PFAS (Method 1633), TSS*	Assess variation of PFAS concentrations in effluent over time.
Effluent (Grab)	EFF-G	1-day event in January, 4 samples collected throughout day	Collected by submerging bottles into reservoir of effluent composite sampler. Collected during 24-hr composite sample collection period.	None	PFAS (Method 1633), TSS*	Assess variation of PFAS concentrations in effluent within 1 day.
		Monthly (February - December)	Collected by submerging bottles into reservoir of effluent composite sampler. Sampled within the 24 hour period following the end of influent composite sample collection.	None	PFAS (Method 1633/1633A), TSS* (monthly) TOP assay (quarterly)	Assess variation of PFAS concentrations in effluent over time.
Biosolids - Class A Cake						
Class A Cake (2023 pile)	BIO-A-23	Quarterly (except December 2025, see notes)	Each sample was composited from 7 grab samples (at least 2 deeper, the rest shallow) and homogenized.	Stainless steel bowl, spoon, trowel, and shovel. Probe also used for deep grab samples.	PFAS (Method 1633A), % Solids, TOP Assay	Assess variation in concentrations in the same pile over time.
Class A Cake (2024 pile)	BIO-A-24	Quarterly				
Class A Cake (2025 pile)	BIO-A-25	First sampled after passing bacteria test, quarterly thereafter				
Biosolids - Class B Biosolids						
Class B Biosolids	BIO-B	Quarterly	Collected grab sample from end of gravity belt thickener.	None	PFAS (Method 1633A), % Solids, TOP Assay	Assess variation in concentrations over time.
Quality Control Samples						
Equipment Blank (Class A Cake)	EB	Concurrent with Class A Cake sampling (up to 8 samples total)	Collected as rinsate prior to equipment use (if only one sample collected) or after decontamination between samples if more than one sample collected using the same equipment.	Not applicable	PFAS (Method 1633A)	QC - evaluate potential cross-contamination from equipment.

Notes:
* = Analysis of TSS was performed for samples collected in January through June (except the second January influent composite sample), and for the influent composite sample in November.
Sampling of the 2023 pile of Class A cake was not feasible in December 2025 due to the pile being too hardened.
Analysis of PFAS was performed using EPA Method 1633 in January and using EPA Method 1633A starting in February through the end of the year.
Composite samplers are not included in the lists of equipment used, but are included in the sample collection notes.

Updated by: L. Auner, 6/24/2026
Checked by: M. Ursin, 6/26/2026

Table 3: Flow Rates from Influent Force Mains (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Influent Sample Date	Flow Rate (MGD)					
	INFLUENT-02	INFLUENT-07	INFLUENT-08	INFLUENT-11	INFLUENT-18	Total Flow from Force Mains
1/13/2025	5.45	3.90	5.85	8.55	11.97	35.72
2/17/2025	6.76	3.77	6.36	8.54	11.73	37.16
3/10/2025	6.66	3.84	6.68	8.82	12.23	38.23
4/14/2025	6.92	4.19	6.30	8.41	12.47	38.29
5/12/2025	7.16	5.12	6.69	8.81	12.70	40.48
6/16/2025	6.17	4.88	6.24	8.73	12.43	38.45
7/14/2025	7.49	7.10	6.52	9.42	13.46	43.99
8/11/2025	9.45	5.84	7.28	10.91	14.48	47.96
9/8/2025	4.23	7.28	6.53	8.59	12.43	39.06
10/13/2025	6.20	3.53	6.18	8.27	11.56	35.74
11/10/2025	7.22	4.68	6.89	8.32	11.82	38.93
12/8/2025	6.31	3.52	6.31	8.21	11.66	36.01

Notes:

Flow rates provided by the Madison Metropolitan Sewerage District (District).

MGD = millions of gallons per day

According to the District, the flow measurement at Pump Station 7 on 7/14/2025 may be inaccurate due to issues with the flow meter at that time.

Updated by: L. Auner, 5/14/2026

Checked by: B. Nickel, 6/1/2026

Table 4: PFAS Analyte List
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

CAS RN	Analyte	Abbreviation	Color on Stacked Column Charts	Terminal PFAS or Precursor?	Potential Terminal Transformation Products
Perfluoroalkyl carboxylic acids (PFCAs)					
375-22-4	Perfluorobutanoic acid	PFBA		Terminal	-
2706-90-3	Perfluoropentanoic acid	PFPeA		Terminal	-
307-24-4	Perfluorohexanoic acid	PFHxA		Terminal	-
375-85-9	Perfluoroheptanoic acid	PFHpA		Terminal	-
335-67-1	Perfluorooctanoic acid	PFOA		Terminal	-
375-95-1	Perfluorononanoic acid	PFNA		Terminal	-
335-76-2	Perfluorodecanoic acid	PFDA		Terminal	-
2058-94-8	Perfluoroundecanoic acid	PFUnA		Terminal	-
307-55-1	Perfluorododecanoic acid	PFDoA		Terminal	-
72629-94-8	Perfluorotridecanoic acid	PFTTrDA		Terminal	-
376-06-7	Perfluorotetradecanoic acid	PFTA		Terminal	-
Perfluoroalkyl sulfonic acids (PFSA)					
375-73-5	Perfluorobutane sulfonic acid	PFBS		Terminal	-
2706-91-4	Perfluoropentane sulfonic acid	PFPeS		Terminal	-
355-46-4	Perfluorohexane sulfonic acid	PFHxS		Terminal	-
375-92-8	Perfluoroheptane sulfonic acid	PFHpS		Terminal	-
1763-23-1	Perfluorooctane sulfonic acid	PFOS		Terminal	-
68259-12-1	Perfluorononane sulfonic acid	PFNS		Terminal	-
335-77-3	Perfluorodecane sulfonic acid	PFDS		Terminal	-
79780-39-5	Perfluorododecane sulfonic acid	PFDoS		Terminal	-
Fluorotelomer sulfonic acids (FTSAs)					
757124-72-4	4:2 Fluorotelomer sulfonic acid	4:2 FTS		Precursor	PFCAs
27619-97-2	6:2 Fluorotelomer sulfonic acid	6:2 FTS		Precursor	PFCAs
39108-34-4	8:2 Fluorotelomer sulfonic acid	8:2 FTS		Precursor	PFCAs
Perfluorooctane sulfonamides					
754-91-6	Perfluorooctane sulfonamide	PFOSA		Precursor	PFCAs/PFSAs including PFOA/PFOS
31506-32-8	N-Methylperfluorooctane sulfonamide	NMeFOSA		Precursor	PFCAs/PFSAs including PFOA/PFOS
4151-50-2	N-Ethylperfluorooctane sulfonamide	NEtFOSA		Precursor	PFCAs/PFSAs including PFOA/PFOS
Perfluorooctane sulfonamidoacetic acids					
2355-31-9	N-Methyl perfluorooctane sulfonamido acetic acid	NMeFOSAA		Precursor	PFCAs/PFSAs including PFOA/PFOS
2991-50-6	N-Ethyl perfluorooctane sulfonamido acetic acid	NEtFOSAA		Precursor	PFCAs/PFSAs including PFOA/PFOS
Perfluorooctane sulfonamide ethanols					
24448-09-7	N-Methyl perfluorooctane sulfonamido ethanol	NMeFOSE		Precursor	PFCAs/PFSAs including PFOA/PFOS
1691-99-2	N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE		Precursor	PFCAs/PFSAs including PFOA/PFOS
Per- and Polyfluoroether carboxylic acids (PFECAs)					
13252-13-6	Perfluoro-2-methyl-3-oxahexanoic acid	HFPO-DA		Terminal	-
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid	DONA		Precursor	PFCAs
377-73-1	Perfluoro-3-methoxypropanoic acid	PFMPA	*	Terminal	-
863090-89-5	Perfluoro-4-methoxybutanoic acid	PFMBA	*	Terminal	-
151772-58-6	Perfluoro-3,6-dioxaheptanoic acid	PFPE-3	*	Terminal	-
Ether sulfonic acids					
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS		Precursor	PFCAs
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS		Precursor	PFCAs
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	*	Terminal	-
Fluorotelomer carboxylic acids (FTCAs)					
356-02-5	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	*	Precursor	PFCAs
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid	5:3 FTCA	*	Precursor	PFCAs
812-70-4	3-Perfluoroheptylpropanoic acid	7:3 FTCA	*	Precursor	PFCAs

Notes:

CAS RN = Chemical Abstracts Service Registry Number

* = Not analyzed prior to 2025

- = Not applicable

Updated by: L. Auner, 7/28/2026

Checked by: E. Denly, 8/3/2026

Table 5: Calculated and Composite Influent Results (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Calculated Influent	Calculated Influent	Calculated Influent	Calculated Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent	Composite Influent
Sample Name			--	--	--	--	Inf-Comp-202501	Inf-Comp-202501_Alternate	Inf-Comp-202502	Inf-Comp-202503	Inf Comp-202504	Comp-202505	Inf-Comp-202506	Inf-Comp-202507	Inf-Comp-202508	Inf-Comp-202509	Inf-Comp-202510	Inf-Comp-202511	Inf-Comp-202512
Sample Date			03/10/2025	06/16/2025	09/08/2025	12/08/2025	01/13/2025	01/13/2025	02/17/2025	03/10/2025	04/14/2025	05/12/2025	06/16/2025	07/14/2025	08/11/2025	09/08/2025	10/13/2025	11/10/2025	12/08/2025
CAS RN	Analyte Abbr	Unit																	
375-22-4	PFBA	ng/L	13	12	--	8.2	10	12	7.9	14	12 J+	13	12	14	20	--	7.1	< 3.7 UJ	7.4
2706-90-3	PFPeA	ng/L	ND	ND	ND	3.6	4.0	4.0	3.3	< 0.19	< 6.7 UJ	< 0.18	< 0.18	< 0.20	< 0.19	4.3 J	4.6	< 2.3 UJ	3.2
307-24-4	PFHxA	ng/L	4.1	4.6	5.3	4.9	4.6	4.9	3.9	3.7	4.6	7.5	5.1 IJ	7.9	13	5.1	5.3	< 0.22 UJ	4.8
375-85-9	PFHpA	ng/L	1.3	2.1	1.4	1.3	1.3 J	1.4 J	1.1 J	1.3 J	1.7	1.6	1.8	1.6 J	1.7 J+	1.5	1.5 J	< 0.28 UJ	1.3 J
335-67-1	PFOA	ng/L	4	5.2	4.7	4.7	4.9	4.8	4.1	4.3	5.3	6.2	5.2	5.2	7.7	4.7	5.2	5.4	4.9
375-95-1	PFNA	ng/L	ND	0.57	0.48	0.18	0.53 J	0.61 IJ	0.56 IJ	< 0.38	0.56 J	0.54 J	0.53 J	0.51 J	0.81 J	0.50 J	0.46 J	< 0.37	< 0.42
335-76-2	PFDA	ng/L	ND	0.16	0.15	ND	< 0.41	< 0.39	< 0.37	< 0.37	< 0.36	< 0.35	< 0.34	0.43 J	0.68 J	< 0.34	< 0.35	< 0.36	< 0.41
2058-94-8	PFUnA	ng/L	0.17	ND	ND	ND	< 0.41	< 0.39	< 0.19	< 0.19	< 0.18	< 0.18	< 0.18	< 0.19	< 0.19	< 0.17	< 0.18	< 0.18	< 0.21
307-55-1	PFDoA	ng/L	ND	ND	ND	ND	< 0.45	< 0.43	< 0.47	< 0.46	< 0.45	< 0.44	< 0.43	< 0.47	< 0.46	< 0.43	< 0.43	< 0.45	< 0.51
72629-94-8	PFTrDA	ng/L	ND	ND	ND	ND	< 0.47	< 0.45	< 0.49	< 0.48	< 0.47	< 0.45	< 0.45	< 0.49	< 0.48	< 0.44	< 0.45	< 0.47	< 0.53
376-06-7	PFTA	ng/L	ND	ND	ND	ND	< 0.66	< 0.63	< 0.68	< 0.68	< 0.66	< 0.63	< 0.63	< 0.69	< 0.68	< 0.62	< 0.63	< 0.66	< 0.74
375-73-5	PFBS	ng/L	2.5	5.5	4.1	3	2.6	2.6	4.3	2.7	3.0	4.7	4.9	5.9	10	3.8	3.5	< 0.44 UJ	3.0
2706-91-4	PFPeS	ng/L	ND	0.36	0.32	0.96	< 0.41	< 0.39	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.18	< 0.18	< 0.16	0.49 IJ	< 0.17	0.83 IJ
355-46-4	PFHxS	ng/L	5.3	6.1	7.6	6.5	6.5	6.7	5.7	5.5	7.1	7.8	6.2	7.6	7.3	7.1	6.1	6.8	6.3
375-92-8	PFHpS	ng/L	ND	ND	ND	ND	< 0.41	< 0.39	< 0.15	< 0.15	< 0.14	< 0.14	< 0.14	< 0.15	< 0.15	< 0.14	< 0.14	< 0.14	< 0.16
1763-23-1	PFOS	ng/L	5.2	5	4.9	5.7	7.3 IJ	6.7 IJ	4.5 IJ	7.9 IJ	7.9 IJ	8.0	< 0.22	8.8	7.7	5.2	4.1	4.8	6.2 IJ
68259-12-1	PFNS	ng/L	ND	ND	ND	ND	< 0.41	< 0.39	< 0.26	< 0.26	< 0.25	< 0.24	< 0.24	< 0.27	< 0.26	< 0.24	< 0.24	< 0.25	< 0.29
335-77-3	PFDS	ng/L	ND	ND	ND	ND	< 0.41	< 0.39	< 0.26	< 0.26	< 0.25	< 0.24	< 0.24	< 0.27	< 0.26	< 0.24	< 0.24	< 0.25	< 0.29
79780-39-5	PFDoS	ng/L	ND	ND	ND	ND	< 0.43	< 0.41	< 0.45	< 0.44	< 0.43	< 0.42	< 0.41	< 0.45	< 0.44	< 0.41	< 0.41	< 0.43	< 0.49
757124-72-4	4:2 FTS	ng/L	ND	ND	ND	ND	< 0.81	< 0.78	< 0.37	< 0.37	< 0.36	< 0.34	< 0.34	< 0.37	< 0.37	< 0.34	< 0.34	< 0.36 UJ	< 0.40
27619-97-2	6:2 FTS	ng/L	1.1	1	1.7	1	1.2 J	1.3 J	1.0 J	1.3 J	1.2 J	1.2 J	< 0.31	2.6 J	1.9 J	1.2 J	1.3 J	0.88 J	1.1 J
39108-34-4	8:2 FTS	ng/L	ND	ND	0.39	ND	< 0.81	< 0.78	< 0.76	< 0.75	< 0.73	< 0.70	< 0.70	0.88 J	< 0.75	< 0.69	< 0.70	< 0.73	< 0.82
754-91-6	PFOSA	ng/L	ND	ND	0.029	ND	< 0.41	< 0.39	< 0.19	< 0.19	< 0.18 UJ	< 0.18	< 0.17	< 0.19	0.26 J	0.19 IJ	0.20 IJ	< 0.18	< 0.21
31506-32-8	NMeFOSA	ng/L	ND	ND	0.063	ND	< 0.41	< 0.39	< 0.33	< 0.32	< 0.31 UJ	< 0.30	< 0.30	< 0.33	< 0.32	< 0.30	< 0.30	< 0.31	< 0.35
4151-50-2	NEtFOSA	ng/L	ND	0.077	0.041	ND	< 0.41	< 0.39	< 0.38	< 0.37	< 3.6 UJ	< 0.35	< 0.35	< 0.38	< 0.37	< 0.34	< 0.35	< 0.36	< 0.41
2355-31-9	NMeFOSAA	ng/L	0.29	0.25	0.63	0.45	0.53 J	0.53 J	0.38 J	0.73 J	0.47 J	0.61 J	0.49 J	0.61 J	2.4 J+	0.62 J	0.68 J	1.1 J	0.62 J
2991-50-6	NEtFOSAA	ng/L	0.56	0.4	0.81	0.55	< 0.41	< 0.39	0.57 J	0.72 J	< 0.36 UJ	< 0.35	< 0.34 UJ	< 0.38	1.1 J	0.93 J	0.79 J	< 0.36	0.61 J
24448-09-7	NMeFOSE	ng/L	3.5	0.94	2.3	0.9	< 2.0 UJ	< 2.0 UJ	2.1 J	4.1 J	8.2 J	1.8 J	1.9 J	< 2.0 UJ	3.1 J	2.2 J	2.6 J	2.8 J	< 2.1 UJ
1691-99-2	NEtFOSE	ng/L	ND	ND	ND	ND	< 2.0 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0	< 2.0 UJ	< 1.9	< 1.9 UJ	< 2.1 UJ	< 2.0 UJ	< 1.9 UJ	< 1.9 UJ	< 2.0 UJ	< 2.2 UJ
13252-13-6	HFPO-DA	ng/L	ND	ND	ND	ND	< 0.32	< 0.31	< 0.33	< 0.33	< 0.32 UJ	< 0.31	< 0.30	< 0.33	< 0.33	< 0.30	< 0.31	< 0.32 UJ	< 0.36
919005-14-4	DONA	ng/L	ND	ND	ND	ND	< 0.41	< 0.39	< 0.34	< 0.33	< 0.33 UJ	< 0.31	< 0.31	< 0.34	< 0.34	< 0.31	< 0.31	< 0.33 UJ	< 0.37
377-73-1	PFMPA	ng/L	0.27	0.32	ND	ND	< 0.41	< 0.39	0.27 J	0.25 J	< 0.15 UJ	< 0.15	0.16 J	0.27 J	< 0.16	< 0.15 UJ	< 0.15	< 1.9 UJ	< 0.17
863090-89-5	PFMBA	ng/L	ND	ND	ND	ND	< 0.41	< 0.39	< 0.22	< 0.22	< 0.21 UJ	< 0.20	< 0.20	< 0.22	< 0.22	< 0.20 UJ	< 0.20	< 2.6 UJ	< 0.24
151772-58-6	PFPE-3	ng/L	ND	ND	ND	ND	< 0.58	< 0.56	< 0.61	< 0.60	< 0.58	< 0.56	< 0.56	< 0.62	< 0.60	< 0.56	< 0.56	< 0.59 UJ	< 0.66
756426-58-1	9CI-PF3ONS	ng/L	ND	ND	ND	ND	< 0.47	< 0.45	< 0.49	< 0.48	< 0.47 UJ	< 0.45	< 0.45	< 0.50	< 0.49	< 0.45	< 0.45	< 0.47 UJ	< 0.53
763051-92-9	11CI-PF3OUdS	ng/L	0.14	ND	ND	ND	< 0.41	< 0.39	< 0.25	< 0.25	< 0.24 UJ	< 0.23	< 0.23	< 0.25	< 0.25	< 0.23	< 0.23	< 0.24 UJ	< 0.27
113507-82-7	PFEESA	ng/L	ND	ND	ND	ND	< 0.41	< 0.39	< 0.21	< 0.21	< 0.20	< 0.20	< 0.19	< 0.21	< 0.21	< 0.19	< 0.19	< 0.20 UJ	< 0.23
356-02-5	3:3 FTCA	ng/L	ND	ND	ND	0.083	< 0.81	< 0.78	< 0.61	< 0.60	< 0.58 UJ	11	< 0.56	< 0.62	< 0.60	< 0.56 UJ	< 0.56	< 7.2 UJ	< 0.66
914637-49-3	5:3 FTCA	ng/L	9.9	16	15	8.9	14	15	13	13	7.0 J	20	19	21	56	17	21	29 J	9.7
812-70-4	7:3 FTCA	ng/L	ND	0.33	0.37	0.41	< 2.0	< 2.0	< 1.1	< 1.0	< 1.0	1.7 J	< 0.96	1.4 J	2.9 J	< 0.96	1.0 J	< 1.0 UJ	< 1.1
TSS	TSS	mg/L	--	--	--	--	250	--	200	190	230	230	250	--	--	--	--	490	--

Notes:
CAS RN = Chemical Abstracts Service Registry Number
Calculated Influent = Calculated as an average of the results from five influent force main samples weighted by their respective flow rates,
with nondetect results represented by zero for the purpose of the calculation.
Influent Comp = Sample composited as flow-weighted average of five influent force main samples.
ND = Calculated influent result considered to be nondetect due to analyte not being detected in any of the five influent force main samples.
-- = Not analyzed or not applicable
TSS = Total suspended solids

Data Qualifiers:
I = ion transition ratio did not meet acceptance limits
J = estimated
J+ = estimated with potential high bias
UJ = estimated nondetect

Table 6: Influent Results from Individual Force Mains (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Influent-02	Influent-02	Influent-02	Influent-02	Influent-07	Influent-07	Influent-07	Influent-07	Influent-08	Influent-08	Influent-08	Influent-08	Influent-11	Influent-11	Influent-11	Influent-11	Influent-18	Influent-18	Influent-18	Influent-18
Sample Name			Inf-02-202503	Inf-02-202506	Inf-02-202509	Inf-02-202512	Inf-07-202503	Inf-07-202506	Inf-07-202509	Inf-07-202512	Inf-08-202503	Inf-08-202506	Inf-08-202509	Inf-08-202512	Inf-11-202503	Inf-11-202506	Inf-11-202509	Inf-11-202512	Inf-18-202503	Inf-18-202506	Inf-18-202509	Inf-18-202512
Sample Date			03/10/2025	06/16/2025	09/08/2025	12/08/2025	03/10/2025	06/16/2025	09/08/2025	12/08/2025	03/10/2025	06/16/2025	09/08/2025	12/08/2025	03/10/2025	06/16/2025	09/08/2025	12/08/2025	03/10/2025	06/16/2025	09/08/2025	12/08/2025
CAS RN	Analyte Abbr	Unit																				
375-22-4	PFBA	ng/L	6.1	7.8	--	3.5 J	21	27	--	19	5.5	8.1	--	4.2	5.0	5.1	--	1.9 J	24	15	--	14
2706-90-3	PFPeA	ng/L	< 0.18	< 0.19	< 0.18 UJ	2.6	< 0.18	< 250	< 0.19 UJ	4.4	< 0.20	< 0.18	< 0.18 UJ	3.0	< 0.18	< 0.18	< 0.19 UJ	2.1	< 0.19	< 0.18	< 0.19 UJ	5.2
307-24-4	PFHxA	ng/L	< 0.20	3.6	3.0	3.1	8.6	11	10	11	7.6 J	4.2	3.4	3.5	1.9	< 0.21	2.3	2.7	4.7	6.0	6.3	6.4
375-85-9	PFHpA	ng/L	0.99 J	1.7 IJ	0.90 J	0.90 J	2.1	2.5	2.2	2.1	< 3.5 UJ	1.4 J	0.72 J	0.87 J	0.46 J	1.8 IJ	0.64 J	0.53 J	2.4	2.6	2.0	1.9
335-67-1	PFOA	ng/L	2.6	4.1	2.5	2.7	5.1 J	7.2	5.5	6.3	< 3.9 UJ	2.8	2.2	2.2	2.2	2.4	2.0	2.3	7.9	8.0	8.1	8.4
375-95-1	PFNA	ng/L	< 0.34	0.52 J	0.43 J	0.53 IJ	< 0.35 UJ	0.84 IJ	0.62 J	0.87 IJ	< 4.5 UJ	0.60 IJ	0.42 J	< 0.41	< 0.36	0.41 J	0.38 J	< 0.40	< 0.37	0.60 IJ	0.50 J	< 0.44
335-76-2	PFDA	ng/L	< 0.34	0.56 J	< 0.35	< 0.40	< 0.34 UJ	0.58 J	0.46 J	< 0.40	< 4.4 UJ	< 0.34	0.38 J	< 0.40	< 0.35	< 0.35	< 0.36	< 0.39	< 0.36	< 0.35	< 0.36	< 0.43
2058-94-8	PFUnA	ng/L	< 0.17	< 0.18	< 0.18	< 0.21	< 0.17 UJ	< 0.17	< 0.19	< 0.21	< 2.3 UJ	< 0.18	< 0.18	< 0.20	< 0.18	< 0.18	< 0.18	< 0.20	0.54 J	< 0.18	< 0.18	< 0.22
307-55-1	PFDaA	ng/L	< 0.42	< 0.45	< 0.44	< 0.50	< 0.42	< 0.42	< 0.46	< 0.50	< 5.5 UJ	< 0.43	< 0.43	< 0.50	< 0.44	< 0.44	< 0.45	< 0.49	< 0.46	< 0.44	< 0.45	< 0.53
72629-94-8	PFTrDA	ng/L	< 0.44	< 0.47	< 0.45	< 0.52	< 0.44 UJ	< 0.44	< 0.48	< 0.52	< 5.8 UJ	< 0.45	< 0.45	< 0.52	< 0.45	< 0.46	< 0.47	< 0.51	< 0.48	< 0.45	< 0.47	< 0.56
376-06-7	PFTA	ng/L	< 0.61	< 0.65	< 0.63	< 0.73	< 0.62 UJ	< 0.62	< 0.68	< 0.74	< 8.1 UJ	< 0.63	< 0.63	< 0.72	< 0.64	< 0.64	< 0.65	< 0.71	< 0.67	< 0.64	< 0.66	< 0.78
375-73-5	PFBS	ng/L	1.6	2.0	1.4 J	1.9	8.3	25	11	9.4	< 2.8 UJ	2.3 IJ	2.1	1.8	1.2 J	2.2 IJ	1.7	1.4 J	3.4	3.6 IJ	3.7	3.4
2706-91-4	PFPeS	ng/L	< 0.16	< 0.17	< 0.17	0.67 IJ	< 0.16 UJ	< 0.16	< 0.18	0.76 IJ	< 2.1 UJ	< 0.17	< 0.17	0.78 IJ	< 0.17	< 0.17	< 0.17	0.80 IJ	< 0.18	1.1 J	1.0 J	1.4 J
355-46-4	PFHxS	ng/L	2.4	2.9	2.4	3.2	3.9 J	5.0	5.7	5.7	< 2.5 UJ	2.8	2.8	3.1	1.3 J	< 0.19	1.7	2.8	13	14	17	13
375-92-8	PFHpS	ng/L	< 0.13	< 0.14	< 0.14	< 0.16	< 0.13 UJ	< 0.13	< 0.15	< 0.16	< 1.8 UJ	< 0.14	< 0.14	< 0.16	< 0.14	< 0.14	< 0.14	< 0.15	< 0.14	< 0.14	< 0.14	< 0.17
1763-23-1	PFOS	ng/L	6.9 IJ	3.9	4.8 IJ	5.8 IJ	4.6 IJ	6.7 IJ	5.4	3.5	< 2.8 UJ	< 0.22	2.8	2.0 IJ	< 0.22	< 0.22	2.6 IJ	6.5 IJ	11 IJ	11	7.3	7.9 IJ
68259-12-1	PFNS	ng/L	< 0.24	< 0.25	< 0.24	< 0.28	< 0.24 UJ	< 0.24	< 0.26	< 0.28	< 3.1 UJ	< 0.24	< 0.24	< 0.28	< 0.24	< 0.25	< 0.25	< 0.27	< 0.26	< 0.25	< 0.25	< 0.30
335-77-3	PFDS	ng/L	< 0.24	< 0.25	< 0.24	< 0.28	< 0.24 UJ	< 0.24	< 0.26	< 0.28	< 3.1 UJ	< 0.24	< 0.24	< 0.28	< 0.24	< 0.25	< 0.25	< 0.27	< 0.26	< 0.24	< 0.25	< 0.30
79780-39-5	PFDoS	ng/L	< 0.40	< 0.43	< 0.42	< 0.48	< 0.41 UJ	< 0.40	< 0.44	< 0.48	< 5.3 UJ	< 0.41	< 0.41	< 0.47	< 0.42	< 0.42	< 0.43	< 0.47	< 0.44	< 0.42	< 0.43	< 0.51
757124-72-4	4:2 FTS	ng/L	< 0.33	< 0.35	< 0.34	< 0.40	< 0.33	< 0.33	< 0.37	< 0.40	< 0.38	< 0.34	< 0.34	< 0.39	< 0.34	< 0.35	< 0.35	< 0.38	< 0.36	< 0.34	< 0.36	< 0.42
27619-97-2	6:2 FTS	ng/L	0.58 J	< 0.33	0.41 J	0.63 J	1.5 J	1.4 IJ	1.2 J	1.1 J	< 4.1 UJ	0.58 IJ	3.2	< 0.36	< 0.32	< 0.32	0.52 J	< 0.36	2.8 J	2.4 J	2.6 J	2.4 J
39108-34-4	8:2 FTS	ng/L	< 0.68	< 0.73	< 0.70	< 0.81	< 0.69	< 0.68	1.1 J	< 0.82	< 9.0 UJ	< 0.70	1.1 J	< 0.80	< 0.71	< 0.71	< 0.72	< 0.79	< 0.74	< 0.71	< 0.73	< 0.86
754-91-6	PFOSA	ng/L	< 0.17	< 0.18	0.27 IJ	< 0.20	< 0.17 UJ	< 0.17	< 0.19	< 0.20	< 2.3 UJ	< 0.18	< 0.18	< 0.20	< 0.18	< 0.18	< 0.18	< 0.20	< 0.19	< 0.18	< 0.18	< 0.22
31506-32-8	NMeFOSA	ng/L	< 0.29	< 0.31	0.58 J	< 0.35	< 0.29	< 0.29	< 0.32	< 0.35	< 3.9 UJ	< 0.30	< 0.30	< 0.34	< 0.30	< 0.31	< 0.31	< 0.34	< 0.32	< 0.30	< 0.31	< 0.37
4151-50-2	NEtFOSA	ng/L	< 0.34	< 0.36	0.38 J	< 0.40	< 0.34	0.61 J	< 0.37	< 0.40	< 4.5 UJ	< 0.35	< 0.35	< 0.40	< 0.35	< 0.35	< 0.36	< 0.39	< 0.37	< 0.35	< 0.36	< 0.43
2355-31-9	NMeFOSAA	ng/L	< 0.27 UJ	< 0.28 UJ	0.31 J	< 0.32 UJ	1.1 J	1.4 J	0.98 J	1.5 J	< 3.5 UJ	0.45 IJ	0.58 J	0.38 J	< 0.28 UJ	< 0.28 UJ	0.50 J	0.36 J	0.57 J	< 0.28 UJ	0.66 J	0.47 J
2991-50-6	NEtFOSAA	ng/L	0.38 J	< 0.36	0.41 J	0.70 J	0.78 J	1.2 J	0.92 J	0.88 J	< 4.4 UJ	< 0.34 UJ	0.95 J	0.47 J	< 0.35 UJ	< 0.35 UJ	1.0 J	< 0.39	1.3 J	0.76 J	0.67 J	0.81 J
24448-09-7	NMeFOSE	ng/L	3.5 J	< 1.8 UJ	4.7 J	< 2.1 UJ	6.3 J	4.2 J	2.7 J	3.4 J	< 23 UJ	< 1.8 UJ	1.9 J	< 2.0 UJ	4.7 J	1.8 J	< 1.8 UJ	2.5 J	3.8 J	< 1.8 UJ	2.9 J	< 2.2 UJ
1691-99-2	NEtFOSE	ng/L	< 1.8	< 2.0 UJ	< 1.9 UJ	< 2.2 UJ	--	< 1.9	< 2.0 UJ	< 2.2 UJ	< 24 UJ	< 1.9 UJ	< 1.9 UJ	< 2.2 UJ	< 1.9 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0	< 1.9 UJ	< 2.0 UJ	< 2.3 UJ
13252-13-6	HFPO-DA	ng/L	< 0.30	< 0.32	< 0.31	< 0.35	< 0.30	< 0.30	< 0.33	< 0.35	< 3.9 UJ	< 0.30	< 0.30	< 0.35	< 0.31	< 0.31	< 0.32	< 0.34	< 0.32	< 0.31	< 0.32	< 0.38
919005-14-4	DONA	ng/L	< 0.30	< 0.32	< 0.31	< 0.36	< 0.31	< 0.30	< 0.34	< 0.36	< 4.0 UJ	< 0.31	< 0.31	< 0.36	< 0.31	< 0.32	< 0.32	< 0.35	< 0.33	< 0.32	< 0.33	< 0.39
377-73-1	PFMPA	ng/L	0.22 J	0.48 J	< 0.15 UJ	< 0.17	0.30 J	< 0.14	< 0.16 UJ	< 0.17	0.29 J	0.50 J	< 0.15 UJ	< 0.17	0.25 J	0.29 J	< 0.15 UJ	< 0.17	0.30 J	0.31 J	< 0.15 UJ	< 0.18
863090-89-5	PFMBA	ng/L	< 0.20	< 0.21	< 0.20 UJ	< 0.23	< 0.20	< 0.20	< 0.22 UJ	< 0.23	< 0.22	< 0.20	< 0.20 UJ	< 0.23	< 0.20	< 0.21	< 0.21 UJ	< 0.23	< 0.21	< 0.20	< 0.21 UJ	< 0.25
151772-58-6	PFPE-3	ng/L	< 0.55	< 0.58	< 0.56	< 0.65	< 0.55	< 0.55	< 0.60	< 0.65	< 7.2 UJ	< 0.56	< 0.56	< 0.64	< 0.57	< 0.57	< 0.58	< 0.63	< 0.59	< 0.57	< 0.59	< 0.69
756426-58-1	9CI-PF3ONS	ng/L	< 0.44	< 0.47	< 0.45	< 0.53	< 0.44	< 0.44	< 0.49	< 0.53	< 5.8 UJ	< 0.45	< 0.45	< 0.52	< 0.46	< 0.46	< 0.47	< 0.51	< 0.48	< 0.46	< 0.47	< 0.56
763051-92-9	11CI-PF3OUdS	ng/L	< 0.23	< 0.24	< 0.23	< 0.27	< 0.23	< 0.23	< 0.25	< 0.27	< 3.0 UJ	< 0.23	< 0.23	< 0.27	< 0.23	< 0.24	< 0.24	< 0.26	0.45 J	< 0.23	< 0.24	< 0.29
113507-82-7	PFEESA	ng/L	< 0.19	< 0.20	< 0.20	< 0.23	< 0.19	< 0.19	< 0.21	< 0.23	< 2.5 UJ	< 0.19	< 0.19	< 0.22	< 0.20	< 0.20	< 0.20	< 0.22	< 0.21	< 0.20	< 0.20	< 0.24
356-02-5	3:3 FTCA	ng/L	< 0.55	< 0.58	< 0.56 UJ	< 0.65	< 0.55	< 0.55	< 0.60 UJ	0.85 J	< 0.62	< 0.56	< 0.56 UJ	< 0.64	< 0.57	< 0.57	< 0.58 UJ	< 0.63	< 0.59	< 0.57	< 0.59 UJ	< 0.69
914637-49-3	5:3 FTCA	ng/L	2.6 J	2.0 J	2.4 J	< 1.6	70	110	60	70	< 17 UJ	3.4 J	3.9 J	2.0 J	1.6 J	2.3 J	3.1 J	1.5 J	6.3 J	3.2 J	7.2 J	4.1 J
812-70-4	7:3 FTCA	ng/L	< 0.94	< 1.0	< 0.97	< 1.1	< 0.95	2.6 J	2.0 J	4.2 J	< 12 UJ	< 0.97	< 0.97	< 1.1	< 0.98	< 0.99	< 1.0	< 1.1	< 1.0	< 0.98	< 1.0	< 1.2
TSS	TSS	mg/L	210	320	--	--	170	200	--	--	190	240	--	--	240	200	--	--	210	230	--	--

Notes:
CAS RN = Chemical Abstracts Service Registry Number
TSS = Total suspended solids
-- = Not analyzed or not applicable

Data Qualifiers:
I = ion transition ratio did not meet acceptance limits
J = estimated
UJ = estimated nondetect

Updated by: L. Auner, 6/24/2026
Checked by:

Updated by: L. Auner, 5/28/2026
Checked by: A. Brubaker, 5/29/2026

Table 7: Effluent Results (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			NR 102 Surface Water Criteria	Effluent	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab
Sample Name				Eff-202501	Eff-G1-202501	Eff-G2-202501	Eff-G3-202501	Eff-G4-202501	Eff-G 202502	Eff-G-202503	Eff-G-202504	Eff-G-202505	EFF G-202506	Eff-G-202507	Eff-G-202508	Eff-G-202509	Eff-G-202510	Eff-G-202511	Eff-G-202512
Sample Date				01/14/2025	01/14/2025	01/14/2025	01/14/2025	01/14/2025	02/18/2025	03/11/2025	04/15/2025	05/13/2025	06/17/2025	07/15/2025	08/12/2025	09/09/2025	10/14/2025	11/11/2025	12/09/2025
CAS RN	Analyte Abbr	Unit																	
375-22-4	PFBA	ng/L	-	9.5	8.9	9.2	9.5	10	9.5	13	9.7	11	9.3	14	17	10	9.6	< 4.1	9.8
2706-90-3	PFPeA	ng/L	-	9.4	8.6	8.3	8.5	7.4	8.9	20	10	< 0.17	< 0.18	4.6 J+	< 0.19	20	19	< 14	6.5
307-24-4	PFHxA	ng/L	-	12	9.7	8.9	8.2	9.5	5.9	13	12	9.6	9.9	12	18	12	8.2	11	11
375-85-9	PFHpA	ng/L	-	1.4 J	1.2 J	1.4 J	1.2 J	1.4	1.2 J	1.4 J	1.8	1.5	1.8	2.0	3.0	1.6	1.4 J	1.7	1.4 J
335-67-1	PFOA	ng/L	95 ⁽¹⁾	6.0	5.4	5.8	5.6	4.8	4.5	5.5	7.0	6.8	6.6	6.9	9.4	7.1	7.1	7.7	5.6
375-95-1	PFNA	ng/L	-	0.47 J	0.40 J	0.48 J	0.41 J	0.47 J	0.58 IJ	0.63 IJ	0.55 J	0.52 J	0.43 J	0.52 J	1.1 IJ	0.54 J	< 0.36	0.68 J	< 0.40
335-76-2	PFDA	ng/L	-	0.45 J	0.43 J	0.42 J	0.41 J	0.42 J	0.39 J	0.66 J	0.65 J	0.58 J	0.71 J	0.75 J	0.57 J	0.56 J	0.56 J	0.58 J	< 0.39
2058-94-8	PFUnA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.17	< 0.17	< 0.19	< 0.17	< 0.18	< 0.18	< 0.19	< 0.17	< 0.18	< 0.18	< 0.20
307-55-1	PFDoA	ng/L	-	< 0.42	< 0.41	< 0.40	< 0.43	< 0.40	< 0.43	< 0.42	< 0.45	< 0.41	< 0.44	< 0.44	< 0.46	< 0.42	< 0.43	< 0.44	< 0.48
72629-94-8	PFTTrDA	ng/L	-	< 0.45	< 0.43	< 0.43	< 0.45	< 0.42	< 0.44	< 0.44	< 0.47	< 0.43	< 0.46	< 0.46	< 0.47	< 0.44	< 0.45	< 0.45	< 0.50
376-06-7	PFTA	ng/L	-	< 0.62	< 0.60	< 0.60	< 0.63	< 0.59	< 0.62	< 0.62	< 0.66	< 0.60	< 0.64	< 0.64	< 0.66	< 0.62	< 0.63	< 0.64	< 0.71
375-73-5	PFBS	ng/L	-	2.9	2.7	3.2	3.1	2.9	7.5 IJ	3.8	3.3	4.2	4.4	6.2	8.3	4.3	2.8	3.4	3.1
2706-91-4	PFPeS	ng/L	-	0.55 J	0.50 J	0.46 J	0.49 J	0.46 J	0.41 J	< 0.16	0.67 J	0.53 J	0.32 J	< 0.17	0.59 J	0.58 J	0.44 IJ	0.47 IJ	0.46 J
355-46-4	PFHxS	ng/L	-	5.4	5.3	5.4	5.0	5.2	5.0	6.6	7.8	7.1	5.4	6.6	8.4	7.5	5.9	6.5	6.5
375-92-8	PFHpS	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.14	< 0.13	< 0.14	< 0.13	< 0.14	< 0.14	< 0.14	< 0.13	< 0.14	< 0.14	< 0.15
1763-23-1	PFOS	ng/L	8 ⁽²⁾	2.5	2.5	2.4	2.2	2.5	1.8	2.6	3.6	3.1	3.5	3.8	5.5	6.1	2.9	3.1	3.4
68259-12-1	PFNS	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.24	< 0.24	< 0.25	< 0.23	< 0.25	< 0.25	< 0.26	< 0.24	< 0.24	< 0.24	< 0.27
335-77-3	PFDS	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.24	< 0.24	< 0.25	< 0.23	< 0.25	< 0.25	< 0.25	< 0.24	< 0.24	< 0.24	< 0.27
79780-39-5	PFDoS	ng/L	-	< 0.41	< 0.39	< 0.39	< 0.41	< 0.38	< 0.41	< 0.40	< 0.43	< 0.39	< 0.42	< 0.42	< 0.43	< 0.41	< 0.41	< 0.42	< 0.46
757124-72-4	4:2 FTS	ng/L	-	< 0.77	< 0.74	< 0.74	< 0.78	< 0.72	< 0.34	< 0.33	< 0.36	< 0.32	< 0.35	< 0.35	< 0.36	< 0.34	< 0.34	< 0.34	< 0.38
27619-97-2	6:2 FTS	ng/L	-	< 0.77	< 0.74	< 0.74	< 0.78	< 0.72	0.82 J	0.78 J	0.90 J	0.89 J	< 0.32	0.56 J	1.1 J	0.65 J	0.76 J	< 0.32	0.75 J
39108-34-4	8:2 FTS	ng/L	-	< 0.77	< 0.74	< 0.74	< 0.78	< 0.72	< 0.69	< 0.68	< 0.73	< 0.67	< 0.71	< 0.71	< 0.74	< 0.69	< 0.70	< 0.71	< 0.78
754-91-6	PFOSA	ng/L	-	0.51 J	< 0.37	0.42 J	0.39 IJ	0.36 J	0.82 J	0.92 J	0.84 J	0.34 J	0.38 IJ	0.34 J	0.36 IJ	0.53 J	0.84 J	< 0.18	0.70 J
31506-32-8	NMeFOSA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.30	< 0.29	< 0.32	< 0.29	< 0.31	< 0.31	< 0.32	< 0.30	< 0.30	< 0.30	< 0.34
4151-50-2	NEtFOSA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.34	< 0.34	< 0.36	< 0.33	< 0.35	< 0.35	< 0.37	< 0.34	< 0.35	< 0.35	< 0.39
2355-31-9	NMeFOSAA	ng/L	-	0.61 J	0.60 J	0.68 J	0.59 J	0.73 J	0.58 J	0.75 J	0.85 J	0.59 J	0.72 J	0.67 J	1.4 J	0.70 J	0.81 J	0.71 J	0.75 J
2991-50-6	NEtFOSAA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.34	< 0.33	< 0.36	0.35 J	0.49 J	0.36 J	0.37 J	0.43 J	< 0.34	< 0.35	0.44 J
24448-09-7	NMeFOSE	ng/L	-	< 1.9	< 1.8	< 1.8	< 1.9	< 1.8	< 1.8 UJ	< 1.7	< 1.9 UJ	< 1.7	< 1.8	< 1.8	< 1.9 UJ	< 1.7 UJ	< 1.8	< 1.8 UJ	< 2.0 UJ
1691-99-2	NEtFOSE	ng/L	-	< 1.9	< 1.8	< 1.8	< 1.9	< 1.8	< 1.9 UJ	< 1.8	< 2.0 UJ	< 1.8	< 1.9	< 1.9	< 2.0 UJ	< 1.9 UJ	< 1.9	< 1.9 UJ	< 2.1 UJ
13252-13-6	HFPO-DA	ng/L	-	< 0.30	< 0.29	< 0.29	< 0.30	< 0.28	< 0.30	< 0.30	< 0.32	< 0.29	< 0.31	< 0.31	< 0.32	< 0.30	< 0.31	< 0.31	< 0.34
919005-14-4	DONA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.31	< 0.30	< 0.33	< 0.30	< 0.32	< 0.32	< 0.33	< 0.31	< 0.31	< 0.32	< 0.35
377-73-1	PFMPA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.15	< 0.14	< 0.16	< 0.14	< 0.15	< 0.15	< 0.16	< 0.15	< 0.15	< 0.15	< 0.17
863090-89-5	PFMBA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.20	< 0.20	< 0.21	< 0.19	< 0.20	< 0.21	< 0.21	< 0.20	< 0.20	< 0.20	< 0.23
151772-58-6	PFPE-3	ng/L	-	< 0.55	< 0.53	< 0.53	< 0.56	< 0.52	< 0.55	< 0.55	< 0.59	< 0.53	< 0.57	< 0.57	< 0.59	< 0.55	< 0.56	< 0.57	< 0.63
756426-58-1	9Cl-PF3ONS	ng/L	-	< 0.45	< 0.43	< 0.43	< 0.45	< 0.42	< 0.45	< 0.44	< 0.47	< 0.43	< 0.46	< 0.46	< 0.48	< 0.44	< 0.45	< 0.46	< 0.51
763051-92-9	11Cl-PF3OUdS	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.23	< 0.23	< 0.24	< 0.22	< 0.24	< 0.24	< 0.24	< 0.23	< 0.23	< 0.23	< 0.26
113507-82-7	PFEESA	ng/L	-	< 0.38	< 0.37	< 0.37	< 0.39	< 0.36	< 0.19	< 0.19	< 0.20	< 0.18	< 0.20	< 0.20	< 0.20	< 0.19	< 0.20	< 0.20	< 0.22
356-02-5	3:3 FTCA	ng/L	-	< 0.77	< 0.74	< 0.74	< 0.78	< 0.72	< 0.55	< 0.55	< 0.59	< 0.53	< 0.57	< 0.57	< 0.59	< 0.55	< 0.56	< 0.57	< 0.63
914637-49-3	5:3 FTCA	ng/L	-	< 1.9	< 1.8	< 1.8	< 1.9	< 1.8	< 1.3	1.7 J	< 1.4	1.3 J	1.8 J	2.0 J	3.0 J	3.2 J	2.3 J	1.6 IJ	1.8 J
812-70-4	7:3 FTCA	ng/L	-	< 1.9	< 1.8	< 1.8	< 1.9	< 1.8	< 0.96	< 0.94	< 1.0	< 0.92	< 0.98	< 0.99	< 1.0	< 0.95	< 0.97	< 0.98	< 1.1
TSS	TSS	mg/L	-	4.7	3.6	4.5	4.8	4.6	3.3	2.8	2.3	3.7	5.7	--	--	--	--	--	--

Notes:
CAS RN = Chemical Abstracts Service Registry Number
NR 102 = Wisconsin Administrative Code chapter NR 102
- = Standard not established
TSS = Total suspended solids

Data Qualifiers:
I = ion transition ratio did not meet acceptance limits
J = estimated
J+ = estimated with potential high bias
UJ = estimated nondetect

Footnotes:
⁽¹⁾ Standard is for surface waters not classified as public water supplies.
⁽²⁾ Standard is for all waters except those that cannot naturally support fish and do not have downstream waters that support fish.

Updated by: L. Auner, 5/28/2026
Checked by: A. Brubaker, 5/29/2026

Table 8: Class B Biosolids Results (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Biosolids-B	Biosolids-B	Biosolids-B	Biosolids-B
Sample Name			Bio-B-202503	Bio-B-202506	Bio-B-202509	Bio-B-202512
Sample Date			03/10/2025	06/16/2025	09/08/2025	12/08/2025
CAS RN	Analyte Abbr	Unit				
375-22-4	PFBA	ug/kg	< 0.30	2.1 J	< 1.1	0.90 J
2706-90-3	PFPeA	ug/kg	< 0.46	< 0.37	< 1.7	< 0.45
307-24-4	PFHxA	ug/kg	< 0.37	< 0.30	1.7 J	< 0.36
375-85-9	PFHpA	ug/kg	< 0.31	< 0.25	< 1.1	< 0.30
335-67-1	PFOA	ug/kg	1.3 J	1.1 J	< 2.1	0.91 J
375-95-1	PFNA	ug/kg	0.42 J	0.54 J	< 0.99	0.59 IJ
335-76-2	PFDA	ug/kg	2.2	2.4	2.0 J	2.2
2058-94-8	PFUnA	ug/kg	0.65 J	0.59 J	< 0.95	0.36 J
307-55-1	PFDaA	ug/kg	1.1 J	1.6	1.6 J	1.6 J
72629-94-8	PFTTrDA	ug/kg	0.35 J	0.38 J	< 0.99	0.33 J
376-06-7	PFTA	ug/kg	< 0.54	0.48 J	< 2.0	< 0.53
375-73-5	PFBS	ug/kg	< 0.23	< 0.19	< 2.3	< 0.61
2706-91-4	PFPeS	ug/kg	< 0.37	< 0.30	< 1.4	< 0.36
355-46-4	PFHxS	ug/kg	0.72 J	< 0.15	1.0 J	0.70 J
375-92-8	PFHpS	ug/kg	< 0.15	< 0.12	< 0.54	< 0.15
1763-23-1	PFOS	ug/kg	8.1	7.7	7.5	5.1
68259-12-1	PFNS	ug/kg	< 0.21	< 0.18	< 0.78	< 0.21
335-77-3	PFDS	ug/kg	1.0 J	< 0.16	0.91 J	< 0.19
79780-39-5	PFDoS	ug/kg	< 0.35	< 0.28	< 1.3	< 0.34
757124-72-4	4:2 FTS	ug/kg	< 0.61	< 0.49	< 2.2	< 0.59
27619-97-2	6:2 FTS	ug/kg	0.52 J	< 0.41	< 1.8	< 0.49
39108-34-4	8:2 FTS	ug/kg	0.60 J	0.59 J	< 1.5	0.40 J
754-91-6	PFOSA	ug/kg	0.91 J	0.96 J	< 2.1	< 0.57
31506-32-8	NMeFOSA	ug/kg	< 0.34	0.43 J	< 1.2	< 0.33
4151-50-2	NEtFOSA	ug/kg	< 0.20	< 0.16	< 0.71	< 0.19
2355-31-9	NMeFOSAA	ug/kg	12	11	11	8.9
2991-50-6	NEtFOSAA	ug/kg	4.6 J	5.7 J	4.7 J	3.7
24448-09-7	NMeFOSE	ug/kg	8.7 J	8.2	12 J	6.8 J
1691-99-2	NEtFOSE	ug/kg	4.5 J	1.1 J	3.1 J	2.2 J
13252-13-6	HFPO-DA	ug/kg	< 0.27	< 0.22	< 0.99	< 0.26
919005-14-4	DONA	ug/kg	< 0.23	< 0.19	< 0.85	< 0.23
377-73-1	PFMPA	ug/kg	< 0.21	< 0.17	< 0.75	< 0.20
863090-89-5	PFMBA	ug/kg	< 0.34	< 0.27	< 1.2	< 0.33
151772-58-6	PFPE-3	ug/kg	< 0.58	< 0.47	< 2.1	< 0.56
756426-58-1	9CI-PF3ONS	ug/kg	< 0.35	< 0.29	< 1.3	< 0.35
763051-92-9	11CI-PF3OUdS	ug/kg	< 0.70	< 0.57	< 2.6	< 0.68
113507-82-7	PFEESA	ug/kg	< 0.35	< 0.29	< 1.3	< 0.35
356-02-5	3:3 FTCA	ug/kg	< 0.70	< 0.57	< 2.6	< 0.68
914637-49-3	5:3 FTCA	ug/kg	170	120	150	150
812-70-4	7:3 FTCA	ug/kg	13	16	11 J	14
Sum of PFOA + PFOS		ug/kg	9.4	8.8	7.5	6.01

Notes:

CAS RN = Chemical Abstracts Service Registry Number

Sum of PFOA and PFOS is based on the sum of detected concentrations.

Data Qualifiers:

I = ion transition ratio did not meet acceptance limits

J = estimated

Updated by: L. Auner, 5/28/2026

Checked by: A. Brubaker, 5/29/2026

Table 9: Class A Cake Results (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Biosolids-A-23	Biosolids-A-23	Biosolids-A-23	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24	Biosolids-A-25	Biosolids-A-25	Biosolids-A-25
Sample Name			Bio-A-23-202503	Bio-A-23-202506	Bio-A-23-202509	Bio-A-24-202503	Bio-A-24-202506	Bio-A-24-202509	Bio-A-24-202512	Bio-A-25-202507	Bio-A-25-202509	Bio-A-25-202512
Sample Date			03/10/2025	06/16/2025	09/08/2025	03/10/2025	06/16/2025	09/08/2025	12/08/2025	07/15/2025	09/08/2025	12/08/2025
CAS RN	Analyte Abbr	Unit										
375-22-4	PFBA	ug/kg	15	6.3	9.7	12	4	9.7	8.2	8.7	4.5	7.8
2706-90-3	PFPeA	ug/kg	30	9.2	33	34	6.4	34	15	8.8	11	6.5
307-24-4	PFHxA	ug/kg	64	29	46	35	12	40	23	24	15	19
375-85-9	PFHpA	ug/kg	6.2	1.8	4.3	5.1	1	2.9	1.6	1.3	0.88 J	0.79
335-67-1	PFOA	ug/kg	58	25	45	27	9.6	23	17	14	10	7.7
375-95-1	PFNA	ug/kg	2.5	1.3	2.4	2	1	1.8	1.2	1	1.4 J	0.78
335-76-2	PFDA	ug/kg	21	12	17	17	7.1	8.3	8.3	5.3	4.8	5.3
2058-94-8	PFUnA	ug/kg	1.5	1	1.3	1.4	1	1.2 J	1.1	0.96	1.0 J	0.71
307-55-1	PFDoA	ug/kg	5.1	3.2	4.8	4.3	2.9	3.9	2.8	2.4	2.8	1.5
72629-94-8	PFTrDA	ug/kg	0.68	0.64	0.87 J	0.62	0.67	0.71 J	0.49 J	0.55 J	0.74 J	0.34 J
376-06-7	PFTA	ug/kg	1.4	0.92	1.6	1.2	0.74	1.2 J	0.68	0.63	1.2 J	< 0.11
375-73-5	PFBS	ug/kg	4.6	< 0.062	3	4.8 IJ	< 0.051	2.9	2.3	0.21 J	< 0.57	< 0.13
2706-91-4	PFPeS	ug/kg	< 0.052	< 0.10	< 0.18	< 0.057	< 0.083	< 0.30	< 0.075	< 0.11	< 0.34	< 0.076
355-46-4	PFHxS	ug/kg	1.4	< 0.051	1.4	1.3	< 0.041	1.3 J	0.8	0.81	0.95 J	0.59
375-92-8	PFHpS	ug/kg	0.19 J	< 0.040	< 0.073	0.15 J	< 0.033	< 0.12	< 0.030	< 0.045	< 0.14	< 0.030
1763-23-1	PFOS	ug/kg	17	8.9	13	15	8.5	11	6.2	8	11	8.5
68259-12-1	PFNS	ug/kg	< 0.030	< 0.058	< 0.11	< 0.033	< 0.047	< 0.17	< 0.043	< 0.065	< 0.19	< 0.044
335-77-3	PFDS	ug/kg	1.7	< 0.053	1.9	< 0.030	< 0.043	2.5	< 0.039	0.6	1.2 J	0.76
79780-39-5	PFDoS	ug/kg	< 0.048	< 0.093	< 0.17	< 0.053	< 0.076	< 0.28	< 0.069	< 0.10	< 0.31	< 0.070
757124-72-4	4:2 FTS	ug/kg	< 0.085	< 0.16	< 0.30	< 0.093	< 0.13	< 0.49	< 0.12	< 0.18	< 0.55	< 0.12
27619-97-2	6:2 FTS	ug/kg	3.3	1.6	3.4	1.6	0.58 IJ	1.4 J	0.88	0.49 J	< 0.46	0.25 J
39108-34-4	8:2 FTS	ug/kg	1.5	1.3	1.6 J	0.87	0.71 J	0.90 J	0.67 J	1.5	1.4 J	0.87
754-91-6	PFOSA	ug/kg	2.5 J	1.2	1.7	1.8 J	0.9	1.2 J	0.92	1.2 J	1.3 J	0.68
31506-32-8	NMeFOSA	ug/kg	< 0.047	0.64 IJ	0.25 J	0.37	0.62 IJ	< 0.27	0.25 J	0.14 J	0.42 J	< 0.069
4151-50-2	NEtFOSA	ug/kg	< 0.027	0.22 J	0.22 J	0.13 J	0.21 J	0.34 J	0.23 J	0.17 J	< 0.18	< 0.040
2355-31-9	NMeFOSAA	ug/kg	31	21	32	34 J	18	28	17	20	24	12
2991-50-6	NEtFOSAA	ug/kg	9.8 J	8.6 J	9.1	10 J	7.8 J	7.9	6.1 J	6.3	7.7	4.7
24448-09-7	NMeFOSE	ug/kg	5.9	12	11	7.2	10	17	7.3	8.2	18	7.2
1691-99-2	NEtFOSE	ug/kg	3.6	4	4.6	3.6	2.4	4.8 J	1.9	2.9	4.8 J	2
13252-13-6	HFPO-DA	ug/kg	< 0.038	< 0.073	< 0.13	< 0.041	< 0.060	< 0.22	< 0.054	< 0.082	< 0.25	< 0.055
919005-14-4	DONA	ug/kg	< 0.033	< 0.063	< 0.11	< 0.036	< 0.052	< 0.19	< 0.047	< 0.071	< 0.21	< 0.048
377-73-1	PFMPA	ug/kg	< 0.029	< 0.056	< 0.10	< 0.031	< 0.045	< 0.16	< 0.041	< 0.062	< 0.19	< 0.042
863090-89-5	PFMBA	ug/kg	< 0.047	< 0.091	< 0.17	< 0.051	< 0.074	< 0.27	< 0.067	< 0.10	< 0.30	< 0.069
151772-58-6	PFPE-3	ug/kg	< 0.081	< 0.16	< 0.28	< 0.088	< 0.13	< 0.46	< 0.12	< 0.18	< 0.52	< 0.12
756426-58-1	9CI-PF3ONS	ug/kg	< 0.050	< 0.096	< 0.17	< 0.054	< 0.078	< 0.28	< 0.071	< 0.11	< 0.32	< 0.072
763051-92-9	11CI-PF3OUdS	ug/kg	< 0.098	< 0.19	< 0.34	< 0.11	< 0.15	< 0.56	< 0.14	< 0.21	< 0.63	< 0.14
113507-82-7	PFEESA	ug/kg	< 0.050	< 0.096	< 0.17	< 0.054	< 0.078	< 0.28	< 0.071	< 0.11	< 0.32	< 0.072
356-02-5	3:3 FTCA	ug/kg	< 0.098	< 0.19	< 0.34	< 0.11	< 0.15	< 0.56	< 0.14	< 0.21	< 0.63	< 0.14
914637-49-3	5:3 FTCA	ug/kg	15	17	37	12	53	42	47	42	110	50
812-70-4	7:3 FTCA	ug/kg	9.6	19	18	7.5	22	21	26	21	29	20
Sum of PFOA + PFOS		ug/kg	75	33.9	58	42	18.1	34	23.2	22	21	16.2

Notes:
CAS RN = Chemical Abstracts Service Registry Number
Sum of PFOA and PFOS is based on the sum of detected concentrations.

Data Qualifiers:
I = ion transition ratio did not meet acceptance limits
J = estimated

Updated by: L. Auner, 5/28/2026
Checked by: A. Brubaker, 5/29/2026

Table 10: TOP Assay Results for Effluent (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab	Effluent Grab
Pre/Post TOP Assay			(1)	Post	Pre	Post	Pre	Post	Pre
Sample Name			Eff-G-202503	Eff-G-202503	Eff G-202506	Eff G-202506	Eff-G-202509	Eff-G-202509	Eff-G-202512
Sample Date			03/11/2025	03/11/2025	06/17/2025	06/17/2025	09/09/2025	09/09/2025	12/09/2025
CAS RN	Analyte Abbr	Unit							
375-22-4	PFBA	ng/L	13	< 23 U	8.6 J	< 26 U	8.4 J	50 J+	7.6 J
2706-90-3	PFPeA	ng/L	20	12	7.6	17 J	12	21 J	4.9 J
307-24-4	PFHxA	ng/L	13	18	14	17 J	16	19	12
375-85-9	PFHpA	ng/L	1.4 J	2.3 J	1.5 J	2.9 J	1.5 J	2.1 J	1.4 J
335-67-1	PFOA	ng/L	5.5	8.4	7.2	8.9	9.1	9.7	5.9
375-95-1	PFNA	ng/L	0.63 IJ	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
335-76-2	PFDA	ng/L	0.66 J	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
2058-94-8	PFUnA	ng/L	< 0.17	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
307-55-1	PFDoA	ng/L	< 0.42	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
72629-94-8	PFTrDA	ng/L	< 0.44	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
376-06-7	PFTA	ng/L	< 0.62	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
375-73-5	PFBS	ng/L	3.8	3.4 J	6.0	5.6	6.5	4.6 J	3.7 J
2706-91-4	PFPeS	ng/L	< 0.16	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
355-46-4	PFHxS	ng/L	6.6	5.9	7.2	7.3	7.9	7.9	7.1
375-92-8	PFHpS	ng/L	< 0.13	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
1763-23-1	PFOS	ng/L	2.6	2.8 J	4.0 J	4.0 J	4.5 J	3.9 J	6.0
68259-12-1	PFNS	ng/L	< 0.24	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
335-77-3	PFDS	ng/L	< 0.24	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3 UJ
79780-39-5	PFDoS	ng/L	< 0.40	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4 UJ
757124-72-4	4:2 FTS	ng/L	< 0.33	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
27619-97-2	6:2 FTS	ng/L	0.78 J	< 3.1	< 3.1	3.2 J	< 3.1	< 3.1	< 3.1
39108-34-4	8:2 FTS	ng/L	< 0.68	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
754-91-6	PFOSA	ng/L	0.92 J	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
31506-32-8	NMeFOSA	ng/L	< 0.29	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
4151-50-2	NEtFOSA	ng/L	< 0.34	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
2355-31-9	NMeFOSAA	ng/L	0.75 J	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1
2991-50-6	NEtFOSAA	ng/L	< 0.33	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1
24448-09-7	NMeFOSE	ng/L	< 1.7	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5
1691-99-2	NEtFOSE	ng/L	< 1.8	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1 UJ	< 2.1
13252-13-6	HFPO-DA	ng/L	< 0.30	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
919005-14-4	DONA	ng/L	< 0.30	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
377-73-1	PFMPA	ng/L	< 0.14	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
863090-89-5	PFMBA	ng/L	< 0.20	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
151772-58-6	PFPE-3	ng/L	< 0.55	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
756426-58-1	9Cl-PF3ONS	ng/L	< 0.44	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
763051-92-9	11Cl-PF3OUdS	ng/L	< 0.23	< 1.7	< 1.7	< 1.7 UJ	< 1.7	< 1.7	< 1.7 UJ
113507-82-7	PFEESA	ng/L	< 0.19	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
356-02-5	3:3 FTCA	ng/L	< 0.55	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
914637-49-3	5:3 FTCA	ng/L	1.7 J	< 1.3	2.2 J	< 1.3	3.0 J	< 1.3	1.4 J
812-70-4	7:3 FTCA	ng/L	< 0.94	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4

Notes:

CAS RN = Chemical Abstracts Service Registry Number

TOP Assay = Total oxidizable precursor assay

Footnotes:

(1) Pre-oxidation TOP assay analysis was not performed in March 2025 due to insufficient sample volume. The Method 1633A (non-TOP assay) results from March are included for comparison, as they also represent PFAS concentrations without forced oxidation.

Data Qualifiers:

J = estimated

J+ = estimated with potential high bias

U = nondetect

UJ = estimated nondetect

Updated by: L. Auner, 7/29/2026

Checked by: M. Ursin, 8/5/2026

Table 11: TOP Assay Results for Biosolids (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Biosolids-A-23	Biosolids-A-23	Biosolids-A-23	Biosolids-A-23	Biosolids-A-23	Biosolids-A-23	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24	Biosolids-A-24
Pre/Post TOP Assay			Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Post
Sample Name			Bio-A-23-202503	Bio-A-23-202503	Bio-A-23-202506	Bio-A-23-202506	Bio-A-23-202509	Bio-A-23-202509	Bio-A-24-202503	Bio-A-24-202503	Bio-A-24-202506	Bio-A-24-202506	Bio-A-24-202509	Bio-A-24-202509	Bio-A-24-202512
Sample Date			03/10/2025	03/10/2025	06/16/2025	06/16/2025	09/08/2025	09/08/2025	03/10/2025	03/10/2025	06/16/2025	06/16/2025	09/08/2025	09/08/2025	12/08/2025
CAS RN	Analyte Abbr	Unit													
375-22-4	PFBA	ug/kg	6.6	190	6.8	120	8.0	200 J	6.5	120	5.6	110	7.6	200 J	5.6
2706-90-3	PFPeA	ug/kg	14	82	16	70	18	120 J	17	83	11	63	23	150 J	12
307-24-4	PFHxA	ug/kg	45	89 J	31	60	37	99 J	28	76 J	37	64	34	100 J	26
375-85-9	PFHpA	ug/kg	4.0	34	2.3 J	25	3.0	38	2.8 J	31	2.2 J	26	4.0	49	1.8 J
335-67-1	PFOA	ug/kg	38	77	23	52	35	83 J	22	60	23	48	31	82 J	19
375-95-1	PFNA	ug/kg	1.9 J	14	1.6 J	13	1.7 J	19 J	1.5 J	13	1.7 J	12	1.9 J	23 J	1.6 J
335-76-2	PFDA	ug/kg	15	21	9.1	15	13	23	8.8	15	8.6	12	15	23	7.6
2058-94-8	PFUnA	ug/kg	1.1 J	4.7	< 1.0	5.2	1.1 J	5.5	0.85 J	4.5	1.1 J	4.1	1.7 J	7.4	< 0.80
307-55-1	PFDoA	ug/kg	2.8	5.3	2.3 J	5.0	2.9	6.1	2.0 J	4.3	2.6 J	3.6 J	3.3 J	6.9	2.5 J
72629-94-8	PFTTrDA	ug/kg	< 0.28	1.3 J	< 0.52	1.6 J	0.30 J	1.5 J	< 0.30	0.90 J	< 0.43	1.1 J	< 0.42	1.9 J	< 0.40
376-06-7	PFTA	ug/kg	0.79 J	1.6 J	< 0.92	1.7 J	0.93 J	1.9 J	< 0.53	1.5 J	< 0.75	1.1 J	< 0.74	2.3 J	0.81 J
375-73-5	PFBS	ug/kg	3.3	12	16	12	5.4	32	3.6	17	11	9.5	5.5	22	5.3
2706-91-4	PFPeS	ug/kg	< 0.49	< 0.48	< 0.92	< 0.92	< 0.44	< 0.44	< 0.53	< 0.52	< 0.75	< 0.75	< 0.74	< 0.75	< 0.71
355-46-4	PFHxS	ug/kg	< 0.38	< 0.38	2.4 IJ	1.5 J	1.8 J	1.4 J	1.8 J	1.2 J	2.5 IJ	1.3 J	2.7 IJ	1.8 J	2.0 J
375-92-8	PFHpS	ug/kg	< 0.65	< 0.64	< 1.2	< 1.2	< 0.59	< 0.59	< 0.71	< 0.69	< 1.0	< 1.0	< 0.99	< 1.0	< 0.94
1763-23-1	PFOS	ug/kg	11	11	12	11	13	12	8.6	8.7	15	9.0	15	13	11
68259-12-1	PFNS	ug/kg	< 0.38	< 0.38	< 0.72	< 0.72	< 0.35	< 0.35	< 0.42	< 0.41	< 0.59	< 0.59	< 0.58	< 0.59	< 0.56
335-77-3	PFDS	ug/kg	0.99 J	0.79 J	< 1.3	< 1.3	1.4 J	0.81 J	< 0.75	< 0.73	1.1 J	< 1.1	< 1.0	1.2 J	< 1.0
79780-39-5	PFDoS	ug/kg	< 0.62	< 0.61	< 1.2	< 1.2	< 0.56	< 0.56	< 0.68	< 0.66	< 0.96	< 0.96	< 0.95	< 0.95	< 0.90
757124-72-4	4:2 FTS	ug/kg	< 0.68	< 0.66	< 1.3	< 1.3	< 0.61	< 0.61	< 0.74	< 0.72	< 1.0	< 1.0	< 1.0	< 1.0	< 0.98
27619-97-2	6:2 FTS	ug/kg	3.4 J	< 0.35	1.3 J	< 0.67	2.5 J	< 0.32	1.4 J	< 0.38	0.72 J	< 0.55	1.3 J	< 0.55	1.1 J
39108-34-4	8:2 FTS	ug/kg	1.1 J	< 0.45	0.93 J	< 0.87	1.1 J	< 0.42	< 0.50	< 0.49	< 0.71	< 0.71	< 0.70	< 0.71	< 0.67
754-91-6	PFOSA	ug/kg	1.3 J	< 0.43	1.3 J	< 0.82	1.1 J	< 0.39	0.82 J	0.95 J	1.2 J	< 0.67	1.5 J	< 0.67	1.1 J
31506-32-8	NMeFOSA	ug/kg	< 0.65	< 0.64	< 1.2	< 1.2	< 0.59	< 0.59	< 0.71	< 0.69	< 1.0	< 1.0	< 0.99	< 1.0	< 0.94
4151-50-2	NEtFOSA	ug/kg	< 0.62	< 0.61	< 1.2	< 1.2	< 0.56	< 0.56	< 0.68	< 0.66	< 0.96	< 0.96	< 0.95	< 0.95	< 0.90
2355-31-9	NMeFOSAA	ug/kg	20	< 0.30	9.7	< 0.57	23	< 0.27	13	< 0.32	8.0	< 0.47	28	< 0.47	15
2991-50-6	NEtFOSAA	ug/kg	6.2	< 0.62	2.7 J	< 1.2	5.6	< 0.57	3.6	< 0.68	1.8 J	< 0.98	6.6	< 0.97	5.6
24448-09-7	NMeFOSE	ug/kg	3.2	< 0.61	6.0	< 1.2	6.2	< 0.56	2.8 J	< 0.66	6.8	< 0.96	5.2	< 0.95	6.8
1691-99-2	NEtFOSE	ug/kg	2.7	< 0.36	4.4 J	< 0.70	5.2	< 0.33	2.5 J	< 0.39	6.8	< 0.57	5.6	< 0.57	3.9
13252-13-6	HFPO-DA	ug/kg	< 0.54	< 0.53	< 1.0	< 1.0	< 0.49	< 0.49	< 0.59	< 0.58	< 0.84	< 0.84	< 0.83	< 0.83	< 0.79
919005-14-4	DONA	ug/kg	< 0.51	< 0.50	< 0.97	< 0.97	< 0.46	< 0.46	< 0.56	< 0.55	< 0.79	< 0.79	< 0.78	< 0.79	< 0.75
377-73-1	PFMPA	ug/kg	< 0.32	< 0.31	< 0.60	< 0.60	< 0.29	< 0.29	< 0.34	< 0.34	< 0.49	< 0.49	< 0.48	< 0.49	< 0.46
863090-89-5	PFMBA	ug/kg	< 0.60	< 0.58	< 1.1	< 1.1	< 0.54	< 0.54	< 0.65	< 0.64	< 0.92	< 0.92	< 0.91	< 0.91	< 0.87
151772-58-6	PFPE-3	ug/kg	< 0.53	< 0.52	< 1.0	< 1.0	< 0.48	< 0.48	< 0.57	< 0.56	< 0.81	< 0.81	< 0.80	< 0.81	< 0.77
756426-58-1	9CI-PF3ONS	ug/kg	< 0.46	< 0.45	< 0.87	< 0.87	< 0.42	< 0.42	< 0.50	< 0.49	< 0.71	< 0.71	< 0.70	< 0.71	< 0.67
763051-92-9	11CI-PF3OUdS	ug/kg	< 0.41	< 0.40	< 0.77	< 0.77	< 0.37	< 0.37	< 0.45	< 0.44	< 0.63	< 0.63	< 0.62	< 0.63	< 0.59
113507-82-7	PFEESA	ug/kg	< 0.42	< 0.41	< 0.80	< 0.80	< 0.38	< 0.38	< 0.46	< 0.45	< 0.65	< 0.65	< 0.64	< 0.65	< 0.61
356-02-5	3:3 FTCA	ug/kg	< 0.54	< 0.53	< 1.0	< 1.0	< 0.49	< 0.49	< 0.59	< 0.58	< 0.84	< 0.84	< 0.83	< 0.83	< 0.79
914637-49-3	5:3 FTCA	ug/kg	6.6	< 0.49	36	< 0.95	15	< 0.45	5.9	< 0.53	28	< 0.77	17	< 0.77	35
812-70-4	7:3 FTCA	ug/kg	5.1	< 0.53	11	< 1.0	11	< 0.49	4.5	< 0.58	9.7	< 0.84	8.6	< 0.83	13

Notes:

CAS RN = Chemical Abstracts Service Registry Number

TOP Assay = Total oxidizable precursor assay

Data Qualifiers:

I = ion transition ratio did not meet acceptance limits

J = estimated

UJ = estimated nondetect

Updated by: L. Auner, 5/28/2026
Checked by: A. Brubaker, 5/29/2026

Table 11: TOP Assay Results for Biosolids (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Biosolids-A-25	Biosolids-A-25	Biosolids-A-25	Biosolids-A-25	Biosolids-A-25	Biosolids-A-25	Biosolids-B	Biosolids-B	Biosolids-B	Biosolids-B	Biosolids-B	Biosolids-B	Biosolids-B
Pre/Post TOP Assay			Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Post
Sample Name			Bio-A-25-202507	Bio-A-25-202507	Bio-A-25-202509	Bio-A-25-202509	Bio-A-25-202512	Bio-A-25-202512	Bio-B-202503	Bio-B-202503	Bio-B-202506	Bio-B-202506	Bio-B-202509	Bio-B-202509	Bio-B-202512
Sample Date			07/15/2025	07/15/2025	09/08/2025	09/08/2025	12/08/2025	12/08/2025	03/10/2025	03/10/2025	06/16/2025	06/16/2025	09/08/2025	09/08/2025	12/08/2025
CAS RN	Analyte Abbr	Unit													
375-22-4	PFBA	ug/kg	< 3.1 UJ	110	4.0 J	96 J	2.8 J	97	< 4.3	140	< 3.4	100	< 4.0	170 J	< 4.3
2706-90-3	PFPeA	ug/kg	4.4	57 J	12	67 J	4.7	52 J	< 3.9	90	< 3.1	68	< 3.6	130 J	< 3.8
307-24-4	PFHxA	ug/kg	17	47 J	12	42 J	18	44 J	3.7 J	43 J	3.0 J	28	< 2.7	53 J	< 2.9
375-85-9	PFHpA	ug/kg	0.78 J	22	< 0.83	19	0.83 J	19	< 3.6	29	< 2.8	19	< 3.3	37	< 3.5
335-67-1	PFOA	ug/kg	10	38	9.8	40 J	11	39	< 5.0	37	< 4.0	24	< 4.7	41 J	< 4.9
375-95-1	PFNA	ug/kg	1.0 J	12	1.2 J	12 J	1.3 J	10	< 2.1	16 J	< 1.6	11 J	< 1.9	23 J	< 2.0
335-76-2	PFDA	ug/kg	4.2	9.5	5.5	11	4.3	9.1	< 4.5	8.8 J	< 3.6	6.6 J	< 4.2	12 J	< 4.4
2058-94-8	PFUnA	ug/kg	1.2 J	3.9	< 0.92	4.5	< 0.80	3.8	< 3.9	5.9 J	< 3.1	4.4 J	< 3.7	9.0 J	< 3.9
307-55-1	PFDoA	ug/kg	1.5 J	3.1 J	1.7 J	4.0 J	1.3 J	3.6 J	< 2.8	4.3 J	< 2.2	2.9 J	< 2.6	5.6 J	< 2.8
72629-94-8	PFTrDA	ug/kg	< 0.40	0.90 J	< 0.46	1.3 J	< 0.40	0.74 J	< 2.0	< 1.9	< 1.6	< 1.6	< 1.8	< 1.9	< 1.9
376-06-7	PFTA	ug/kg	< 0.70	1.1 J	< 0.81	1.4 J	< 0.71	1.1 J	< 3.5	< 3.4	< 2.8	< 2.8	< 3.2	3.7 J	< 3.4
375-73-5	PFBS	ug/kg	3.6 J	5.7	5.0	13	1.5 J	16	< 3.6	< 3.5	< 2.8	3.5 J	< 3.3	7.5 J	< 3.5
2706-91-4	PFPeS	ug/kg	< 0.70	< 0.70	< 0.81	< 0.80	< 0.71	< 0.69	< 3.5	< 3.4	< 2.8	< 2.8	< 3.2	< 3.3	< 3.4
355-46-4	PFHxS	ug/kg	1.7 IJ	1.4 IJ	< 0.64	1.2 J	1.7 J	1.1 J	< 2.7	< 2.7	8.1 IJ	< 2.2	< 2.5	< 2.6	< 2.7
375-92-8	PFHpS	ug/kg	< 0.93	< 0.93	< 1.1	< 1.1	< 0.94	< 0.92	< 4.6	< 4.5	< 3.7	< 3.7	< 4.3	< 4.3	< 4.5
1763-23-1	PFOS	ug/kg	12	10	16	13	11	10	9.0 J	6.6 J	16 IJ	9.2 J	15 IJ	11 J	17 IJ
68259-12-1	PFNS	ug/kg	< 0.55	< 0.55	< 0.64	< 0.62	< 0.56	< 0.54	< 2.7	< 2.7	< 2.2	< 2.2	< 2.5	< 2.6	< 2.7
335-77-3	PFDS	ug/kg	< 0.99	< 0.99	< 1.1	< 1.1	< 1.0	< 0.98 UJ	< 4.9	< 4.8	< 3.9	< 3.9	< 4.6	< 4.6	< 4.8 UJ
79780-39-5	PFDoS	ug/kg	< 0.90	< 0.90 UJ	< 1.0	< 1.0	< 0.90	< 0.89 UJ	< 4.4	< 4.3	< 3.5	< 3.5	< 4.1	< 4.2	< 4.4 UJ
757124-72-4	4:2 FTS	ug/kg	< 0.97	< 0.97	< 1.1	< 1.1	< 0.98	< 0.96	< 4.8	< 4.7	< 3.8	< 3.8	< 4.5	< 4.5	< 4.7
27619-97-2	6:2 FTS	ug/kg	< 0.51	< 0.51	< 0.59	< 0.58	< 0.52	< 0.51	< 2.5	< 2.5	< 2.0	< 2.0	< 2.4	< 2.4	< 2.5
39108-34-4	8:2 FTS	ug/kg	0.95 J	< 0.66	< 0.77	< 0.75	1.1 J	< 0.66	< 3.3	< 3.2	< 2.6	< 2.6	< 3.1	< 3.1	< 3.2
754-91-6	PFOSA	ug/kg	0.74 J	< 0.63	1.0 J	< 0.71	0.89 J	< 0.62	< 3.1	< 3.0	< 2.5	< 2.5	< 2.9	< 2.9	< 3.1
31506-32-8	NMeFOSA	ug/kg	< 0.93	< 0.93	< 1.1	< 1.1	< 0.94	< 0.92	< 4.6	< 4.5	< 3.7	< 3.7	< 4.3	< 4.3	< 4.5
4151-50-2	NEtFOSA	ug/kg	< 0.90	< 0.90	< 1.0	< 1.0	< 0.90	< 0.89	< 4.4	< 4.3	< 3.5	< 3.5	< 4.1	< 4.2	< 4.4
2355-31-9	NMeFOSAA	ug/kg	12	< 0.44	16	< 0.50	11	< 0.43	11 J	< 2.1	11 J	< 1.7	10 J	< 2.0	7.7 J
2991-50-6	NEtFOSAA	ug/kg	3.1 J	< 0.91	4.6	< 1.0	3.6 J	< 0.90	5.0 J	< 4.4	5.2 J	< 3.6	< 4.2	< 4.2	< 4.4
24448-09-7	NMeFOSE	ug/kg	5.0	< 0.90	7.6	< 1.0	5.1	< 0.89	< 4.4	< 4.3	8.1 J	< 3.5	< 4.1	< 4.2	6.5 J
1691-99-2	NEtFOSE	ug/kg	3.1 J	< 0.53	5.1	< 0.60	2.6 J	< 0.53	< 2.6	< 2.6	5.9 J	< 2.1	< 2.5	< 2.5	6.5 J
13252-13-6	HFPO-DA	ug/kg	< 0.78	< 0.78	< 0.91	< 0.89	< 0.79	< 0.77	< 3.9	< 3.8	< 3.1	< 3.1	< 3.6	< 3.6	< 3.8
919005-14-4	DONA	ug/kg	< 0.74	< 0.74	< 0.86	< 0.84	< 0.75	< 0.73	< 3.7	< 3.6	< 2.9	< 2.9	< 3.4	< 3.4	< 3.6
377-73-1	PFMPA	ug/kg	< 0.46	< 0.46	< 0.53	< 0.52	< 0.46	< 0.45	< 2.2	< 2.2	< 1.8	< 1.8	< 2.1	< 2.1	< 2.2
863090-89-5	PFMBA	ug/kg	< 0.86	< 0.86	< 0.99	< 0.97	< 0.87	< 0.85	< 4.2	< 4.2	< 3.4	< 3.4	< 4.0	< 4.0	< 4.2
151772-58-6	PFPE-3	ug/kg	< 0.76	< 0.76	< 0.88	< 0.86	< 0.77	< 0.75	< 3.7	< 3.7	< 3.0	< 3.0	< 3.5	< 3.5	< 3.7
756426-58-1	9Cl-PF3ONS	ug/kg	< 0.66	< 0.66	< 0.77	< 0.75	< 0.67	< 0.66	< 3.3	< 3.2	< 2.6	< 2.6	< 3.1	< 3.1	< 3.2
763051-92-9	11Cl-PF3OUdS	ug/kg	< 0.59	< 0.59 UJ	< 0.68	< 0.67	< 0.59	< 0.58 UJ	< 2.9	< 2.8	< 2.3	< 2.3	< 2.7	< 2.7	< 2.9 UJ
113507-82-7	PFEESA	ug/kg	< 0.61	< 0.61	< 0.70	< 0.69	< 0.61	< 0.60	< 3.0	< 2.9	< 2.4	< 2.4	< 2.8	< 2.8	< 3.0
356-02-5	3:3 FTCA	ug/kg	< 0.78	< 0.78	< 0.91	< 0.89	< 0.79	< 0.77	< 3.9	< 3.8	< 3.1	< 3.1	< 3.6	< 3.6	< 3.8
914637-49-3	5:3 FTCA	ug/kg	28	< 0.72	48	< 0.82	27	< 0.71	93	< 3.5	150	< 2.8	130	< 3.4	110
812-70-4	7:3 FTCA	ug/kg	8.1	< 0.78	14	< 0.89	13	< 0.77	8.3 J	< 3.8	7.6 J	< 3.1	6.9 J	< 3.6	9.3 J

Notes:
CAS RN = Chemical Abstracts Service Registry Number
TOP Assay = Total oxidizable precursor assay

Data Qualifiers:
I = ion transition ratio did not meet acceptance limits
J = estimated
UJ = estimated nondetect

Updated by: L. Auner, 5/28/2026
Checked by: A. Brubaker, 5/29/2026

Table 12: Blank Sample Results (2025)
Madison Metropolitan Sewerage District
Madison, Dane County, Wisconsin
TRC Project #567794

Location ID			Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Name			EB01-202503	EB-01-202506	EB-02-202506	EB-01-202507	EB01-202509	EB02-202509	EB-01-202512	EB-02-202512
Sample Date			03/10/2025	06/16/2025	06/16/2025	07/15/2025	09/08/2025	09/08/2025	12/08/2025	12/08/2025
CAS RN	Analyte Abbr	Unit								
375-22-4	PFBA	ng/L	< 0.30	1.1 J	< 0.29	0.49 J	< 0.29	< 0.30	< 0.34	< 0.34
2706-90-3	PFPeA	ng/L	< 0.19	< 0.18	< 0.18	< 0.19	< 0.18	< 0.18	< 0.21	< 0.21
307-24-4	PFHxA	ng/L	< 0.22	3.4	< 0.21	0.80 J	0.33 J	< 0.21	< 0.25	< 0.24
375-85-9	PFHpA	ng/L	< 0.28	0.28 J	< 0.27	< 0.28	< 0.27	< 0.28	< 0.32	< 0.31
335-67-1	PFOA	ng/L	< 0.32	0.90 J	< 0.31	< 0.32	< 0.30	< 0.31	< 0.36	< 0.36
375-95-1	PFNA	ng/L	< 0.37	< 0.36	< 0.35	< 0.37	< 0.35	< 0.36	< 0.41	< 0.41
335-76-2	PFDA	ng/L	< 0.36	< 0.35	< 0.34	< 0.36	< 0.34	< 0.35	< 0.40	< 0.40
2058-94-8	PFUnA	ng/L	< 0.18	< 0.18	< 0.18	< 0.19	< 0.17	< 0.18	< 0.21	< 0.21
307-55-1	PFDoA	ng/L	< 0.45	< 0.44	< 0.43	< 0.45	< 0.43	< 0.44	< 0.51	< 0.50
72629-94-8	PFTTrDA	ng/L	< 0.47	< 0.45	< 0.45	< 0.47	< 0.44	< 0.46	< 0.53	< 0.52
376-06-7	PFTA	ng/L	< 0.66	< 0.63	< 0.63	< 0.66	< 0.62	< 0.64	< 0.74	< 0.73
375-73-5	PFBS	ng/L	< 0.23	1.0 J	< 0.22	< 0.23	< 0.41	< 0.43	< 0.49	< 0.49
2706-91-4	PFPeS	ng/L	< 0.17	< 0.17	< 0.17	< 0.17	< 0.16	< 0.17	< 0.19	< 0.19
355-46-4	PFHxS	ng/L	< 0.20	< 0.19	< 0.19	< 0.20	< 0.19	< 0.20	< 0.22	< 0.22
375-92-8	PFHpS	ng/L	< 0.14	< 0.14	< 0.14	< 0.14	< 0.13	< 0.14	< 0.16	< 0.16
1763-23-1	PFOS	ng/L	< 0.23	0.36 J	< 0.22	< 0.23	< 0.21	< 0.22	< 0.25	< 0.25
68259-12-1	PFNS	ng/L	< 0.25	< 0.24	< 0.24	< 0.26	< 0.24	< 0.25	< 0.28	< 0.28
335-77-3	PFDS	ng/L	< 0.25	< 0.24	< 0.24	< 0.25	< 0.24	< 0.25	< 0.28	< 0.28
79780-39-5	PFDoS	ng/L	< 0.43	< 0.42	< 0.41	< 0.43	< 0.41	< 0.42	< 0.48	< 0.48
757124-72-4	4:2 FTS	ng/L	< 0.36	< 0.34	< 0.34	< 0.36	< 0.34	< 0.35	< 0.40	< 0.40
27619-97-2	6:2 FTS	ng/L	< 0.33	< 0.32	< 0.32	< 0.33	< 0.31	< 0.32	< 0.37	< 0.37
39108-34-4	8:2 FTS	ng/L	< 0.73	< 0.70	< 0.70	< 0.74	< 0.69	< 0.71	< 0.82	< 0.81
754-91-6	PFOSA	ng/L	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.18	< 0.21	< 0.20
31506-32-8	NMeFOSA	ng/L	< 0.31	< 0.30	< 0.30	< 0.32	< 0.30	< 0.31	< 0.35	< 0.35
4151-50-2	NEtFOSA	ng/L	< 0.36	< 0.35	< 0.35	< 0.37	< 0.34	< 0.35	< 0.41	< 0.40
2355-31-9	NMeFOSAA	ng/L	< 0.29	< 0.27	< 0.27	< 0.29	< 0.27	< 0.28	< 0.32	< 0.32
2991-50-6	NEtFOSAA	ng/L	< 0.36	< 0.35	< 0.34	< 0.36	< 0.34	< 0.35	< 0.40	< 0.40
24448-09-7	NMeFOSE	ng/L	< 1.9	< 1.8	< 1.8	< 1.9	< 1.8 UJ	< 1.8 UJ	< 2.1 UJ	< 2.1 UJ
1691-99-2	NEtFOSE	ng/L	< 2.0	< 1.9	< 1.9	< 2.0	< 1.9 UJ	< 1.9 UJ	< 2.2 UJ	< 2.2 UJ
13252-13-6	HFPO-DA	ng/L	< 0.32	< 0.31	< 0.30	< 0.32	< 0.30	< 0.31	< 0.36	< 0.35
919005-14-4	DONA	ng/L	< 0.33	< 0.31	< 0.31	< 0.33	< 0.31	< 0.32	< 0.36	< 0.36
377-73-1	PFMPA	ng/L	< 0.16	< 0.15	< 0.15	< 0.16	< 0.15	< 0.15	< 0.17	< 0.17
863090-89-5	PFMBA	ng/L	< 0.21	< 0.20	< 0.20	< 0.21	< 0.20	< 0.21	< 0.24	< 0.23
151772-58-6	PFPE-3	ng/L	< 0.59	< 0.56	< 0.56	< 0.59	< 0.55	< 0.57	< 0.66	< 0.65
756426-58-1	9CI-PF3ONS	ng/L	< 0.47	< 0.45	< 0.45	< 0.48	< 0.45	< 0.46	< 0.53	< 0.53
763051-92-9	11CI-PF3OUdS	ng/L	< 0.24	< 0.23	< 0.23	< 0.24	< 0.23	< 0.24	< 0.27	< 0.27
113507-82-7	PFEESA	ng/L	< 0.20	< 0.20	< 0.19	< 0.20	< 0.19	< 0.20	< 0.23	< 0.23
356-02-5	3:3 FTCA	ng/L	< 0.59	< 0.56	< 0.56	< 0.59	< 0.55	< 0.57	< 0.66	< 0.65
914637-49-3	5:3 FTCA	ng/L	< 1.4	< 1.4	< 1.3	< 1.4	< 1.3	< 1.4	< 1.6	< 1.6
812-70-4	7:3 FTCA	ng/L	< 1.0	< 0.97	< 0.97	< 1.0	< 0.95	< 0.99	< 1.1	< 1.1

Notes:
CAS RN = Chemical Abstracts Service Registry Number

Data Qualifiers:
J = estimated
UJ = estimated nondetect

Updated by: L. Auner, 5/28/2026
Checked by: A. Brubaker, 5/29/2026

Figure 1
Calculated and Composite Influent PFAS Detections (2025)

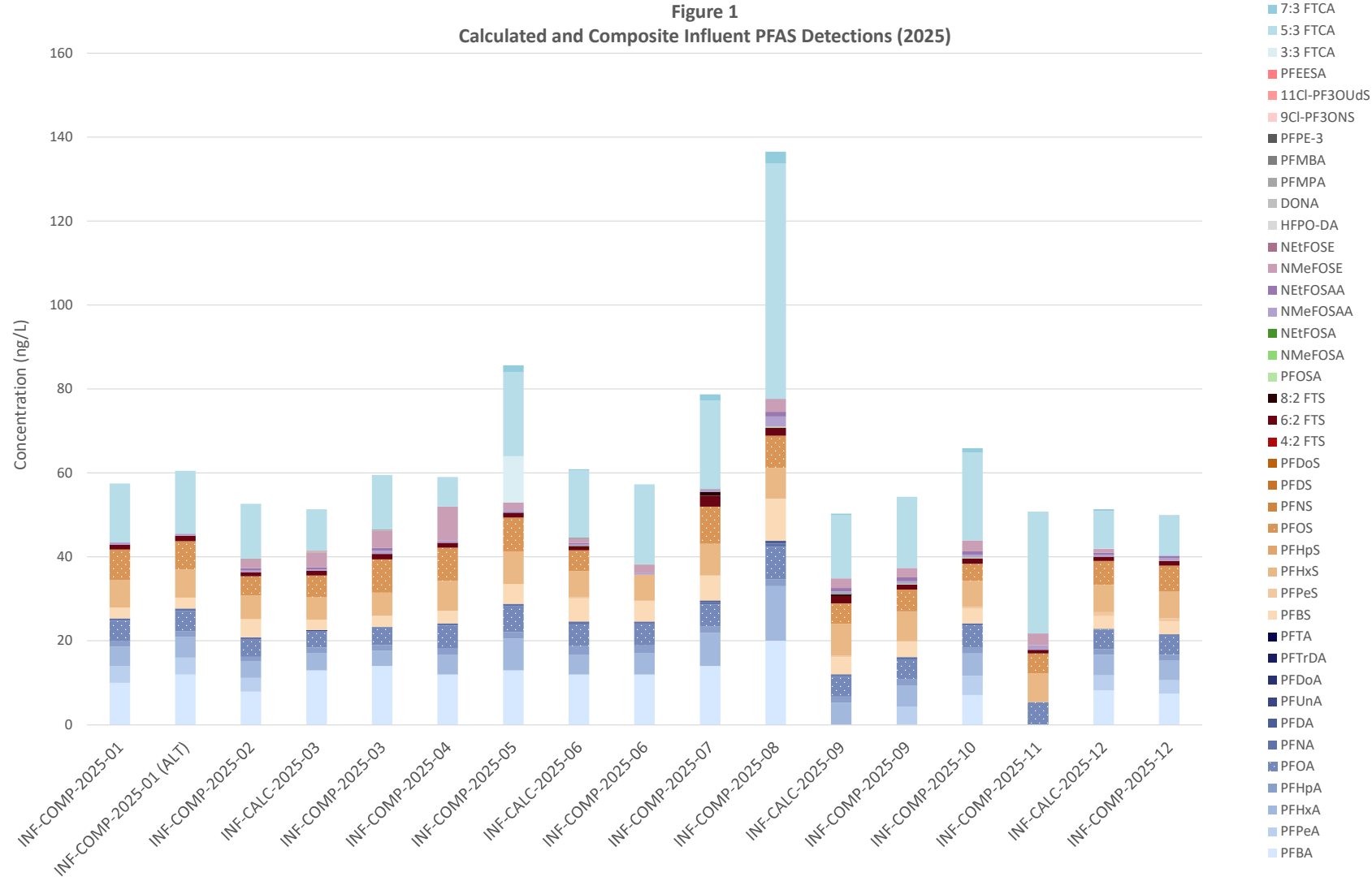


Figure 2a
Influent PFOA Time Series

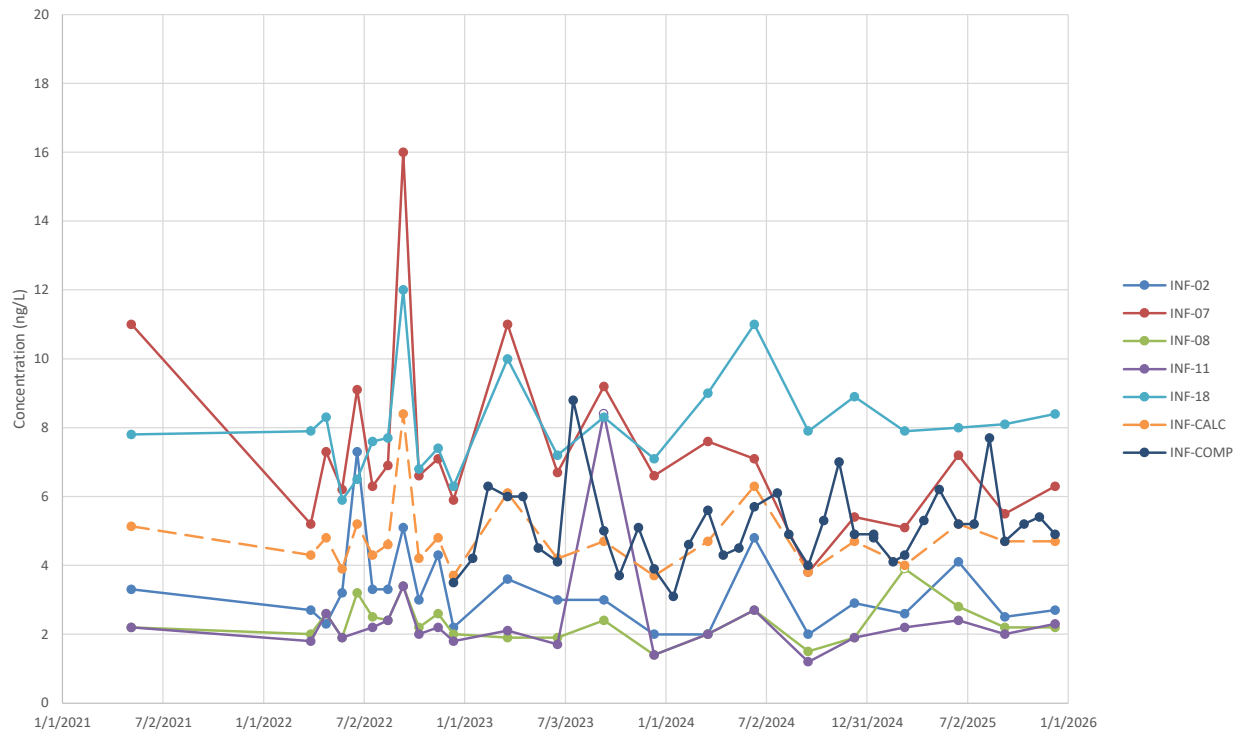
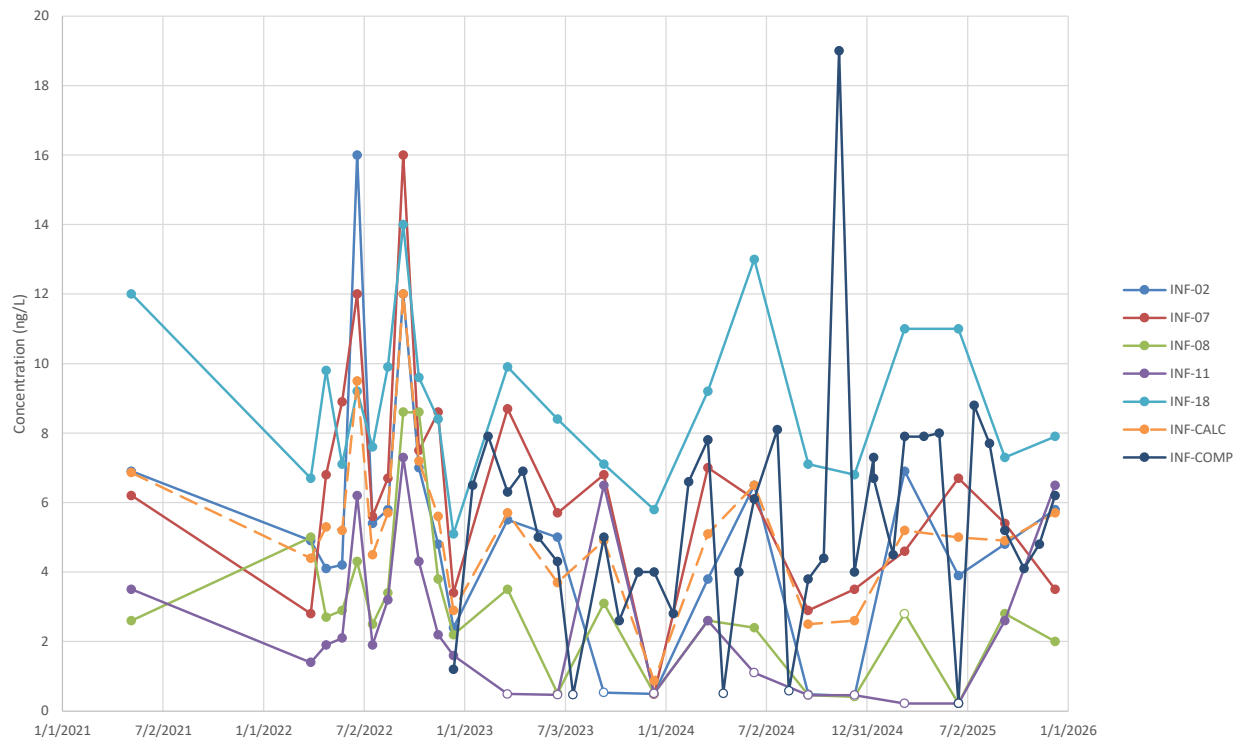


Figure 2b
Influent PFOS Time Series



Nondetect results are plotted with a hollow symbol at the detection limit.

Figure 3
Effluent PFAS Detections (2025)

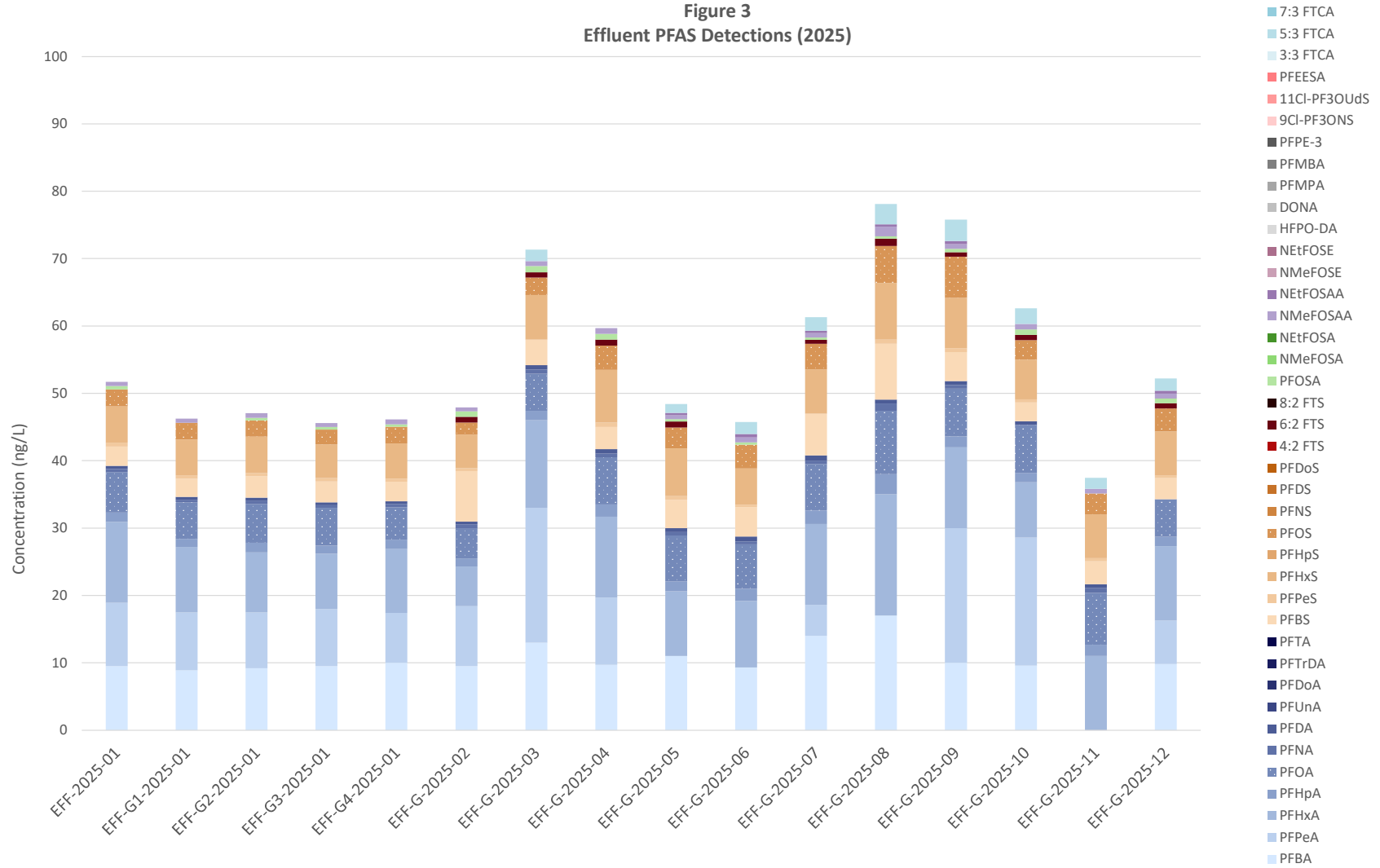


Figure 4a
Effluent PFOA Time Series

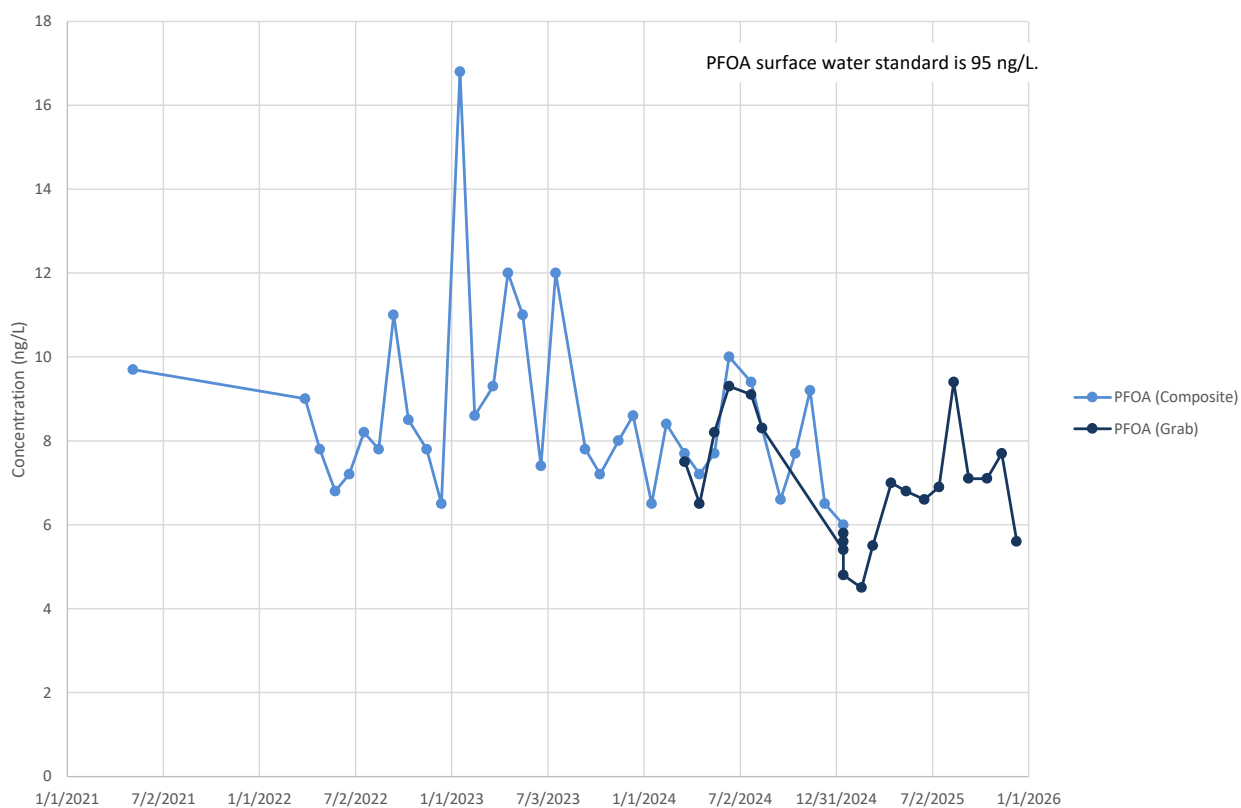


Figure 4b
Effluent PFOS Time Series

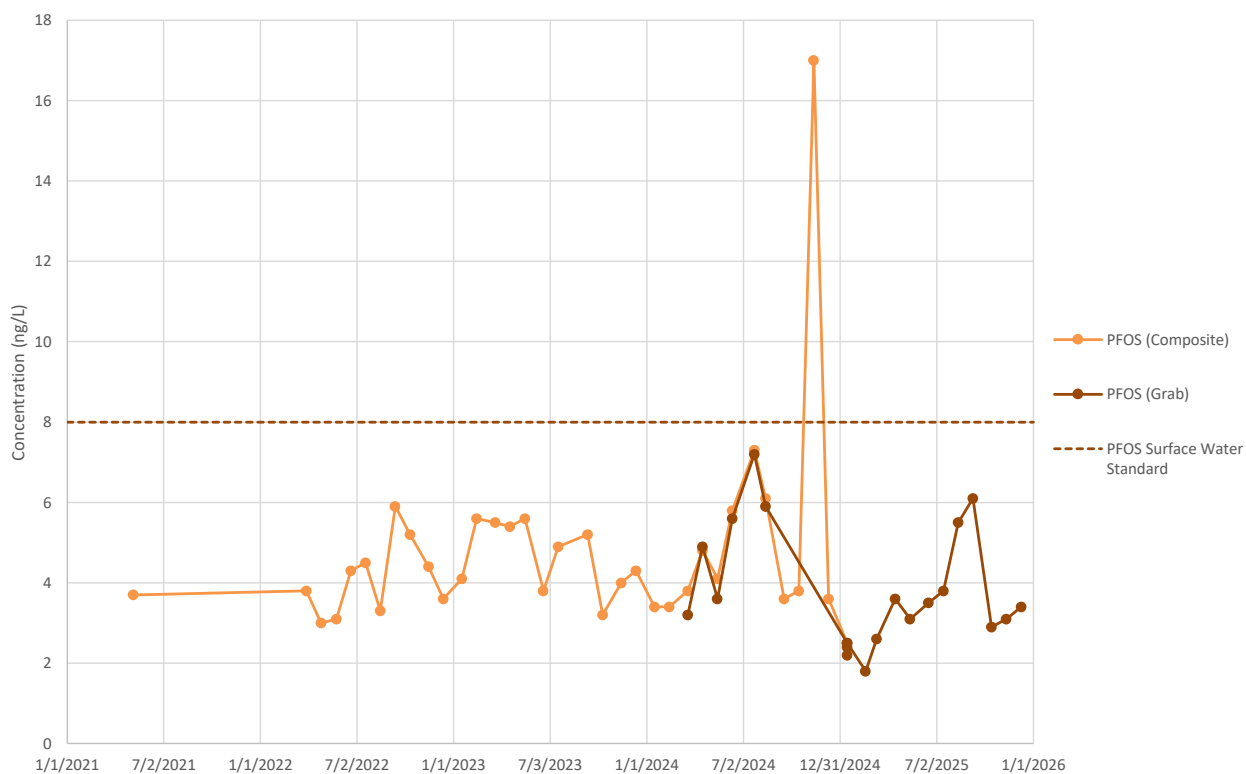


Figure 5a: Calculated Influent & Composite Influent (2025)

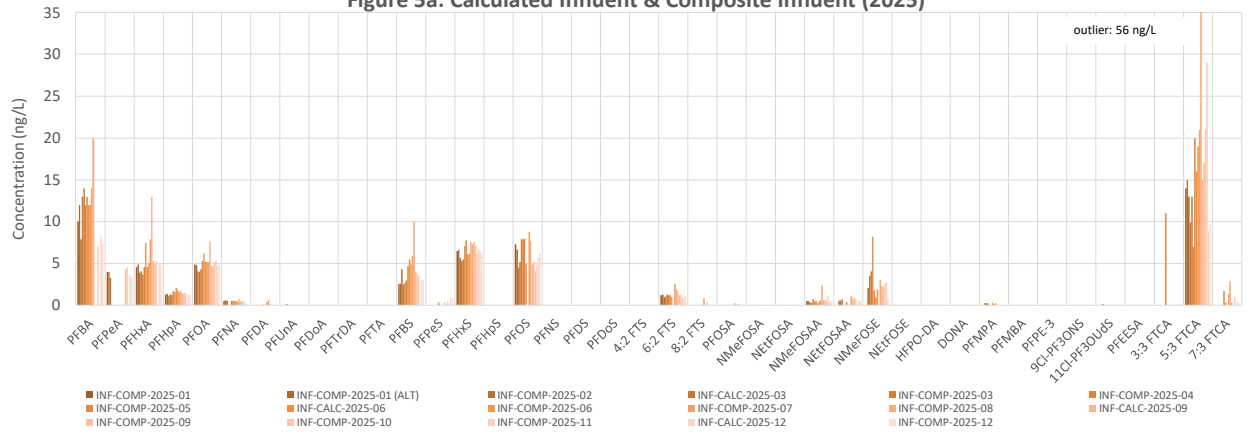


Figure 5b: Effluent (2025)

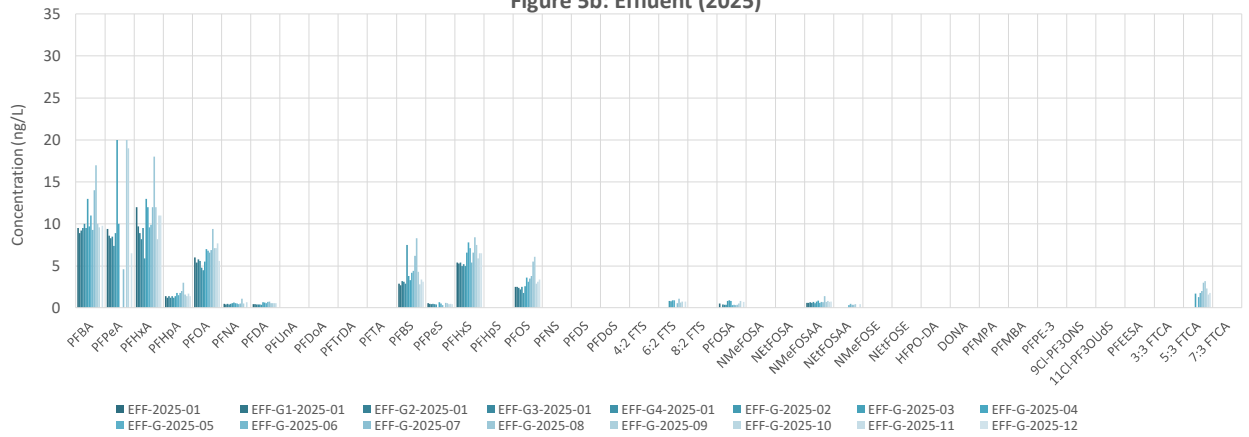


Figure 5c: Class B Biosolids (2025)

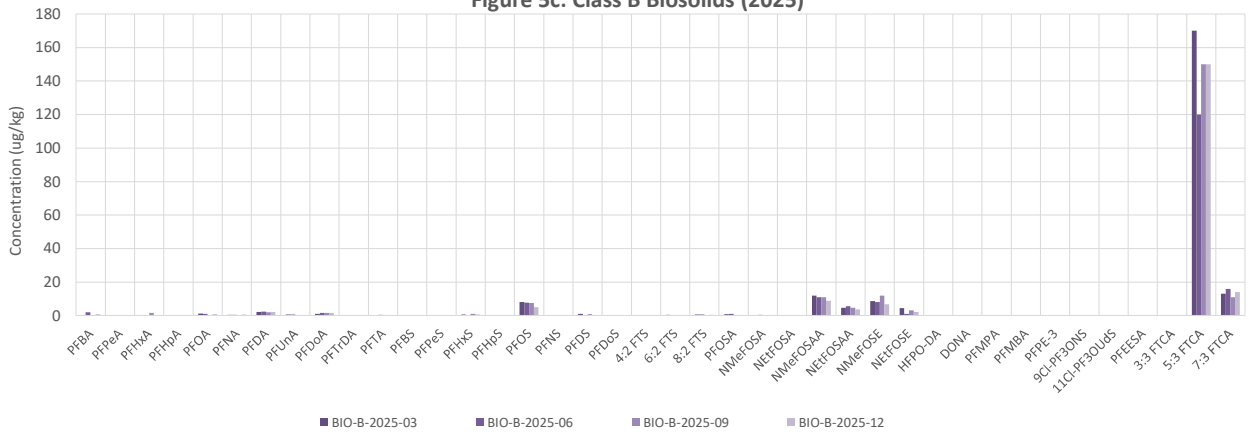


Figure 5d: Class A Cake (2023, 2024, and 2025 Piles) Detections in 2025

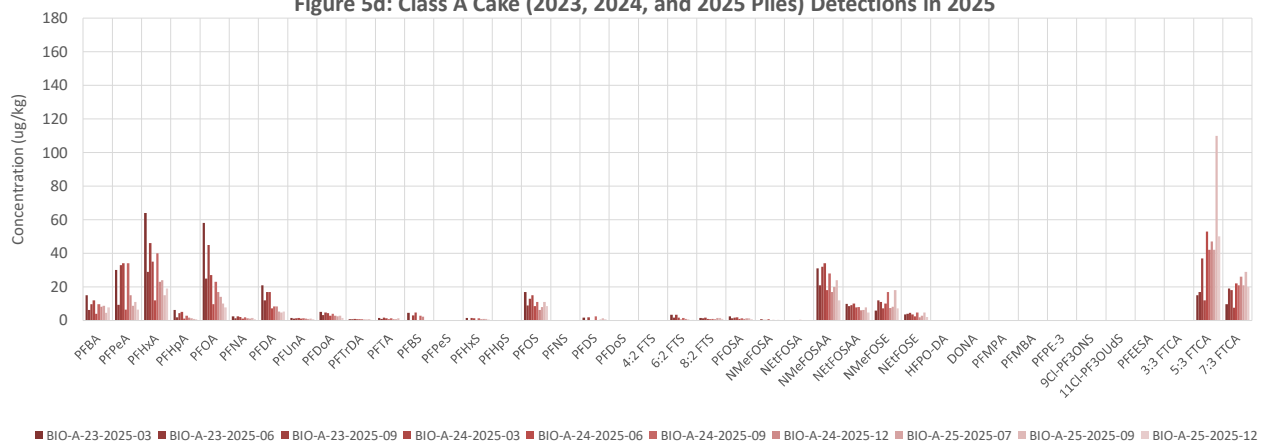


Figure 6
Class B Biosolids PFAS Detections (2025)

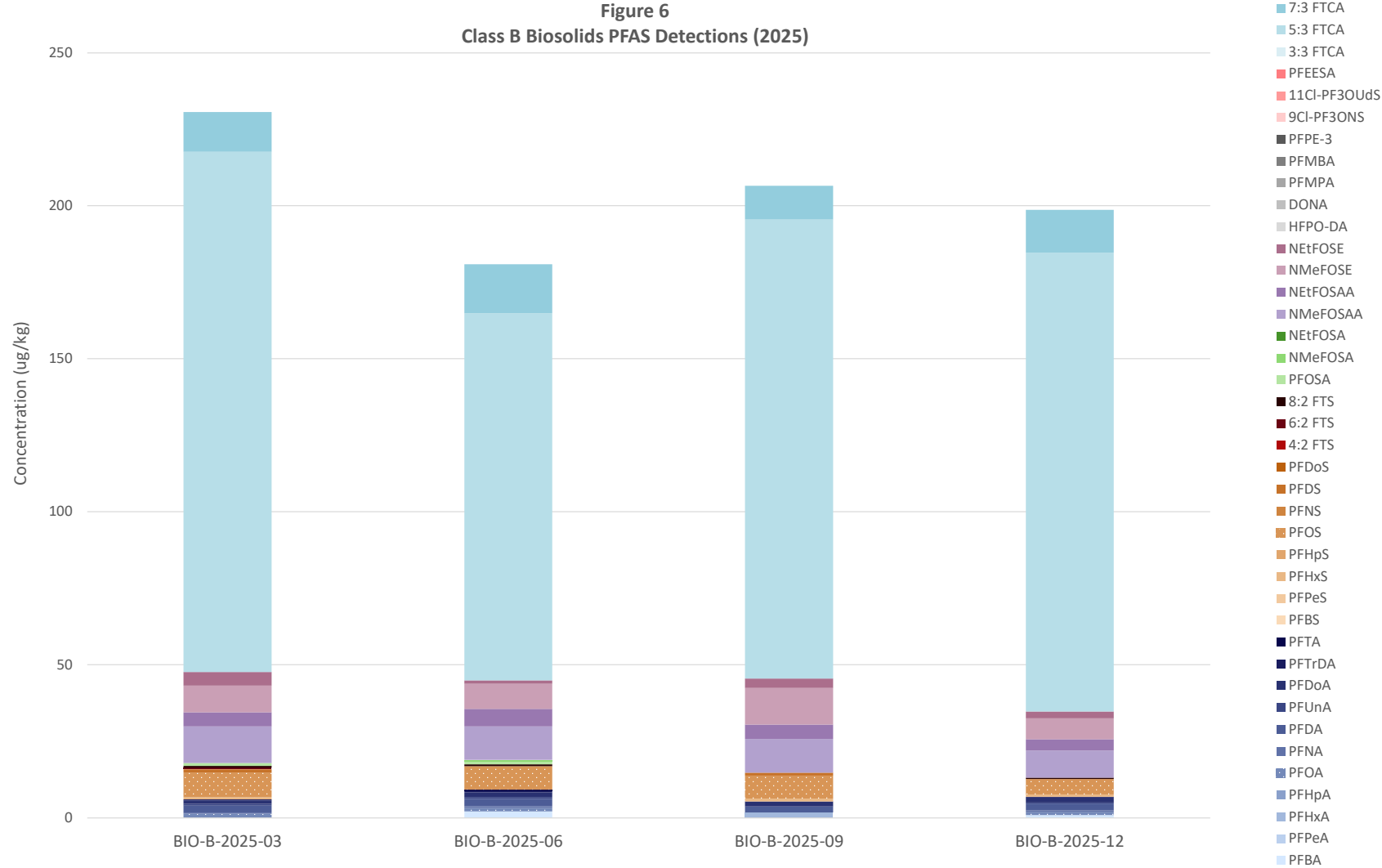


Figure 7a
Class B Biosolids PFOA and PFOS Time Series

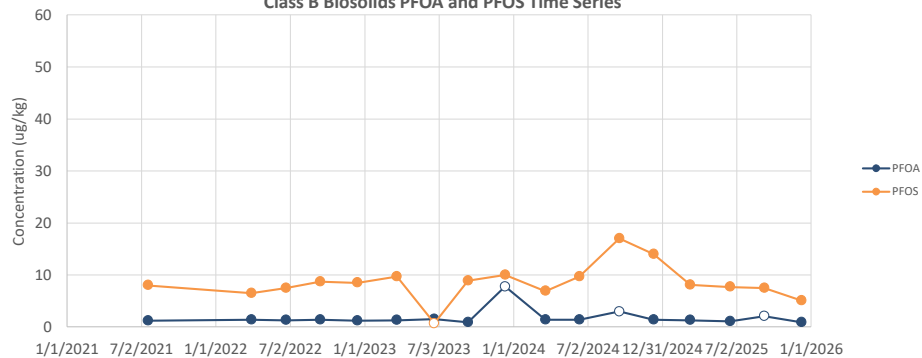


Figure 7b
Class A Cake (2023 Pile*) PFOA and PFOS Time Series

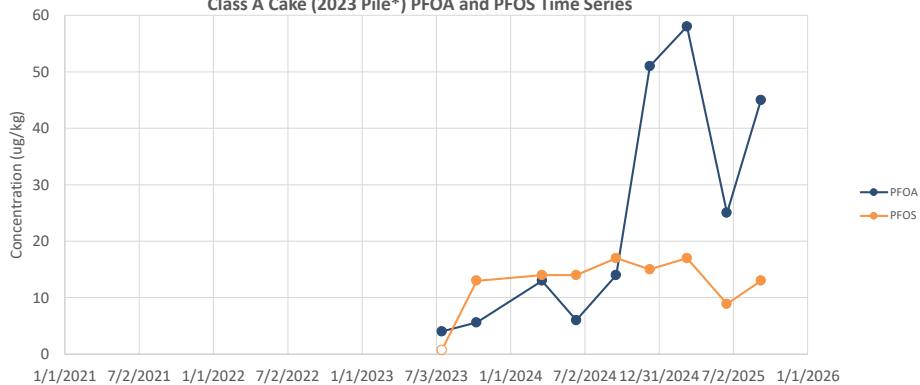


Figure 7c
Class A Cake (2024 Pile) PFOA and PFOS Time Series

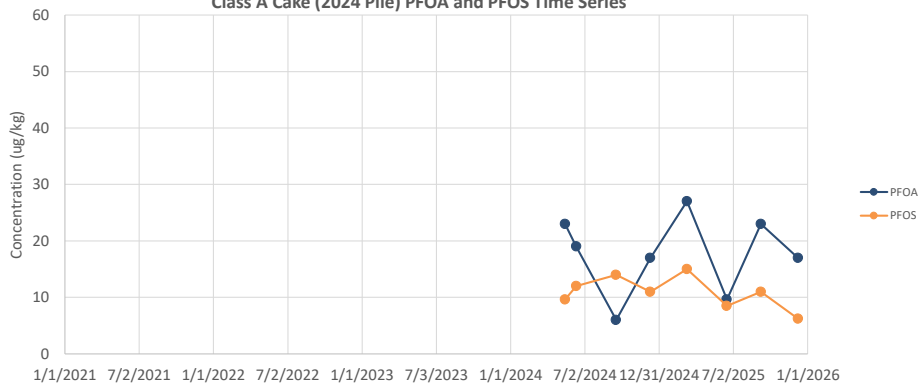
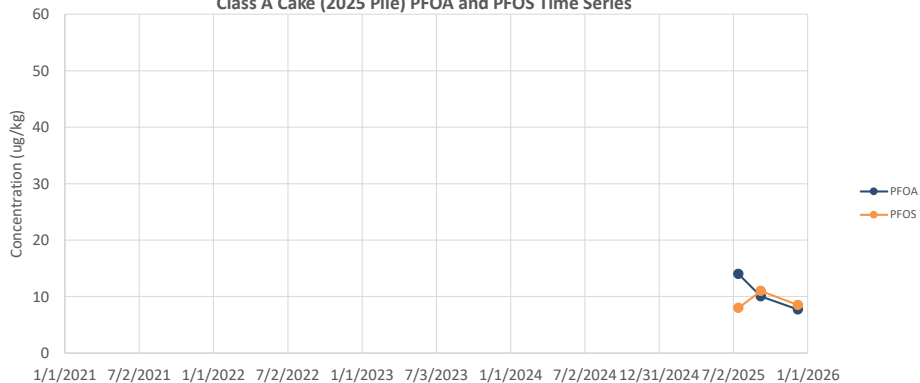


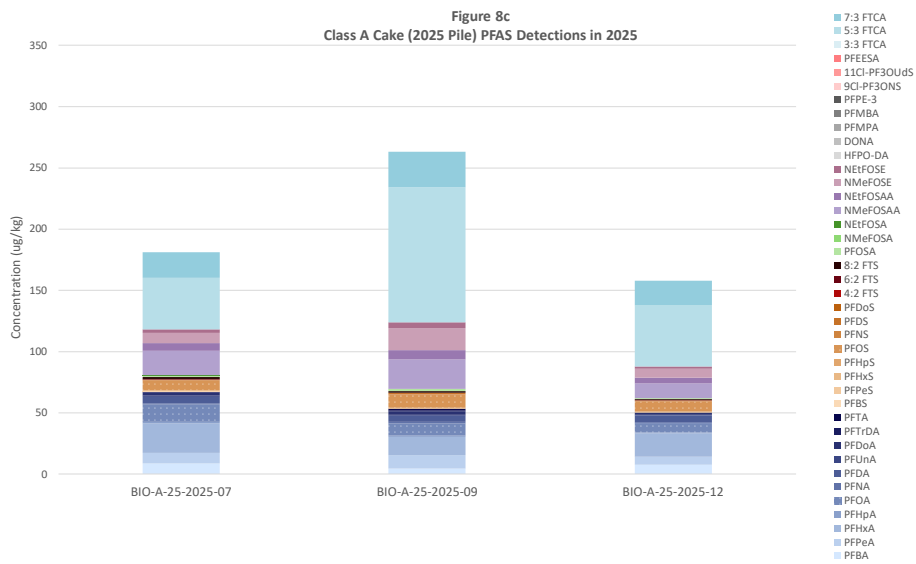
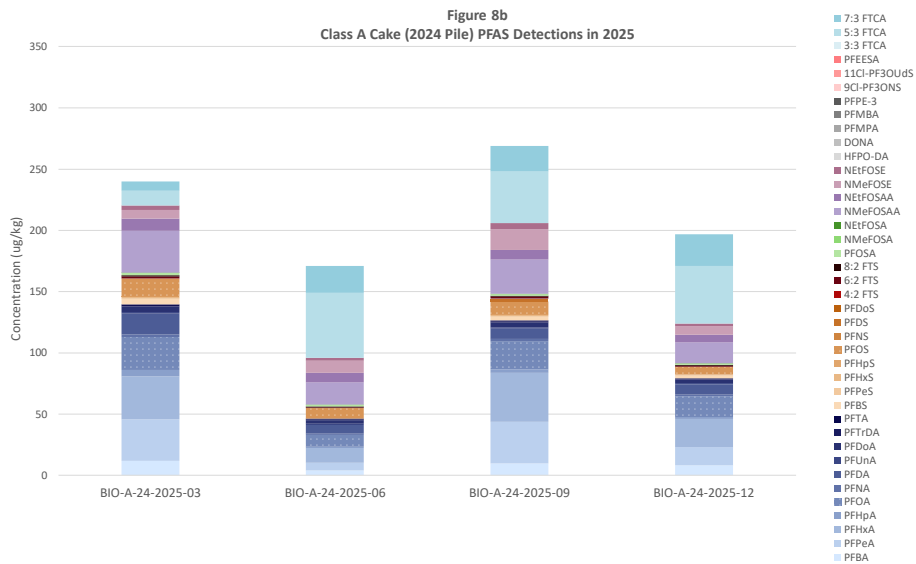
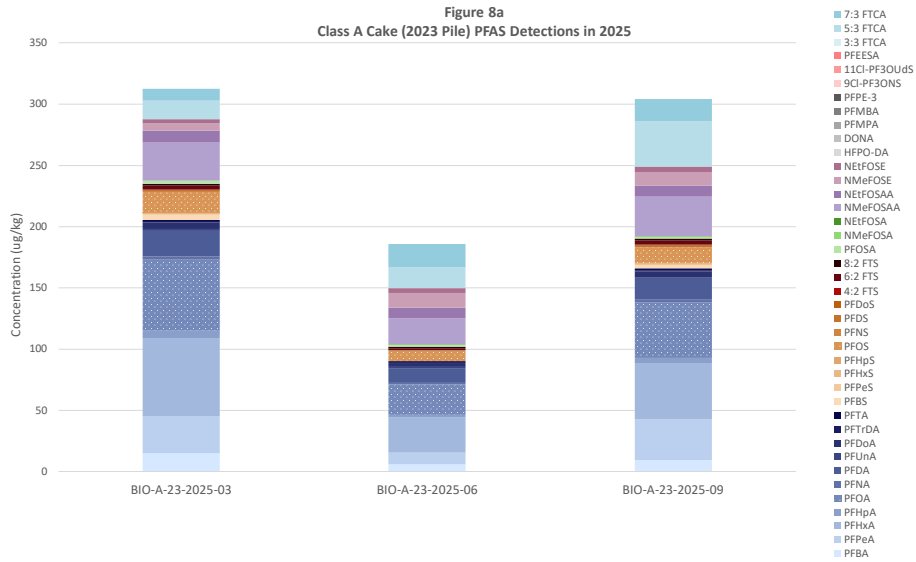
Figure 7d
Class A Cake (2025 Pile) PFOA and PFOS Time Series



Notes:

Nondetect results plotted with hollow symbols at the detection limit.

* Graph for 2023 Class A Cake pile includes results for the composite samples collected in 2023, which consisted only of shallow grab samples, and the composite samples collected in 2024, which consisted of both shallow and deeper grab samples.



Appendix A: Laboratory Reports

January 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 2/27/2025 6:01:33 PM Revision 1

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-118296-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Revision 1

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-118296-1

Job ID: 320-118296-1

Eurofins Sacramento

Job Narrative 320-118296-1

Revision

The report being provided is a revision of the original report sent on 2/6/2025. The report (revision 1) is being revised to correct the analytes reported for several samples and to correct the narrative as needed.

Receipt

The samples were received on 1/16/2025 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0° C.

LCMS

Method 1633: The continuing calibration verification (CCV) associated with batch 320-828567 recovered above the upper control limit for isotope dilution analyte (IDA) 13C2 4:2 FTS. The associated target analyte, 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS), was within control limits in the CCV; therefore, the data have been reported. The following samples are associated with this narration: Eff-202501 (320-118296-2), Eff-G1-202501 (320-118296-3), Eff-G2-202501 (320-118296-4), Eff-G3-202501 (320-118296-5), Eff-G4-202501 (320-118296-6) and (CCV 320-828567/17).

Method 1633: The low level continuing calibration verification (CCVL) associated with batch 320-828567 recovered above the upper control limit for 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS). The method blank and sample(s) associated with this CCV were non-detects for the affected analyte and the laboratory control samples (LCSs) were within control limits; therefore, the data have been reported. The associated samples are impacted: Eff-202501 (320-118296-2), Eff-G1-202501 (320-118296-3), Eff-G2-202501 (320-118296-4), Eff-G3-202501 (320-118296-5), Eff-G4-202501 (320-118296-6) and (CCVL 320-828567/4).

Method 1633: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-828473 and analytical batch 320-828567 recovered outside control limits for the following analytes: 8:2 FTS and Nonafluoro-3,6-dioxaheptanoic acid (NFDHA).

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged in the following samples: Eff-G3-202501 (320-118296-5) and INFCOMP-202501 (320-118296-1).

Method 1633: The low level continuing calibration verification (CCVL) associated with batch 320-828999 recovered above the upper control limit for Nonafluoro-3,6-dioxaheptanoic acid (NFDHA). The MB and the samples associated with this CCV are non-detected, and the LLCS/LCS/LCSD are in control for the affected analyte; therefore, the data have been reported. The following samples are associated with this narration: INF-COMP-202501 (320-118296-1), (CCVL 320-828999/2), (LCS 320-828863/3-A), (LCSD 320-828863/4-A), (LLCS 320-828863/2-A) and (MB 320-828863/1-A).

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: INF-COMP-202501 (320-118296-1). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INFCOMP-202501 (320-118296-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633: Internal standard (ISTD) response for the following sample was outside control limits: INF-COMP-202501 (320-118296-1). The sample was re-analyzed with concurring results; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: Samples INF-COMP-202501 (320-118296-1), (320-118296-A-1) and (320-118296-A-1 DU) were prepared at reduced volume due to the nature of the sample matrix. The reporting limits (RLs) have been adjusted proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633: The following samples in preparation batch 320-828473 were discolored following extraction: Eff-202501 (320-118296-2), Eff-G1-202501 (320-118296-3), Eff-G2-202501 (320-118296-4), Eff-G3-202501 (320-118296-5) and Eff-G4-202501 (320-118296-6).

Eurofins Sacramento

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-118296-1

Job ID: 320-118296-1 (Continued)

Eurofins Sacramento

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	10		3.2	0.81	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	4.0		1.6	0.41	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	4.6		1.6	0.41	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.6	0.41	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	4.9		1.6	0.41	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.53	J	1.6	0.41	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.6		1.6	0.41	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.6	0.41	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.3	I	1.6	0.41	ng/L	1		1633	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.2	J	3.2	0.81	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.53	J	1.6	0.41	ng/L	1		1633	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	14		8.1	2.0	ng/L	1		1633	Total/NA
Total Suspended Solids	250		13	13	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-202501

Lab Sample ID: 320-118296-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.77	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	9.4		1.5	0.38	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	12		1.5	0.38	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.38	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	6.0		1.5	0.38	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.47	J	1.5	0.38	ng/L	1		1633	Total/NA
Perfluorodecanoic acid (PFDA)	0.45	J	1.5	0.38	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		1.5	0.38	ng/L	1		1633	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.55	J	1.5	0.38	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.5	0.38	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		1.5	0.38	ng/L	1		1633	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.51	J	1.5	0.38	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.5	0.38	ng/L	1		1633	Total/NA
Total Suspended Solids	4.7		1.3	1.3	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.9		2.9	0.74	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	8.6		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	9.7		1.5	0.37	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	5.4		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.40	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorodecanoic acid (PFDA)	0.43	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7		1.5	0.37	ng/L	1		1633	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.50	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.3		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		1.5	0.37	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.60	J	1.5	0.37	ng/L	1		1633	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G1-202501 (Continued)

Lab Sample ID: 320-118296-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	3.6		1.3	1.3	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.2		2.9	0.74	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	8.3		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	8.9		1.5	0.37	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	5.8		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.48	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorodecanoic acid (PFDA)	0.42	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.2		1.5	0.37	ng/L	1		1633	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.5	0.37	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		1.5	0.37	ng/L	1		1633	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.42	J	1.5	0.37	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.5	0.37	ng/L	1		1633	Total/NA
Total Suspended Solids	4.5		1.3	1.3	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.78	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	8.5		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	8.2		1.6	0.39	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.6	0.39	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	5.6		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.41	J	1.6	0.39	ng/L	1		1633	Total/NA
Perfluorodecanoic acid (PFDA)	0.41	J	1.6	0.39	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		1.6	0.39	ng/L	1		1633	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.49	J	1.6	0.39	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.39	J I	1.6	0.39	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.59	J	1.6	0.39	ng/L	1		1633	Total/NA
Total Suspended Solids	4.8		1.3	1.3	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	10		2.9	0.72	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	7.4		1.4	0.36	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	9.5		1.4	0.36	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4		1.4	0.36	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	4.8		1.4	0.36	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.47	J	1.4	0.36	ng/L	1		1633	Total/NA
Perfluorodecanoic acid (PFDA)	0.42	J	1.4	0.36	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		1.4	0.36	ng/L	1		1633	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G4-202501 (Continued)

Lab Sample ID: 320-118296-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.4	0.36	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.2		1.4	0.36	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		1.4	0.36	ng/L	1		1633	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.36	J	1.4	0.36	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.73	J	1.4	0.36	ng/L	1		1633	Total/NA
Total Suspended Solids	4.6		1.3	1.3	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoropentanoic acid (PFPeA)	4.0		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorohexanoic acid (PFHxA)	4.6		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorooctanoic acid (PFOA)	4.9		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorononanoic acid (PFNA)	0.53	J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorobutanesulfonic acid (PFBS)	2.6		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorooctanesulfonic acid (PFOS)	7.3	I	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		01/22/25 11:50	01/23/25 22:06	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.2	J	3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.53	J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.32	ng/L		01/22/25 11:50	01/23/25 22:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	^+	1.6	0.58	ng/L		01/22/25 11:50	01/23/25 22:06	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	ND		1.6	0.47	ng/L		01/22/25 11:50	01/23/25 22:06	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	14		8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88.8	*3	5 - 130	01/22/25 11:50	01/23/25 22:06	1
13C5 PFPeA	90.0		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C5 PFHxA	119		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C4 PFHpA	141	*5+	40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C8 PFOA	96.1		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C9 PFNA	100		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C6 PFDA	86.7		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C7 PFUnA	61.2		30 - 130	01/22/25 11:50	01/23/25 22:06	1
13C2 PFDoA	46.3		10 - 130	01/22/25 11:50	01/23/25 22:06	1
13C2 PFTeDA	34.9		10 - 130	01/22/25 11:50	01/23/25 22:06	1
13C3 PFBS	92.3		40 - 135	01/22/25 11:50	01/23/25 22:06	1
13C3 PFHxS	102		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C8 PFOS	94.8		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C8 FOSA	88.9		40 - 130	01/22/25 11:50	01/23/25 22:06	1
d3-NMeFOSAA	39.4	*5-	40 - 170	01/22/25 11:50	01/23/25 22:06	1
d5-NEtFOSAA	47.3		25 - 135	01/22/25 11:50	01/23/25 22:06	1
13C2 6:2 FTS	232	*5+	40 - 200	01/22/25 11:50	01/23/25 22:06	1
13C2 8:2 FTS	152		40 - 300	01/22/25 11:50	01/23/25 22:06	1
13C3 HFPO-DA	136	*5+	40 - 130	01/22/25 11:50	01/23/25 22:06	1
d7-N-MeFOSE-M	57.9		10 - 130	01/22/25 11:50	01/23/25 22:06	1
d9-N-EtFOSE-M	59.0		10 - 130	01/22/25 11:50	01/23/25 22:06	1
d5-NEtPFOSA	75.3		10 - 130	01/22/25 11:50	01/23/25 22:06	1
d3-NMePFOSA	77.0		10 - 130	01/22/25 11:50	01/23/25 22:06	1

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.2	0.81	ng/L		01/22/25 11:50	01/24/25 15:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	158		40 - 200				01/22/25 11:50	01/24/25 15:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	250		13	13	mg/L			01/20/25 14:17	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-202501

Lab Sample ID: 320-118296-2

Date Collected: 01/14/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoropentanoic acid (PFPeA)	9.4		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorohexanoic acid (PFHxA)	12		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorooctanoic acid (PFOA)	6.0		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorononanoic acid (PFNA)	0.47	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorodecanoic acid (PFDA)	0.45	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorotridecanoic acid (PFTriDA)	ND		1.5	0.45	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	0.55	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		01/21/25 05:14	01/21/25 14:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND	*1	3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorooctanesulfonamide (PFOSA)	0.51	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.30	ng/L		01/21/25 05:14	01/21/25 14:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*1	1.5	0.55	ng/L		01/21/25 05:14	01/21/25 14:39	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-202501

Lab Sample ID: 320-118296-2

Date Collected: 01/14/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND	^+	1.5	0.45	ng/L		01/21/25 05:14	01/21/25 14:39	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130	01/21/25 05:14	01/21/25 14:39	1
13C5 PFPeA	103		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C5 PFHxA	99.0		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C4 PFHpA	110		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C8 PFOA	95.7		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C9 PFNA	86.8		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C6 PFDA	82.8		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C7 PFUnA	76.8		30 - 130	01/21/25 05:14	01/21/25 14:39	1
13C2 PFDoA	88.3		10 - 130	01/21/25 05:14	01/21/25 14:39	1
13C2 PFTeDA	49.9		10 - 130	01/21/25 05:14	01/21/25 14:39	1
13C3 PFBS	108		40 - 135	01/21/25 05:14	01/21/25 14:39	1
13C3 PFHxS	107		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C8 PFOS	91.6		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C8 FOSA	98.7		40 - 130	01/21/25 05:14	01/21/25 14:39	1
d3-NMeFOSAA	87.7		40 - 170	01/21/25 05:14	01/21/25 14:39	1
d5-NEtFOSAA	78.1		25 - 135	01/21/25 05:14	01/21/25 14:39	1
13C2 4:2 FTS	150		40 - 200	01/21/25 05:14	01/21/25 14:39	1
13C2 6:2 FTS	125		40 - 200	01/21/25 05:14	01/21/25 14:39	1
13C2 8:2 FTS	104		40 - 300	01/21/25 05:14	01/21/25 14:39	1
13C3 HFPO-DA	106		40 - 130	01/21/25 05:14	01/21/25 14:39	1
d7-N-MeFOSE-M	74.0		10 - 130	01/21/25 05:14	01/21/25 14:39	1
d9-N-EtFOSE-M	69.9		10 - 130	01/21/25 05:14	01/21/25 14:39	1
d5-NEtPFOSA	77.9		10 - 130	01/21/25 05:14	01/21/25 14:39	1
d3-NMePFOSA	77.0		10 - 130	01/21/25 05:14	01/21/25 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.7		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.9		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoropentanoic acid (PFPeA)	8.6		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorohexanoic acid (PFHxA)	9.7		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorooctanoic acid (PFOA)	5.4		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorononanoic acid (PFNA)	0.40	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorodecanoic acid (PFDA)	0.43	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.41	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.43	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.60	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorobutanesulfonic acid (PFBS)	2.7		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoropentanesulfonic acid (PFPeS)	0.50	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorohexanesulfonic acid (PFHxS)	5.3		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.39	ng/L		01/21/25 05:14	01/21/25 14:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND	*1	2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.60	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.1	0.29	ng/L		01/21/25 05:14	01/21/25 14:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*1	1.5	0.53	ng/L		01/21/25 05:14	01/21/25 14:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	^+	1.5	0.43	ng/L		01/21/25 05:14	01/21/25 14:56	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUs)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.7		5 - 130				01/21/25 05:14	01/21/25 14:56	1
13C5 PFPeA	90.7		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C5 PFHxA	112		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C4 PFHpA	115		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C8 PFOA	104		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C9 PFNA	92.2		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C6 PFDA	83.1		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C7 PFUnA	78.5		30 - 130				01/21/25 05:14	01/21/25 14:56	1
13C2 PFDoA	75.3		10 - 130				01/21/25 05:14	01/21/25 14:56	1
13C2 PFTeDA	40.1		10 - 130				01/21/25 05:14	01/21/25 14:56	1
13C3 PFBS	97.5		40 - 135				01/21/25 05:14	01/21/25 14:56	1
13C3 PFHxS	107		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C8 PFOS	85.1		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C8 FOSA	80.1		40 - 130				01/21/25 05:14	01/21/25 14:56	1
d3-NMeFOSAA	68.1		40 - 170				01/21/25 05:14	01/21/25 14:56	1
d5-NEtFOSAA	74.5		25 - 135				01/21/25 05:14	01/21/25 14:56	1
13C2 4:2 FTS	139		40 - 200				01/21/25 05:14	01/21/25 14:56	1
13C2 6:2 FTS	110		40 - 200				01/21/25 05:14	01/21/25 14:56	1
13C2 8:2 FTS	86.9		40 - 300				01/21/25 05:14	01/21/25 14:56	1
13C3 HFPO-DA	98.8		40 - 130				01/21/25 05:14	01/21/25 14:56	1
d7-N-MeFOSE-M	65.4		10 - 130				01/21/25 05:14	01/21/25 14:56	1
d9-N-EtFOSE-M	57.9		10 - 130				01/21/25 05:14	01/21/25 14:56	1
d5-NEtPFOSA	64.3		10 - 130				01/21/25 05:14	01/21/25 14:56	1
d3-NMePFOSA	67.5		10 - 130				01/21/25 05:14	01/21/25 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	3.6		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.2		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoropentanoic acid (PFPeA)	8.3		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorohexanoic acid (PFHxA)	8.9		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoroheptanoic acid (PFHpA)	1.4 J		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorooctanoic acid (PFOA)	5.8		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorononanoic acid (PFNA)	0.48 J		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.42	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.40	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.43	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.60	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorobutanesulfonic acid (PFBS)	3.2		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorooctanesulfonic acid (PFOS)	2.4		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.39	ng/L		01/21/25 05:14	01/21/25 15:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND	*1	2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorooctanesulfonamide (PFOSA)	0.42	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.1	0.29	ng/L		01/21/25 05:14	01/21/25 15:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*1	1.5	0.53	ng/L		01/21/25 05:14	01/21/25 15:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	^+	1.5	0.43	ng/L		01/21/25 05:14	01/21/25 15:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.7		5 - 130				01/21/25 05:14	01/21/25 15:12	1
13C5 PFPeA	110		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C5 PFHxA	107		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C4 PFHpA	116		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C8 PFOA	92.7		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C9 PFNA	99.8		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C6 PFDA	96.0		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C7 PFUnA	89.2		30 - 130				01/21/25 05:14	01/21/25 15:12	1
13C2 PFDoA	81.1		10 - 130				01/21/25 05:14	01/21/25 15:12	1
13C2 PFTeDA	51.0		10 - 130				01/21/25 05:14	01/21/25 15:12	1
13C3 PFBS	93.9		40 - 135				01/21/25 05:14	01/21/25 15:12	1
13C3 PFHxS	106		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C8 PFOS	97.4		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C8 FOSA	93.3		40 - 130				01/21/25 05:14	01/21/25 15:12	1
d3-NMeFOSAA	79.6		40 - 170				01/21/25 05:14	01/21/25 15:12	1
d5-NEtFOSAA	81.5		25 - 135				01/21/25 05:14	01/21/25 15:12	1
13C2 4:2 FTS	178		40 - 200				01/21/25 05:14	01/21/25 15:12	1
13C2 6:2 FTS	138		40 - 200				01/21/25 05:14	01/21/25 15:12	1
13C2 8:2 FTS	106		40 - 300				01/21/25 05:14	01/21/25 15:12	1
13C3 HFPO-DA	108		40 - 130				01/21/25 05:14	01/21/25 15:12	1
d7-N-MeFOSE-M	78.5		10 - 130				01/21/25 05:14	01/21/25 15:12	1
d9-N-EtFOSE-M	73.5		10 - 130				01/21/25 05:14	01/21/25 15:12	1
d5-NEtPFOSA	80.1		10 - 130				01/21/25 05:14	01/21/25 15:12	1
d3-NMePFOSA	77.3		10 - 130				01/21/25 05:14	01/21/25 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.5		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoropentanoic acid (PFPeA)	8.5		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorohexanoic acid (PFHxA)	8.2		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorooctanoic acid (PFOA)	5.6		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorononanoic acid (PFNA)	0.41	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorodecanoic acid (PFDA)	0.41	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorobutanesulfonic acid (PFBS)	3.1		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoropentanesulfonic acid (PFPeS)	0.49	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorooctanesulfonic acid (PFOS)	2.2		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		01/21/25 05:14	01/21/25 15:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND	*1	3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorooctanesulfonamide (PFOSA)	0.39	J I	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.59	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.30	ng/L		01/21/25 05:14	01/21/25 15:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*1	1.6	0.56	ng/L		01/21/25 05:14	01/21/25 15:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	^+	1.6	0.45	ng/L		01/21/25 05:14	01/21/25 15:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130				01/21/25 05:14	01/21/25 15:29	1
13C5 PFPeA	106		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C5 PFHxA	120		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C4 PFHpA	112		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C8 PFOA	89.5		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C9 PFNA	100		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C6 PFDA	85.2		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C7 PFUnA	73.7		30 - 130				01/21/25 05:14	01/21/25 15:29	1
13C2 PFDoA	82.6		10 - 130				01/21/25 05:14	01/21/25 15:29	1
13C2 PFTeDA	48.6		10 - 130				01/21/25 05:14	01/21/25 15:29	1
13C3 PFBS	108		40 - 135				01/21/25 05:14	01/21/25 15:29	1
13C3 PFHxS	117		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C8 PFOS	91.7		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C8 FOSA	90.6		40 - 130				01/21/25 05:14	01/21/25 15:29	1
d3-NMeFOSAA	82.3		40 - 170				01/21/25 05:14	01/21/25 15:29	1
d5-NEtFOSAA	82.2		25 - 135				01/21/25 05:14	01/21/25 15:29	1
13C2 4:2 FTS	182		40 - 200				01/21/25 05:14	01/21/25 15:29	1
13C2 6:2 FTS	112		40 - 200				01/21/25 05:14	01/21/25 15:29	1
13C2 8:2 FTS	110		40 - 300				01/21/25 05:14	01/21/25 15:29	1
13C3 HFPO-DA	111		40 - 130				01/21/25 05:14	01/21/25 15:29	1
d7-N-MeFOSE-M	75.5		10 - 130				01/21/25 05:14	01/21/25 15:29	1
d9-N-EtFOSE-M	70.1		10 - 130				01/21/25 05:14	01/21/25 15:29	1
d5-NEtPFOSA	76.0		10 - 130				01/21/25 05:14	01/21/25 15:29	1
d3-NMePFOSA	76.3		10 - 130				01/21/25 05:14	01/21/25 15:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.8		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Date Collected: 01/14/25 14:55

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoropentanoic acid (PFPeA)	7.4		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorohexanoic acid (PFHxA)	9.5		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoroheptanoic acid (PFHpA)	1.4		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorooctanoic acid (PFOA)	4.8		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorononanoic acid (PFNA)	0.47 J		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorodecanoic acid (PFDA)	0.42 J		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoroundecanoic acid (PFUnA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorododecanoic acid (PFDoA)	ND		1.4	0.40	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.4	0.42	ng/L		01/21/25 05:14	01/21/25 15:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Date Collected: 01/14/25 14:55

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	ND		1.4	0.59	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorohexanesulfonic acid (PFHxS)	5.2		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorononanesulfonic acid (PFNS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.4	0.38	ng/L		01/21/25 05:14	01/21/25 15:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND	*1	2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorooctanesulfonamide (PFOSA)	0.36	J	1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.73	J	1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.1	0.28	ng/L		01/21/25 05:14	01/21/25 15:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*1	1.4	0.52	ng/L		01/21/25 05:14	01/21/25 15:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	^+	1.4	0.42	ng/L		01/21/25 05:14	01/21/25 15:45	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUs)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Date Collected: 01/14/25 14:55

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130				01/21/25 05:14	01/21/25 15:45	1
13C5 PFPeA	84.9		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C5 PFHxA	98.1		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C4 PFHpA	94.7		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C8 PFOA	106		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C9 PFNA	94.6		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C6 PFDA	83.5		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C7 PFUnA	74.4		30 - 130				01/21/25 05:14	01/21/25 15:45	1
13C2 PFDoA	81.6		10 - 130				01/21/25 05:14	01/21/25 15:45	1
13C2 PFTeDA	39.7		10 - 130				01/21/25 05:14	01/21/25 15:45	1
13C3 PFBS	102		40 - 135				01/21/25 05:14	01/21/25 15:45	1
13C3 PFHxS	108		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C8 PFOS	92.2		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C8 FOSA	94.6		40 - 130				01/21/25 05:14	01/21/25 15:45	1
d3-NMeFOSAA	79.6		40 - 170				01/21/25 05:14	01/21/25 15:45	1
d5-NEtFOSAA	77.2		25 - 135				01/21/25 05:14	01/21/25 15:45	1
13C2 4:2 FTS	137		40 - 200				01/21/25 05:14	01/21/25 15:45	1
13C2 6:2 FTS	126		40 - 200				01/21/25 05:14	01/21/25 15:45	1
13C2 8:2 FTS	102		40 - 300				01/21/25 05:14	01/21/25 15:45	1
13C3 HFPO-DA	90.3		40 - 130				01/21/25 05:14	01/21/25 15:45	1
d7-N-MeFOSE-M	75.1		10 - 130				01/21/25 05:14	01/21/25 15:45	1
d9-N-EtFOSE-M	72.5		10 - 130				01/21/25 05:14	01/21/25 15:45	1
d5-NEtPFOSA	76.6		10 - 130				01/21/25 05:14	01/21/25 15:45	1
d3-NMePFOSA	77.7		10 - 130				01/21/25 05:14	01/21/25 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.6		1.3	1.3	mg/L			01/20/25 14:17	1

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-118296-1	INF-COMP-202501	88.8 *3	90.0	119	141 *5+	96.1	100	86.7	61.2
320-118296-1 - RA	INF-COMP-202501								
320-118296-2	Eff-202501	102	103	99.0	110	95.7	86.8	82.8	76.8
320-118296-3	Eff-G1-202501	99.7	90.7	112	115	104	92.2	83.1	78.5
320-118296-4	Eff-G2-202501	97.7	110	107	116	92.7	99.8	96.0	89.2
320-118296-5	Eff-G3-202501	101	106	120	112	89.5	100	85.2	73.7
320-118296-6	Eff-G4-202501	102	84.9	98.1	94.7	106	94.6	83.5	74.4
LCS 320-828473/3-A	Lab Control Sample	100	106	111	106	88.4	88.9	91.3	98.6
LCS 320-828863/3-A	Lab Control Sample	97.3	103	104	110	93.2	102	101	87.9
LCS 320-828863/3-A - RA	Lab Control Sample								
LCSD 320-828473/4-A	Lab Control Sample Dup	103	122	108	110	88.7	96.5	80.1	77.4
LCSD 320-828863/4-A	Lab Control Sample Dup	98.1	105	112	112	101	111	95.8	96.5
LCSD 320-828863/4-A - RA	Lab Control Sample Dup								
LLCS 320-828473/2-A	Lab Control Sample	108	88.6	101	83.4	100	86.7	87.6	89.7
LLCS 320-828863/2-A	Lab Control Sample	99.0	110	97.2	115	96.8	108	97.4	93.5
LLCS 320-828863/2-A - RA	Lab Control Sample								
MB 320-828473/1-A	Method Blank	102	96.2	105	89.4	96.0	87.5	89.8	91.6
MB 320-828863/1-A	Method Blank	97.3	97.6	105	112	101	101	93.2	90.0
MB 320-828863/1-A - RA	Method Blank								
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-118296-1	INF-COMP-202501	46.3	34.9	92.3	102	94.8	88.9	39.4 *5-	47.3
320-118296-1 - RA	INF-COMP-202501								
320-118296-2	Eff-202501	88.3	49.9	108	107	91.6	98.7	87.7	78.1
320-118296-3	Eff-G1-202501	75.3	40.1	97.5	107	85.1	80.1	68.1	74.5
320-118296-4	Eff-G2-202501	81.1	51.0	93.9	106	97.4	93.3	79.6	81.5
320-118296-5	Eff-G3-202501	82.6	48.6	108	117	91.7	90.6	82.3	82.2
320-118296-6	Eff-G4-202501	81.6	39.7	102	108	92.2	94.6	79.6	77.2
LCS 320-828473/3-A	Lab Control Sample	103	90.1	102	102	99.7	88.3	89.4	90.0
LCS 320-828863/3-A	Lab Control Sample	84.2	77.9	91.3	104	94.8	83.1	86.6	75.5
LCS 320-828863/3-A - RA	Lab Control Sample								
LCSD 320-828473/4-A	Lab Control Sample Dup	104	78.7	108	106	102	83.5	78.2	74.4
LCSD 320-828863/4-A	Lab Control Sample Dup	84.5	77.6	97.9	107	105	85.3	87.3	77.3
LCSD 320-828863/4-A - RA	Lab Control Sample Dup								
LLCS 320-828473/2-A	Lab Control Sample	93.8	92.1	104	103	104	91.0	89.5	87.2
LLCS 320-828863/2-A	Lab Control Sample	96.1	87.4	98.4	108	102	84.5	92.5	80.9
LLCS 320-828863/2-A - RA	Lab Control Sample								
MB 320-828473/1-A	Method Blank	95.4	81.2	101	101	96.9	84.6	80.7	84.3
MB 320-828863/1-A	Method Blank	87.6	80.2	97.7	103	103	83.7	91.4	87.3
MB 320-828863/1-A - RA	Method Blank								
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-118296-1	INF-COMP-202501		232 *5+	152	136 *5+	57.9	59.0	75.3	77.0
320-118296-1 - RA	INF-COMP-202501	158							
320-118296-2	Eff-202501	150	125	104	106	74.0	69.9	77.9	77.0
320-118296-3	Eff-G1-202501	139	110	86.9	98.8	65.4	57.9	64.3	67.5
320-118296-4	Eff-G2-202501	178	138	106	108	78.5	73.5	80.1	77.3

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-118296-1

Project/Site: PFAS Sampling

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-118296-5	Eff-G3-202501	182	112	110	111	75.5	70.1	76.0	76.3
320-118296-6	Eff-G4-202501	137	126	102	90.3	75.1	72.5	76.6	77.7
LCS 320-828473/3-A	Lab Control Sample	67.6	97.9	61.2	95.7	88.7	88.5	76.2	71.6
LCS 320-828863/3-A	Lab Control Sample		85.2		92.2	86.8	86.1	84.3	83.2
LCS 320-828863/3-A - RA	Lab Control Sample	88.0		74.6					
LCSD 320-828473/4-A	Lab Control Sample Dup	86.1	98.1	95.9	98.5	78.0	81.3	63.3	56.6
LCSD 320-828863/4-A	Lab Control Sample Dup		88.7		92.4	89.0	85.9	79.0	89.1
LCSD 320-828863/4-A - RA	Lab Control Sample Dup	89.7		77.8					
LLCS 320-828473/2-A	Lab Control Sample	83.9	97.4	77.3	71.7	87.5	86.2	78.7	76.6
LLCS 320-828863/2-A	Lab Control Sample		87.3		93.3	91.7	90.1	81.6	85.0
LLCS 320-828863/2-A - RA	Lab Control Sample	84.0		76.0					
MB 320-828473/1-A	Method Blank	88.7	85.6	95.5	83.2	79.7	80.6	65.3	66.7
MB 320-828863/1-A	Method Blank		84.7		91.4	94.3	89.4	81.0	81.2
MB 320-828863/1-A - RA	Method Blank	89.9		81.9					

Surrogate Legend

PFBA = 13C4 PFBA
 PFPeA = 13C5 PFPeA
 13C5PHA = 13C5 PFHxA
 C4PFHA = 13C4 PFHpA
 C8PFOA = 13C8 PFOA
 C9PFNA = 13C9 PFNA
 C6PFDA = 13C6 PFDA
 13C7PUA = 13C7 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 C3PFHS = 13C3 PFHxS
 C8PFOS = 13C8 PFOS
 PFOSA = 13C8 FOSA
 d3NMFOS = d3-NMeFOSAA
 d5NEFOS = d5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS
 HFPODA = 13C3 HFPO-DA
 NMFM = d7-N-MeFOSE-M
 NEFM = d9-N-EtFOSE-M
 d5NPFSA = d5-NEtPFOSA
 d3NMFSA = d3-NMePFOSA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-828473/1-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	1.0	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		01/21/25 05:14	01/21/25 13:17	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		4.0	1.0	ng/L		01/21/25 05:14	01/21/25 13:17	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		4.0	1.0	ng/L		01/21/25 05:14	01/21/25 13:17	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		4.0	1.0	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.5	ng/L		01/21/25 05:14	01/21/25 13:17	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.5	ng/L		01/21/25 05:14	01/21/25 13:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.5	0.39	ng/L		01/21/25 05:14	01/21/25 13:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		01/21/25 05:14	01/21/25 13:17	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	ND		2.0	0.58	ng/L		01/21/25 05:14	01/21/25 13:17	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-828473/1-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	0.50	ng/L		01/21/25 05:14	01/21/25 13:17	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	1.0	ng/L		01/21/25 05:14	01/21/25 13:17	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	2.5	ng/L		01/21/25 05:14	01/21/25 13:17	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	2.5	ng/L		01/21/25 05:14	01/21/25 13:17	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130	01/21/25 05:14	01/21/25 13:17	1
13C5 PFPeA	96.2		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C5 PFHxA	105		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C4 PFHpA	89.4		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C8 PFOA	96.0		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C9 PFNA	87.5		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C6 PFDA	89.8		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C7 PFUnA	91.6		30 - 130	01/21/25 05:14	01/21/25 13:17	1
13C2 PFDoA	95.4		10 - 130	01/21/25 05:14	01/21/25 13:17	1
13C2 PFTeDA	81.2		10 - 130	01/21/25 05:14	01/21/25 13:17	1
13C3 PFBS	101		40 - 135	01/21/25 05:14	01/21/25 13:17	1
13C3 PFHxS	101		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C8 PFOS	96.9		40 - 130	01/21/25 05:14	01/21/25 13:17	1
13C8 FOSA	84.6		40 - 130	01/21/25 05:14	01/21/25 13:17	1
d3-NMeFOSAA	80.7		40 - 170	01/21/25 05:14	01/21/25 13:17	1
d5-NEtFOSAA	84.3		25 - 135	01/21/25 05:14	01/21/25 13:17	1
13C2 4:2 FTS	88.7		40 - 200	01/21/25 05:14	01/21/25 13:17	1
13C2 6:2 FTS	85.6		40 - 200	01/21/25 05:14	01/21/25 13:17	1
13C2 8:2 FTS	95.5		40 - 300	01/21/25 05:14	01/21/25 13:17	1
13C3 HFPO-DA	83.2		40 - 130	01/21/25 05:14	01/21/25 13:17	1
d7-N-MeFOSE-M	79.7		10 - 130	01/21/25 05:14	01/21/25 13:17	1
d9-N-EtFOSE-M	80.6		10 - 130	01/21/25 05:14	01/21/25 13:17	1
d5-NEtPFOSA	65.3		10 - 130	01/21/25 05:14	01/21/25 13:17	1
d3-NMePFOSA	66.7		10 - 130	01/21/25 05:14	01/21/25 13:17	1

Lab Sample ID: LCS 320-828473/3-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	77.2		ng/L		96	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	41.7		ng/L		104	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.0		ng/L		90	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	35.9		ng/L		90	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	47.0		ng/L		118	70 - 150
Perfluorononanoic acid (PFNA)	40.0	39.4		ng/L		99	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	41.3		ng/L		103	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-828473/3-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	40.0	43.5		ng/L		109	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	43.7		ng/L		109	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	37.0		ng/L		92	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	41.7		ng/L		104	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	35.2		ng/L		99	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.1		ng/L		109	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	33.1		ng/L		91	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.2		ng/L		103	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.5		ng/L		98	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	39.4		ng/L		102	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	39.1		ng/L		101	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	38.2		ng/L		99	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	82.4		ng/L		110	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	63.6		ng/L		84	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	85.7		ng/L		112	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	39.8		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.1		ng/L		100	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.1		ng/L		100	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	43.5		ng/L		109	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.0		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	199		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	196		ng/L		98	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	27.3		ng/L		91	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	41.5		ng/L		110	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	38.2		ng/L		95	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.1		ng/L		103	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	24.0		ng/L		60	50 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-828473/3-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	34.6		ng/L		93	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	38.8		ng/L		103	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	31.6		ng/L		89	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	68.2		ng/L		85	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	173		ng/L		86	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	156		ng/L		78	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	100		5 - 130
13C5 PFPeA	106		40 - 130
13C5 PFHxA	111		40 - 130
13C4 PFHpA	106		40 - 130
13C8 PFOA	88.4		40 - 130
13C9 PFNA	88.9		40 - 130
13C6 PFDA	91.3		40 - 130
13C7 PFUnA	98.6		30 - 130
13C2 PFDoA	103		10 - 130
13C2 PFTeDA	90.1		10 - 130
13C3 PFBS	102		40 - 135
13C3 PFHxS	102		40 - 130
13C8 PFOS	99.7		40 - 130
13C8 FOSA	88.3		40 - 130
d3-NMeFOSAA	89.4		40 - 170
d5-NEtFOSAA	90.0		25 - 135
13C2 4:2 FTS	67.6		40 - 200
13C2 6:2 FTS	97.9		40 - 200
13C2 8:2 FTS	61.2		40 - 300
13C3 HFPO-DA	95.7		40 - 130
d7-N-MeFOSE-M	88.7		10 - 130
d9-N-EtFOSE-M	88.5		10 - 130
d5-NEtPFOSA	76.2		10 - 130
d3-NMePFOSA	71.6		10 - 130

Lab Sample ID: LCSD 320-828473/4-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	74.6		ng/L		93	70 - 140	3	30
Perfluoropentanoic acid (PFPeA)	40.0	40.1		ng/L		100	65 - 135	4	30
Perfluorohexanoic acid (PFHxA)	40.0	41.1		ng/L		103	70 - 145	13	30
Perfluoroheptanoic acid (PFHpA)	40.0	40.8		ng/L		102	70 - 150	13	30
Perfluorooctanoic acid (PFOA)	40.0	45.4		ng/L		114	70 - 150	4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-828473/4-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorononanoic acid (PFNA)	40.0	44.3		ng/L		111	70 - 150	12	30
Perfluorodecanoic acid (PFDA)	40.0	44.4		ng/L		111	70 - 140	7	30
Perfluoroundecanoic acid (PFUnA)	40.0	50.3		ng/L		126	70 - 145	14	30
Perfluorododecanoic acid (PFDoA)	40.0	37.4		ng/L		94	70 - 140	15	30
Perfluorotridecanoic acid (PFTrDA)	40.0	39.0		ng/L		98	65 - 140	5	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	37.7		ng/L		94	60 - 140	10	30
Perfluorobutanesulfonic acid (PFBS)	35.5	33.3		ng/L		94	60 - 145	5	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.6		ng/L		105	65 - 140	4	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.6		ng/L		98	65 - 145	7	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.6		ng/L		99	70 - 150	4	30
Perfluorooctanesulfonic acid (PFOS)	37.2	34.9		ng/L		94	55 - 150	4	30
Perfluorononanesulfonic acid (PFNS)	38.5	34.1		ng/L		89	65 - 145	14	30
Perfluorodecanesulfonic acid (PFDS)	38.6	35.7		ng/L		93	60 - 145	9	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	32.9		ng/L		85	50 - 145	15	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	74.4		ng/L		99	70 - 145	10	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	71.4		ng/L		94	65 - 155	12	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	61.4	*1	ng/L		80	60 - 150	33	30
Perfluorooctanesulfonamide (PFOSA)	40.0	39.8		ng/L		100	70 - 145	0	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	44.5		ng/L		111	60 - 150	10	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	41.0		ng/L		103	65 - 145	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.1		ng/L		105	50 - 140	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.2		ng/L		101	70 - 145	2	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	198		ng/L		99	70 - 145	1	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	195		ng/L		98	70 - 135	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	31.2		ng/L		104	70 - 140	13	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	40.0		ng/L		106	65 - 145	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	38.7		ng/L		97	55 - 140	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	35.5		ng/L		89	60 - 150	14	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-828473/4-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	40.0	40.1	*1	ng/L		100	50 - 150	50	30
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid (9CI-PF3ONS)	37.4	42.4		ng/L		113	70 - 155	20	30
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11CI-PF3OUdS)	37.8	39.5		ng/L		105	55 - 160	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	39.4		ng/L		110	70 - 140	22	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	68.6		ng/L		86	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	193		ng/L		97	70 - 135	11	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	184		ng/L		92	50 - 145	16	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	103		5 - 130
13C5 PFPeA	122		40 - 130
13C5 PFHxA	108		40 - 130
13C4 PFHpA	110		40 - 130
13C8 PFOA	88.7		40 - 130
13C9 PFNA	96.5		40 - 130
13C6 PFDA	80.1		40 - 130
13C7 PFUnA	77.4		30 - 130
13C2 PFDoA	104		10 - 130
13C2 PFTeDA	78.7		10 - 130
13C3 PFBS	108		40 - 135
13C3 PFHxS	106		40 - 130
13C8 PFOS	102		40 - 130
13C8 FOSA	83.5		40 - 130
d3-NMeFOSAA	78.2		40 - 170
d5-NEtFOSAA	74.4		25 - 135
13C2 4:2 FTS	86.1		40 - 200
13C2 6:2 FTS	98.1		40 - 200
13C2 8:2 FTS	95.9		40 - 300
13C3 HFPO-DA	98.5		40 - 130
d7-N-MeFOSE-M	78.0		10 - 130
d9-N-EtFOSE-M	81.3		10 - 130
d5-NEtPFOSA	63.3		10 - 130
d3-NMePFOSA	56.6		10 - 130

Lab Sample ID: LLCS 320-828473/2-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	7.31		ng/L		91	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.72		ng/L		93	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.50		ng/L		112	70 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-828473/2-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	4.00	3.58		ng/L		89	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.21		ng/L		105	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.37		ng/L		109	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.69		ng/L		117	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	3.84		ng/L		96	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.59		ng/L		90	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.33		ng/L		108	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.01		ng/L		100	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.68		ng/L		104	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.86		ng/L		103	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.56		ng/L		98	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.79		ng/L		99	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.59		ng/L		97	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.52		ng/L		91	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.65		ng/L		95	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	4.21		ng/L		109	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	6.69		ng/L		89	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	6.84		ng/L		90	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	7.57		ng/L		99	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.94		ng/L		98	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.63		ng/L		91	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.90		ng/L		98	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.39		ng/L		110	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.29		ng/L		107	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.4		ng/L		97	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.8		ng/L		99	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.13		ng/L		104	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.95		ng/L		104	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.25		ng/L		106	55 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-828473/2-A

Matrix: Water

Analysis Batch: 828567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828473

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.34		ng/L		83	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	2.94		ng/L		74	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	3.74	4.23		ng/L		113	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	4.70		ng/L		124	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.38		ng/L		95	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	7.19		ng/L		90	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	17.1		ng/L		85	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	14.2		ng/L		71	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	108		5 - 130
13C5 PFPeA	88.6		40 - 130
13C5 PFHxA	101		40 - 130
13C4 PFHpA	83.4		40 - 130
13C8 PFOA	100		40 - 130
13C9 PFNA	86.7		40 - 130
13C6 PFDA	87.6		40 - 130
13C7 PFUnA	89.7		30 - 130
13C2 PFDoA	93.8		10 - 130
13C2 PFTeDA	92.1		10 - 130
13C3 PFBS	104		40 - 135
13C3 PFHxS	103		40 - 130
13C8 PFOS	104		40 - 130
13C8 FOSA	91.0		40 - 130
d3-NMeFOSAA	89.5		40 - 170
d5-NEtFOSAA	87.2		25 - 135
13C2 4:2 FTS	83.9		40 - 200
13C2 6:2 FTS	97.4		40 - 200
13C2 8:2 FTS	77.3		40 - 300
13C3 HFPO-DA	71.7		40 - 130
d7-N-MeFOSE-M	87.5		10 - 130
d9-N-EtFOSE-M	86.2		10 - 130
d5-NEtPFOSA	78.7		10 - 130
d3-NMePFOSA	76.6		10 - 130

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 07:51	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		01/22/25 11:50	01/23/25 07:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.5	0.39	ng/L		01/22/25 11:50	01/23/25 07:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		01/22/25 11:50	01/23/25 07:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		2.0	0.58	ng/L		01/22/25 11:50	01/23/25 07:51	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 07:51	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.3		5 - 130				01/22/25 11:50	01/23/25 07:51	1
13C5 PFPeA	97.6		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C5 PFHxA	105		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C4 PFHpA	112		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C8 PFOA	101		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C9 PFNA	101		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C6 PFDA	93.2		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C7 PFUnA	90.0		30 - 130				01/22/25 11:50	01/23/25 07:51	1
13C2 PFDaA	87.6		10 - 130				01/22/25 11:50	01/23/25 07:51	1
13C2 PFTeDA	80.2		10 - 130				01/22/25 11:50	01/23/25 07:51	1
13C3 PFBS	97.7		40 - 135				01/22/25 11:50	01/23/25 07:51	1
13C3 PFHxS	103		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C8 PFOS	103		40 - 130				01/22/25 11:50	01/23/25 07:51	1
13C8 FOSA	83.7		40 - 130				01/22/25 11:50	01/23/25 07:51	1
d3-NMeFOSAA	91.4		40 - 170				01/22/25 11:50	01/23/25 07:51	1
d5-NEtFOSAA	87.3		25 - 135				01/22/25 11:50	01/23/25 07:51	1
13C2 6:2 FTS	84.7		40 - 200				01/22/25 11:50	01/23/25 07:51	1
13C3 HFPO-DA	91.4		40 - 130				01/22/25 11:50	01/23/25 07:51	1
d7-N-MeFOSE-M	94.3		10 - 130				01/22/25 11:50	01/23/25 07:51	1
d9-N-EtFOSE-M	89.4		10 - 130				01/22/25 11:50	01/23/25 07:51	1
d5-NEtPFOSA	81.0		10 - 130				01/22/25 11:50	01/23/25 07:51	1
d3-NMePFOSA	81.2		10 - 130				01/22/25 11:50	01/23/25 07:51	1

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	81.4		ng/L		102	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	45.6		ng/L		114	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.4		ng/L		91	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	43.4		ng/L		109	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	44.8		ng/L		112	70 - 150
Perfluorononanoic acid (PFNA)	40.0	41.6		ng/L		104	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	39.6		ng/L		99	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	46.0		ng/L		115	70 - 145
Perfluorododecanoic acid (PFDaA)	40.0	44.0		ng/L		110	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	40.0	41.5		ng/L		104	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	42.5		ng/L		106	60 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	35.5	44.7		ng/L		126	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.7		ng/L		103	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	38.0		ng/L		104	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	38.9		ng/L		102	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	38.2		ng/L		103	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	40.0		ng/L		104	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.1		ng/L		91	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	33.1		ng/L		85	50 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	70.7		ng/L		93	65 - 155
Perfluorooctanesulfonamide (PFOSA)	40.0	39.4		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.6		ng/L		106	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	41.0		ng/L		102	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.6		ng/L		107	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	45.5		ng/L		114	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	195		ng/L		98	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	213		ng/L		106	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	30.4		ng/L		101	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	45.5		ng/L		120	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	42.8		ng/L		107	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	44.2		ng/L		111	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	45.7		ng/L		114	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	40.0		ng/L		107	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	38.8		ng/L		103	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	39.2		ng/L		110	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	80.0		ng/L		100	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	188		ng/L		94	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	171		ng/L		86	50 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	97.3		5 - 130
13C5 PFPeA	103		40 - 130
13C5 PFHxA	104		40 - 130
13C4 PFHpA	110		40 - 130
13C8 PFOA	93.2		40 - 130
13C9 PFNA	102		40 - 130
13C6 PFDA	101		40 - 130
13C7 PFUnA	87.9		30 - 130
13C2 PFDoA	84.2		10 - 130
13C2 PFTeDA	77.9		10 - 130
13C3 PFBS	91.3		40 - 135
13C3 PFHxS	104		40 - 130
13C8 PFOS	94.8		40 - 130
13C8 FOSA	83.1		40 - 130
d3-NMeFOSAA	86.6		40 - 170
d5-NEtFOSAA	75.5		25 - 135
13C2 6:2 FTS	85.2		40 - 200
13C3 HFPO-DA	92.2		40 - 130
d7-N-MeFOSE-M	86.8		10 - 130
d9-N-EtFOSE-M	86.1		10 - 130
d5-NEtPFOSA	84.3		10 - 130
d3-NMePFOSA	83.2		10 - 130

Lab Sample ID: LCSD 320-828863/4-A
Matrix: Water
Analysis Batch: 828999

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 828863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits		RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	81.1		ng/L		101	70 - 140		0	30
Perfluoropentanoic acid (PFPeA)	40.0	43.5		ng/L		109	65 - 135		5	30
Perfluorohexanoic acid (PFHxA)	40.0	36.3		ng/L		91	70 - 145		0	30
Perfluoroheptanoic acid (PFHpA)	40.0	44.2		ng/L		110	70 - 150		2	30
Perfluorooctanoic acid (PFOA)	40.0	42.1		ng/L		105	70 - 150		6	30
Perfluorononanoic acid (PFNA)	40.0	35.7		ng/L		89	70 - 150		15	30
Perfluorodecanoic acid (PFDA)	40.0	40.8		ng/L		102	70 - 140		3	30
Perfluoroundecanoic acid (PFUnA)	40.0	43.4		ng/L		108	70 - 145		6	30
Perfluorododecanoic acid (PFDoA)	40.0	43.7		ng/L		109	70 - 140		1	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	42.4		ng/L		106	65 - 140		2	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	44.7		ng/L		112	60 - 140		5	30
Perfluorobutanesulfonic acid (PFBS)	35.5	41.9		ng/L		118	60 - 145		6	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.2		ng/L		110	65 - 140		6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.0		ng/L		101	65 - 145		3	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.5		ng/L		104	70 - 150		2	30
Perfluorooctanesulfonic acid (PFOS)	37.2	36.8		ng/L		99	55 - 150		4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorononanesulfonic acid (PFNS)	38.5	38.7		ng/L		101	65 - 145	3	30
Perfluorodecanesulfonic acid (PFDS)	38.6	35.5		ng/L		92	60 - 145	1	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.0		ng/L		90	50 - 145	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	68.6		ng/L		90	65 - 155	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	39.2		ng/L		98	70 - 145	0	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	39.4		ng/L		98	60 - 150	8	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	44.1		ng/L		110	65 - 145	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	44.0		ng/L		110	50 - 140	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	44.2		ng/L		110	70 - 145	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	188		ng/L		94	70 - 145	4	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	201		ng/L		101	70 - 135	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	30.7		ng/L		102	70 - 140	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	45.5		ng/L		120	65 - 145	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.5		ng/L		111	55 - 140	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.4		ng/L		104	60 - 150	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	39.0		ng/L		97	50 - 150	16	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	39.7		ng/L		106	70 - 155	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	42.0		ng/L		111	55 - 160	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	37.3		ng/L		105	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	79.0		ng/L		99	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	182		ng/L		91	70 - 135	3	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	160		ng/L		80	50 - 145	7	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	98.1		5 - 130
13C5 PFPeA	105		40 - 130
13C5 PFHxA	112		40 - 130
13C4 PFHpA	112		40 - 130
13C8 PFOA	101		40 - 130
13C9 PFNA	111		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C6 PFDA	95.8		40 - 130
13C7 PFUnA	96.5		30 - 130
13C2 PFDoA	84.5		10 - 130
13C2 PFTeDA	77.6		10 - 130
13C3 PFBS	97.9		40 - 135
13C3 PFHxS	107		40 - 130
13C8 PFOS	105		40 - 130
13C8 FOSA	85.3		40 - 130
d3-NMeFOSAA	87.3		40 - 170
d5-NEtFOSAA	77.3		25 - 135
13C2 6:2 FTS	88.7		40 - 200
13C3 HFPO-DA	92.4		40 - 130
d7-N-MeFOSE-M	89.0		10 - 130
d9-N-EtFOSE-M	85.9		10 - 130
d5-NEtPFOSA	79.0		10 - 130
d3-NMePFOSA	89.1		10 - 130

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	7.71		ng/L		96	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.71		ng/L		93	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.80		ng/L		120	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.39		ng/L		110	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.63		ng/L		116	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.30		ng/L		107	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.17		ng/L		104	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.51		ng/L		113	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.97		ng/L		99	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.95		ng/L		99	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.03		ng/L		101	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.75		ng/L		106	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.64		ng/L		97	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.73		ng/L		102	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.44		ng/L		90	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.97		ng/L		107	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.86		ng/L		100	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.56		ng/L		92	60 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.41		ng/L		88	50 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	7.38		ng/L		97	65 - 155
Perfluorooctanesulfonamide (PFOSA)	4.00	3.95		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.21		ng/L		80	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.55		ng/L		89	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.11		ng/L		103	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.83		ng/L		96	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	18.5		ng/L		93	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.7		ng/L		99	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.22		ng/L		107	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.93		ng/L		130	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.23		ng/L		106	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.18		ng/L		105	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.02		ng/L		100	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	3.74	3.78		ng/L		101	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	4.00		ng/L		106	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	4.54		ng/L		127	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.20		ng/L		102	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.3		ng/L		102	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	18.4		ng/L		92	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	99.0		5 - 130
13C5 PFPeA	110		40 - 130
13C5 PFHxA	97.2		40 - 130
13C4 PFHpA	115		40 - 130
13C8 PFOA	96.8		40 - 130
13C9 PFNA	108		40 - 130
13C6 PFDA	97.4		40 - 130
13C7 PFUnA	93.5		30 - 130
13C2 PFDoA	96.1		10 - 130
13C2 PFTeDA	87.4		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

	LLCS	LLCS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3 PFBS	98.4		40 - 135
13C3 PFHxS	108		40 - 130
13C8 PFOS	102		40 - 130
13C8 FOSA	84.5		40 - 130
d3-NMeFOSAA	92.5		40 - 170
d5-NEtFOSAA	80.9		25 - 135
13C2 6:2 FTS	87.3		40 - 200
13C3 HFPO-DA	93.3		40 - 130
d7-N-MeFOSE-M	91.7		10 - 130
d9-N-EtFOSE-M	90.1		10 - 130
d5-NEtPFOSA	81.6		10 - 130
d3-NMePFOSA	85.0		10 - 130

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 12:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 12:26	1
Isotope Dilution	MB	MB	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS - RA	89.9		40 - 200				01/22/25 11:50	01/23/25 12:26	1
13C2 8:2 FTS - RA	81.9		40 - 300				01/22/25 11:50	01/23/25 12:26	1

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	75.0	77.0		ng/L		103		70 - 145	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA	76.8	80.4		ng/L		105		60 - 150	
Isotope Dilution	LCS	LCS	Limits						
13C2 4:2 FTS - RA	88.0		40 - 200						
13C2 8:2 FTS - RA	74.6		40 - 300						

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	75.0	77.6		ng/L		103		70 - 145	18	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA	76.8	76.6		ng/L		100	60 - 150	2	30
Isotope Dilution	%Recovery	Qualifier	Limits						
13C2 4:2 FTS - RA	89.7		40 - 200						
13C2 8:2 FTS - RA	77.8		40 - 300						

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	7.50	8.42		ng/L		112	70 - 145		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA	7.68	8.17		ng/L		106	60 - 150		
Isotope Dilution	%Recovery	Qualifier	Limits						
13C2 4:2 FTS - RA	84.0		40 - 200						
13C2 8:2 FTS - RA	76.0		40 - 300						

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 320-828407/1

Matrix: Water

Analysis Batch: 828407

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.0	5.0	mg/L			01/20/25 14:17	1

Lab Sample ID: LCS 320-828407/2

Matrix: Water

Analysis Batch: 828407

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	97.6		mg/L		98	85 - 115		

Lab Sample ID: 320-118296-1 DU

Matrix: Water

Analysis Batch: 828407

Client Sample ID: INF-COMP-202501

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	250		250		mg/L		0.4	20

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

LCMS

Prep Batch: 828473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-2	Eff-202501	Total/NA	Water	1633	
320-118296-3	Eff-G1-202501	Total/NA	Water	1633	
320-118296-4	Eff-G2-202501	Total/NA	Water	1633	
320-118296-5	Eff-G3-202501	Total/NA	Water	1633	
320-118296-6	Eff-G4-202501	Total/NA	Water	1633	
MB 320-828473/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-828473/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-828473/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-828473/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 828567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-2	Eff-202501	Total/NA	Water	1633	828473
320-118296-3	Eff-G1-202501	Total/NA	Water	1633	828473
320-118296-4	Eff-G2-202501	Total/NA	Water	1633	828473
320-118296-5	Eff-G3-202501	Total/NA	Water	1633	828473
320-118296-6	Eff-G4-202501	Total/NA	Water	1633	828473
MB 320-828473/1-A	Method Blank	Total/NA	Water	1633	828473
LCS 320-828473/3-A	Lab Control Sample	Total/NA	Water	1633	828473
LCSD 320-828473/4-A	Lab Control Sample Dup	Total/NA	Water	1633	828473
LLCS 320-828473/2-A	Lab Control Sample	Total/NA	Water	1633	828473

Prep Batch: 828863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1	INF-COMP-202501	Total/NA	Water	1633	
320-118296-1 - RA	INF-COMP-202501	Total/NA	Water	1633	
MB 320-828863/1-A	Method Blank	Total/NA	Water	1633	
MB 320-828863/1-A - RA	Method Blank	Total/NA	Water	1633	
LCS 320-828863/3-A	Lab Control Sample	Total/NA	Water	1633	
LCS 320-828863/3-A - RA	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-828863/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LCSD 320-828863/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-828863/2-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-828863/2-A - RA	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 828999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-828863/1-A	Method Blank	Total/NA	Water	1633	828863
LCS 320-828863/3-A	Lab Control Sample	Total/NA	Water	1633	828863
LCSD 320-828863/4-A	Lab Control Sample Dup	Total/NA	Water	1633	828863
LLCS 320-828863/2-A	Lab Control Sample	Total/NA	Water	1633	828863

Analysis Batch: 829078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-828863/1-A - RA	Method Blank	Total/NA	Water	1633	828863
LCS 320-828863/3-A - RA	Lab Control Sample	Total/NA	Water	1633	828863
LCSD 320-828863/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633	828863
LLCS 320-828863/2-A - RA	Lab Control Sample	Total/NA	Water	1633	828863

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

LCMS

Analysis Batch: 829229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1	INF-COMP-202501	Total/NA	Water	1633	828863

Analysis Batch: 829441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1 - RA	INF-COMP-202501	Total/NA	Water	1633	828863

General Chemistry

Analysis Batch: 828407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1	INF-COMP-202501	Total/NA	Water	SM 2540D	
320-118296-2	Eff-202501	Total/NA	Water	SM 2540D	
320-118296-3	Eff-G1-202501	Total/NA	Water	SM 2540D	
320-118296-4	Eff-G2-202501	Total/NA	Water	SM 2540D	
320-118296-5	Eff-G3-202501	Total/NA	Water	SM 2540D	
320-118296-6	Eff-G4-202501	Total/NA	Water	SM 2540D	
MB 320-828407/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 320-828407/2	Lab Control Sample	Total/NA	Water	SM 2540D	
320-118296-1 DU	INF-COMP-202501	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			154.2 mL	5.0 mL	828863	01/22/25 11:50	KMG	EET SAC
Total/NA	Analysis	1633		1			829229	01/23/25 22:06	P1P	EET SAC
Total/NA	Prep	1633	RA		154.2 mL	5.0 mL	828863	01/22/25 11:50	KMG	EET SAC
Total/NA	Analysis	1633	RA	1			829441	01/24/25 15:20	S1M	EET SAC
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	828407	01/20/25 14:17	JCB	EET SAC

Client Sample ID: Eff-202501

Lab Sample ID: 320-118296-2

Date Collected: 01/14/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			162.4 mL	5.0 mL	828473	01/21/25 05:14	GAT	EET SAC
Total/NA	Analysis	1633		1			828567	01/21/25 14:39	C1P	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	828407	01/20/25 14:17	JCB	EET SAC

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			169.5 mL	5.0 mL	828473	01/21/25 05:14	GAT	EET SAC
Total/NA	Analysis	1633		1			828567	01/21/25 14:56	C1P	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	828407	01/20/25 14:17	JCB	EET SAC

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			169.8 mL	5.0 mL	828473	01/21/25 05:14	GAT	EET SAC
Total/NA	Analysis	1633		1			828567	01/21/25 15:12	C1P	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	828407	01/20/25 14:17	JCB	EET SAC

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			160.8 mL	5.0 mL	828473	01/21/25 05:14	GAT	EET SAC
Total/NA	Analysis	1633		1			828567	01/21/25 15:29	C1P	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	828407	01/20/25 14:17	JCB	EET SAC

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G4-202501
Date Collected: 01/14/25 14:55
Date Received: 01/16/25 09:30

Lab Sample ID: 320-118296-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			172.5 mL	5.0 mL	828473	01/21/25 05:14	GAT	EET SAC
Total/NA	Analysis	1633		1			828567	01/21/25 15:45	C1P	EET SAC
Total/NA	Analysis	SM 2540D		1	980 mL	250 mL	828407	01/20/25 14:17	JCB	EET SAC

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-25
Wisconsin	State	998204680	01-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633	1633	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
1633	1633	Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
1633	1633	Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
1633	1633	Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
1633	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633	1633	Water	4,8-Dioxo-3H-perfluorononanoic acid (ADONA)
1633	1633	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)
1633	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
1633	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
1633	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633	1633	Water	Perfluorobutanoic acid (PFBA)
1633	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633	1633	Water	Perfluorodecanoic acid (PFDA)
1633	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633	1633	Water	Perfluorododecanoic acid (PFDoS)
1633	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633	1633	Water	Perfluorohexanesulfonic acid (PFHxS)

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Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633	1633	Water	Perfluorohexanoic acid (PFHxA)
1633	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633	1633	Water	Perfluorononanoic acid (PFNA)
1633	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633	1633	Water	Perfluorooctanesulfonic acid (PFOS)
1633	1633	Water	Perfluorooctanoic acid (PFOA)
1633	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633	1633	Water	Perfluoropentanoic acid (PFPeA)
1633	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633	1633	Water	Perfluorotridecanoic acid (PFTeDA)
1633	1633	Water	Perfluoroundecanoic acid (PFUnA)
SM 2540D		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Method	Method Description	Protocol	Laboratory
1633	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118296-1	INF-COMP-202501	Water	01/13/25 23:59	01/16/25 09:30
320-118296-2	Eff-202501	Water	01/14/25 23:59	01/16/25 09:30
320-118296-3	Eff-G1-202501	Water	01/14/25 05:50	01/16/25 09:30
320-118296-4	Eff-G2-202501	Water	01/14/25 08:45	01/16/25 09:30
320-118296-5	Eff-G3-202501	Water	01/14/25 11:45	01/16/25 09:30
320-118296-6	Eff-G4-202501	Water	01/14/25 14:55	01/16/25 09:30

Environment Testing

[illegible]



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 2/27/2025 6:16:15 PM Revision 1

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-118296-2

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Revision 1

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-118296-2

Job ID: 320-118296-2

Eurofins Sacramento

Job Narrative 320-118296-2

Revision

The report being provided is a revision of the original report sent on 2/6/2025. The report (revision 1) is being revised due to correct the analytes reported for several samples and to correct the narrative as needed.

Receipt

The samples were received on 1/16/2025 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0° C.

LCMS

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INFCOMP-202501 (320-118296-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-COMP-202501 (320-118296-1).

Method 1633: Internal standard (ISTD) response for the following sample was outside control limits: INF-COMP-202501 (320-118296-1). The sample was re-analyzed with concurring results; therefore, the data have been reported.

Method 1633: The low level continuing calibration verification (CCVL) associated with batch 320-828999 recovered above the upper control limit for Nonfluoro-3,6-dioxahexanoic acid (NFDHA). The MB and the samples associated with this CCV are non-detected, and the LLCS/LCS/LCSD are in control for the affected analyte; therefore, the data have been reported. The following samples are associated with this narration: INF-COMP-202501 (320-118296-1), (CCVL 320-828999/2), (LCS 320-828863/3-A), (LCSD 320-828863/4-A), (LLCS 320-828863/2-A) and (MB 320-828863/1-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633: As specified in client instructions, sample INF-COMP-202501(320-118296-1) was fortified with IDA then centrifuged. The supernatant was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual solids were extracted the resulting extract was used for SPE elution of the supernatant to generate a single extract for analysis.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	12		3.1	0.78	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	4.0		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	4.9		1.6	0.39	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.39	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	4.8		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	0.61	J I	1.6	0.39	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.6		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.7		1.6	0.39	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.7	I	1.6	0.39	ng/L	1		1633	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.3	J	3.1	0.78	ng/L	1		1633	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.53	J	1.6	0.39	ng/L	1		1633	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		7.8	2.0	ng/L	1		1633	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoropentanoic acid (PFPeA)	4.0		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorohexanoic acid (PFHxA)	4.9		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorooctanoic acid (PFOA)	4.8		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorononanoic acid (PFNA)	0.61	J I	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorobutanesulfonic acid (PFBS)	2.6		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorohexanesulfonic acid (PFHxS)	6.7		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorooctanesulfonic acid (PFOS)	6.7	I	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.3	J	3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.53	J	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.31	ng/L		01/22/25 11:50	01/23/25 22:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	^+	1.6	0.56	ng/L		01/22/25 11:50	01/23/25 22:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.6	0.45	ng/L		01/22/25 11:50	01/23/25 22:23	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	91.3	*3	5 - 130	01/22/25 11:50	01/23/25 22:23	1
13C5 PFPeA	78.8		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C5 PFHxA	104		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C4 PFHpA	122		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C8 PFOA	102		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C9 PFNA	94.7		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C6 PFDA	94.8		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C7 PFUnA	63.0		30 - 130	01/22/25 11:50	01/23/25 22:23	1
13C2 PFDoA	48.3		10 - 130	01/22/25 11:50	01/23/25 22:23	1
13C2 PFTeDA	34.9		10 - 130	01/22/25 11:50	01/23/25 22:23	1
13C3 PFBS	87.1		40 - 135	01/22/25 11:50	01/23/25 22:23	1
13C3 PFHxS	109		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C8 PFOS	102		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C8 FOSA	91.8		40 - 130	01/22/25 11:50	01/23/25 22:23	1
d3-NMeFOSAA	40.6		40 - 170	01/22/25 11:50	01/23/25 22:23	1
d5-NEtFOSAA	48.6		25 - 135	01/22/25 11:50	01/23/25 22:23	1
13C2 6:2 FTS	249	*5+	40 - 200	01/22/25 11:50	01/23/25 22:23	1
13C2 8:2 FTS	158		40 - 300	01/22/25 11:50	01/23/25 22:23	1
13C3 HFPO-DA	124		40 - 130	01/22/25 11:50	01/23/25 22:23	1
d7-N-MeFOSE-M	63.6		10 - 130	01/22/25 11:50	01/23/25 22:23	1
d9-N-EtFOSE-M	67.0		10 - 130	01/22/25 11:50	01/23/25 22:23	1
d5-NEtPFOSA	79.1		10 - 130	01/22/25 11:50	01/23/25 22:23	1
d3-NMePFOSA	78.7		10 - 130	01/22/25 11:50	01/23/25 22:23	1

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.78	ng/L		01/22/25 11:50	01/24/25 15:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	153		40 - 200				01/22/25 11:50	01/24/25 15:37	1

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-118296-1	INF-COMP-202501	91.3 *3	78.8	104	122	102	94.7	94.8	63.0
320-118296-1 - RA	INF-COMP-202501								
LCS 320-828863/3-A	Lab Control Sample	97.3	103	104	110	93.2	102	101	87.9
LCS 320-828863/3-A - RA	Lab Control Sample								
LCSD 320-828863/4-A	Lab Control Sample Dup	98.1	105	112	112	101	111	95.8	96.5
LCSD 320-828863/4-A - RA	Lab Control Sample Dup								
LLCS 320-828863/2-A	Lab Control Sample	99.0	110	97.2	115	96.8	108	97.4	93.5
LLCS 320-828863/2-A - RA	Lab Control Sample								
MB 320-828863/1-A	Method Blank	97.3	97.6	105	112	101	101	93.2	90.0
MB 320-828863/1-A - RA	Method Blank								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-118296-1	INF-COMP-202501	48.3	34.9	87.1	109	102	91.8	40.6	48.6
320-118296-1 - RA	INF-COMP-202501								
LCS 320-828863/3-A	Lab Control Sample	84.2	77.9	91.3	104	94.8	83.1	86.6	75.5
LCS 320-828863/3-A - RA	Lab Control Sample								
LCSD 320-828863/4-A	Lab Control Sample Dup	84.5	77.6	97.9	107	105	85.3	87.3	77.3
LCSD 320-828863/4-A - RA	Lab Control Sample Dup								
LLCS 320-828863/2-A	Lab Control Sample	96.1	87.4	98.4	108	102	84.5	92.5	80.9
LLCS 320-828863/2-A - RA	Lab Control Sample								
MB 320-828863/1-A	Method Blank	87.6	80.2	97.7	103	103	83.7	91.4	87.3
MB 320-828863/1-A - RA	Method Blank								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-118296-1	INF-COMP-202501		249 *5+	158	124	63.6	67.0	79.1	78.7
320-118296-1 - RA	INF-COMP-202501	153							
LCS 320-828863/3-A	Lab Control Sample		85.2		92.2	86.8	86.1	84.3	83.2
LCS 320-828863/3-A - RA	Lab Control Sample	88.0		74.6					
LCSD 320-828863/4-A	Lab Control Sample Dup		88.7		92.4	89.0	85.9	79.0	89.1
LCSD 320-828863/4-A - RA	Lab Control Sample Dup	89.7		77.8					
LLCS 320-828863/2-A	Lab Control Sample		87.3		93.3	91.7	90.1	81.6	85.0
LLCS 320-828863/2-A - RA	Lab Control Sample	84.0		76.0					
MB 320-828863/1-A	Method Blank	71.6	84.7	68.9	91.4	94.3	89.4	81.0	81.2
MB 320-828863/1-A - RA	Method Blank	89.9		81.9					

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-118296-2

Project/Site: PFAS Sampling

C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		01/22/25 11:50	01/23/25 07:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.5	0.39	ng/L		01/22/25 11:50	01/23/25 07:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		01/22/25 11:50	01/23/25 07:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		2.0	0.58	ng/L		01/22/25 11:50	01/23/25 07:51	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	0.50	ng/L		01/22/25 11:50	01/23/25 07:51	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 07:51	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	2.5	ng/L		01/22/25 11:50	01/23/25 07:51	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	97.3		5 - 130	01/22/25 11:50	01/23/25 07:51	1
13C5 PFPeA	97.6		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C5 PFHxA	105		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C4 PFHpA	112		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C8 PFOA	101		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C9 PFNA	101		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C6 PFDA	93.2		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C7 PFUnA	90.0		30 - 130	01/22/25 11:50	01/23/25 07:51	1
13C2 PFDoA	87.6		10 - 130	01/22/25 11:50	01/23/25 07:51	1
13C2 PFTeDA	80.2		10 - 130	01/22/25 11:50	01/23/25 07:51	1
13C3 PFBS	97.7		40 - 135	01/22/25 11:50	01/23/25 07:51	1
13C3 PFHxS	103		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C8 PFOS	103		40 - 130	01/22/25 11:50	01/23/25 07:51	1
13C8 FOSA	83.7		40 - 130	01/22/25 11:50	01/23/25 07:51	1
d3-NMeFOSAA	91.4		40 - 170	01/22/25 11:50	01/23/25 07:51	1
d5-NEtFOSAA	87.3		25 - 135	01/22/25 11:50	01/23/25 07:51	1
13C2 4:2 FTS	71.6		40 - 200	01/22/25 11:50	01/23/25 07:51	1
13C2 6:2 FTS	84.7		40 - 200	01/22/25 11:50	01/23/25 07:51	1
13C2 8:2 FTS	68.9		40 - 300	01/22/25 11:50	01/23/25 07:51	1
13C3 HFPO-DA	91.4		40 - 130	01/22/25 11:50	01/23/25 07:51	1
d7-N-MeFOSE-M	94.3		10 - 130	01/22/25 11:50	01/23/25 07:51	1
d9-N-EtFOSE-M	89.4		10 - 130	01/22/25 11:50	01/23/25 07:51	1
d5-NEtPFOSA	81.0		10 - 130	01/22/25 11:50	01/23/25 07:51	1
d3-NMePFOSA	81.2		10 - 130	01/22/25 11:50	01/23/25 07:51	1

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	81.4		ng/L		102	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	45.6		ng/L		114	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.4		ng/L		91	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	43.4		ng/L		109	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	44.8		ng/L		112	70 - 150
Perfluorononanoic acid (PFNA)	40.0	41.6		ng/L		104	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	39.6		ng/L		99	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	46.0		ng/L		115	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	44.0		ng/L		110	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	41.5		ng/L		104	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	42.5		ng/L		106	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	44.7		ng/L		126	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.7		ng/L		103	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	38.0		ng/L		104	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	38.9		ng/L		102	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	38.2		ng/L		103	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	40.0		ng/L		104	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.1		ng/L		91	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	33.1		ng/L		85	50 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	70.7		ng/L		93	65 - 155
Perfluorooctanesulfonamide (PFOSA)	40.0	39.4		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.6		ng/L		106	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	41.0		ng/L		102	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.6		ng/L		107	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	45.5		ng/L		114	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	195		ng/L		98	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	213		ng/L		106	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	30.4		ng/L		101	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	45.5		ng/L		120	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	42.8		ng/L		107	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	44.2		ng/L		111	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	45.7		ng/L		114	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	40.0		ng/L		107	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	38.8		ng/L		103	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	39.2		ng/L		110	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	80.0		ng/L		100	65 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	188		ng/L		94	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	171		ng/L		86	50 - 145
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	97.3		5 - 130				
13C5 PFPeA	103		40 - 130				
13C5 PFHxA	104		40 - 130				
13C4 PFHpA	110		40 - 130				
13C8 PFOA	93.2		40 - 130				
13C9 PFNA	102		40 - 130				
13C6 PFDA	101		40 - 130				
13C7 PFUnA	87.9		30 - 130				
13C2 PFDoA	84.2		10 - 130				
13C2 PFTeDA	77.9		10 - 130				
13C3 PFBS	91.3		40 - 135				
13C3 PFHxS	104		40 - 130				
13C8 PFOS	94.8		40 - 130				
13C8 FOSA	83.1		40 - 130				
d3-NMeFOSAA	86.6		40 - 170				
d5-NEtFOSAA	75.5		25 - 135				
13C2 6:2 FTS	85.2		40 - 200				
13C3 HFPO-DA	92.2		40 - 130				
d7-N-MeFOSE-M	86.8		10 - 130				
d9-N-EtFOSE-M	86.1		10 - 130				
d5-NEtPFOSA	84.3		10 - 130				
d3-NMePFOSA	83.2		10 - 130				

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	81.1		ng/L		101	70 - 140	0	30
Perfluoropentanoic acid (PFPeA)	40.0	43.5		ng/L		109	65 - 135	5	30
Perfluorohexanoic acid (PFHxA)	40.0	36.3		ng/L		91	70 - 145	0	30
Perfluoroheptanoic acid (PFHpA)	40.0	44.2		ng/L		110	70 - 150	2	30
Perfluorooctanoic acid (PFOA)	40.0	42.1		ng/L		105	70 - 150	6	30
Perfluorononanoic acid (PFNA)	40.0	35.7		ng/L		89	70 - 150	15	30
Perfluorodecanoic acid (PFDA)	40.0	40.8		ng/L		102	70 - 140	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	43.4		ng/L		108	70 - 145	6	30
Perfluorododecanoic acid (PFDoA)	40.0	43.7		ng/L		109	70 - 140	1	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	42.4		ng/L		106	65 - 140	2	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	44.7		ng/L		112	60 - 140	5	30
Perfluorobutanesulfonic acid (PFBS)	35.5	41.9		ng/L		118	60 - 145	6	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.2		ng/L		110	65 - 140	6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.0		ng/L		101	65 - 145	3	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.5		ng/L		104	70 - 150	2	30
Perfluorooctanesulfonic acid (PFOS)	37.2	36.8		ng/L		99	55 - 150	4	30
Perfluorononanesulfonic acid (PFNS)	38.5	38.7		ng/L		101	65 - 145	3	30
Perfluorodecanesulfonic acid (PFDS)	38.6	35.5		ng/L		92	60 - 145	1	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.0		ng/L		90	50 - 145	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	68.6		ng/L		90	65 - 155	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	39.2		ng/L		98	70 - 145	0	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	39.4		ng/L		98	60 - 150	8	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	44.1		ng/L		110	65 - 145	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	44.0		ng/L		110	50 - 140	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	44.2		ng/L		110	70 - 145	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	188		ng/L		94	70 - 145	4	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	201		ng/L		101	70 - 135	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	30.7		ng/L		102	70 - 140	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	45.5		ng/L		120	65 - 145	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.5		ng/L		111	55 - 140	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.4		ng/L		104	60 - 150	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	39.0		ng/L		97	50 - 150	16	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	39.7		ng/L		106	70 - 155	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	42.0		ng/L		111	55 - 160	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	37.3		ng/L		105	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	79.0		ng/L		99	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	182		ng/L		91	70 - 135	3	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	160		ng/L		80	50 - 145	7	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	98.1		5 - 130
13C5 PFPeA	105		40 - 130
13C5 PFHxA	112		40 - 130
13C4 PFHpA	112		40 - 130
13C8 PFOA	101		40 - 130
13C9 PFNA	111		40 - 130
13C6 PFDA	95.8		40 - 130
13C7 PFUnA	96.5		30 - 130
13C2 PFDoA	84.5		10 - 130
13C2 PFTeDA	77.6		10 - 130
13C3 PFBS	97.9		40 - 135
13C3 PFHxS	107		40 - 130
13C8 PFOS	105		40 - 130
13C8 FOSA	85.3		40 - 130
d3-NMeFOSAA	87.3		40 - 170
d5-NEtFOSAA	77.3		25 - 135
13C2 6:2 FTS	88.7		40 - 200
13C3 HFPO-DA	92.4		40 - 130
d7-N-MeFOSE-M	89.0		10 - 130
d9-N-EtFOSE-M	85.9		10 - 130
d5-NEtPFOSA	79.0		10 - 130
d3-NMePFOSA	89.1		10 - 130

Lab Sample ID: LLCS 320-828863/2-A
Matrix: Water
Analysis Batch: 828999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 828863

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	7.71		ng/L		96	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.71		ng/L		93	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.80		ng/L		120	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.39		ng/L		110	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.63		ng/L		116	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.30		ng/L		107	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.17		ng/L		104	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.51		ng/L		113	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.97		ng/L		99	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.95		ng/L		99	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.03		ng/L		101	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.75		ng/L		106	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.64		ng/L		97	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.73		ng/L		102	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.44		ng/L		90	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.97		ng/L		107	55 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanesulfonic acid (PFNS)	3.85	3.86		ng/L		100	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.56		ng/L		92	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.41		ng/L		88	50 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	7.38		ng/L		97	65 - 155
Perfluorooctanesulfonamide (PFOSA)	4.00	3.95		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.21		ng/L		80	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.55		ng/L		89	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.11		ng/L		103	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.83		ng/L		96	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	18.5		ng/L		93	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.7		ng/L		99	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.22		ng/L		107	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.93		ng/L		130	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.23		ng/L		106	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.18		ng/L		105	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.02		ng/L		100	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	3.74	3.78		ng/L		101	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	4.00		ng/L		106	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	4.54		ng/L		127	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.20		ng/L		102	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.3		ng/L		102	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	18.4		ng/L		92	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	99.0		5 - 130
13C5 PFPeA	110		40 - 130
13C5 PFHxA	97.2		40 - 130
13C4 PFHpA	115		40 - 130
13C8 PFOA	96.8		40 - 130
13C9 PFNA	108		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 828999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C6 PFDA	97.4		40 - 130
13C7 PFUnA	93.5		30 - 130
13C2 PFDoA	96.1		10 - 130
13C2 PFTeDA	87.4		10 - 130
13C3 PFBS	98.4		40 - 135
13C3 PFHxS	108		40 - 130
13C8 PFOS	102		40 - 130
13C8 FOSA	84.5		40 - 130
d3-NMeFOSAA	92.5		40 - 170
d5-NEtFOSAA	80.9		25 - 135
13C2 6:2 FTS	87.3		40 - 200
13C3 HFPO-DA	93.3		40 - 130
d7-N-MeFOSE-M	91.7		10 - 130
d9-N-EtFOSE-M	90.1		10 - 130
d5-NEtPFOSA	81.6		10 - 130
d3-NMePFOSA	85.0		10 - 130

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: MB 320-828863/1-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 828863

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 12:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA	ND		4.0	1.0	ng/L		01/22/25 11:50	01/23/25 12:26	1
Isotope Dilution	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
13C2 4:2 FTS - RA	89.9		40 - 200				01/22/25 11:50	01/23/25 12:26	1
13C2 8:2 FTS - RA	81.9		40 - 300				01/22/25 11:50	01/23/25 12:26	1

Lab Sample ID: LCS 320-828863/3-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte		Spike Added	LCS	LCS	Unit	D	%Rec	%Rec		
			Result	Qualifier				Limits		
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA		75.0	77.0		ng/L		103	70 - 145		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA		76.8	80.4		ng/L		105	60 - 150		

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCSD 320-828863/4-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 828863

			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA			75.0	77.6		ng/L		103	70 - 145	18	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA			76.8	76.6		ng/L		100	60 - 150	2	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits								
13C2 4:2 FTS - RA	89.7		40 - 200								
13C2 8:2 FTS - RA	77.8		40 - 300								

Lab Sample ID: LLCS 320-828863/2-A

Matrix: Water

Analysis Batch: 829078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 828863

Analyte			Spike	LLCS	LLCS	Unit	D	%Rec	%Rec		
			Added	Result	Qualifier			Limits			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA			7.50	8.42		ng/L		112	70 - 145		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) - RA			7.68	8.17		ng/L		106	60 - 150		
LLCS LLCS											
Isotope Dilution	%Recovery	Qualifier	Limits								
13C2 4:2 FTS - RA	84.0		40 - 200								
13C2 8:2 FTS - RA	76.0		40 - 300								

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

LCMS

Prep Batch: 828863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1	INF-COMP-202501	Total/NA	Water	1633	
320-118296-1 - RA	INF-COMP-202501	Total/NA	Water	1633	
MB 320-828863/1-A	Method Blank	Total/NA	Water	1633	
MB 320-828863/1-A - RA	Method Blank	Total/NA	Water	1633	
LCS 320-828863/3-A	Lab Control Sample	Total/NA	Water	1633	
LCS 320-828863/3-A - RA	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-828863/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LCSD 320-828863/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-828863/2-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-828863/2-A - RA	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 828999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-828863/1-A	Method Blank	Total/NA	Water	1633	828863
LCS 320-828863/3-A	Lab Control Sample	Total/NA	Water	1633	828863
LCSD 320-828863/4-A	Lab Control Sample Dup	Total/NA	Water	1633	828863
LLCS 320-828863/2-A	Lab Control Sample	Total/NA	Water	1633	828863

Analysis Batch: 829078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-828863/1-A - RA	Method Blank	Total/NA	Water	1633	828863
LCS 320-828863/3-A - RA	Lab Control Sample	Total/NA	Water	1633	828863
LCSD 320-828863/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633	828863
LLCS 320-828863/2-A - RA	Lab Control Sample	Total/NA	Water	1633	828863

Analysis Batch: 829229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1	INF-COMP-202501	Total/NA	Water	1633	828863

Analysis Batch: 829441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118296-1 - RA	INF-COMP-202501	Total/NA	Water	1633	828863

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			159.7 mL	5.0 mL	828863	01/22/25 11:50	KMG	EET SAC
Total/NA	Analysis	1633		1			829229	01/23/25 22:23	P1P	EET SAC
Total/NA	Prep	1633	RA		159.7 mL	5.0 mL	828863	01/22/25 11:50	KMG	EET SAC
Total/NA	Analysis	1633	RA	1			829441	01/24/25 15:37	S1M	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-25
Wisconsin	State	998204680	01-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633	1633	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
1633	1633	Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
1633	1633	Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
1633	1633	Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
1633	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633	1633	Water	4,8-Dioxo-3H-perfluorononanoic acid (ADONA)
1633	1633	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)
1633	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
1633	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
1633	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633	1633	Water	Perfluorobutanoic acid (PFBA)
1633	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633	1633	Water	Perfluorodecanoic acid (PFDA)
1633	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633	1633	Water	Perfluorododecanoic acid (PFDoS)
1633	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633	1633	Water	Perfluorohexanesulfonic acid (PFHxS)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633	1633	Water	Perfluorohexanoic acid (PFHxA)
1633	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633	1633	Water	Perfluorononanoic acid (PFNA)
1633	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633	1633	Water	Perfluorooctanesulfonic acid (PFOS)
1633	1633	Water	Perfluorooctanoic acid (PFOA)
1633	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633	1633	Water	Perfluoropentanoic acid (PFPeA)
1633	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633	1633	Water	Perfluorotridecanoic acid (PFTTrDA)
1633	1633	Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Method	Method Description	Protocol	Laboratory
1633	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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14

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118296-1	INF-COMP-202501	Water	01/13/25 23:59	01/16/25 09:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Environment Testing

[illegible]

February 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 2/28/2025 4:23:52 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-119248-1

Eurofins Sacramento

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-119248-1

Job ID: 320-119248-1

Eurofins Sacramento

Job Narrative 320-119248-1

Revision Date: March 18, 2025

The report was revised to accurately reflect the laboratory's references for Method 1633A.

Receipt

The samples were received on 2/24/2025 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.2° C.

LCMS

Method 1633A: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INF-Comp 202502 (320-119248-1), Eff-G 202502 (320-119248-2), (CCB 320-835937/22), (CCB 320-835937/30) and (CCV 320-835937/29). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633A: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-Comp 202502 (320-119248-1) and Eff-G 202502 (320-119248-2).

Method 1633A: Internal standard (ISTD) response for the following sample was outside control limits: INF-Comp 202502 (320-119248-1). The sample was re-analyzed with concurring results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: The following samples in analytical batch 320-835389 were diluted due to the nature of the sample matrix: INF-Comp 202502 (320-119248-1) and (320-119248-D-1 DU). 100ml, instead of the nominal 250ml, was used. Please note that the sample was visibly non-homogenous with particulate matter of various sizes observed prior to analysis. Additionally, the sample was very difficult to filter. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633A: The following sample in preparation batch 320-835766 was observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction: INF-Comp 202502 (320-119248-1).

Method 1633A: The following samples in preparation batch 320-835766 were yellow in color prior to extraction: INF-Comp 202502 (320-119248-1) and Eff-G 202502 (320-119248-2).

Method 1633A: The following samples in preparation batch 320-835766 were yellow in color following extraction: INF-Comp 202502(320-119248-1) and Eff-G 202502 (320-119248-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: INF-Comp 202502

Lab Sample ID: 320-119248-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.9		3.4	0.32	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	3.3		1.7	0.20	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.7	0.29	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		1.7	0.33	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.56	J I	1.7	0.38	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.3		1.7	0.24	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.7	0.21	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5	I	1.7	0.23	ng/L	1		1633A	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.0	J	3.4	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	J	1.7	0.30	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.57	J	1.7	0.37	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.1	J	8.5	1.9	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	J	1.7	0.16	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	13		8.5	1.5	ng/L	1		1633A	Total/NA
Total Suspended Solids	200		13	13	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	8.9		1.5	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	5.9		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.5	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.5		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.58	J I	1.5	0.35	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.39	J	1.5	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	7.5	I	1.5	0.22	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.41	J	1.5	0.16	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.8		1.5	0.21	ng/L	1		1633A	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.82	J	3.1	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.82	J	1.5	0.17	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.58	J	1.5	0.27	ng/L	1		1633A	Total/NA
Total Suspended Solids	3.3		1.3	1.3	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: INF-Comp 202502

Lab Sample ID: 320-119248-1

Date Collected: 02/17/25 23:59

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.9		3.4	0.32	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoropentanoic acid (PFPeA)	3.3		1.7	0.20	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorohexanoic acid (PFHxA)	3.9		1.7	0.23	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.7	0.29	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorooctanoic acid (PFOA)	4.1		1.7	0.33	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorononanoic acid (PFNA)	0.56	J I	1.7	0.38	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.37	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.49	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorobutanesulfonic acid (PFBS)	4.3		1.7	0.24	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.7	0.21	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorooctanesulfonic acid (PFOS)	4.5	I	1.7	0.23	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.45	ng/L		02/26/25 04:29	02/26/25 18:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.4	0.37	ng/L		02/26/25 04:29	02/26/25 18:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.0	J	3.4	0.34	ng/L		02/26/25 04:29	02/26/25 18:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.4	0.76	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.33	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.38	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	J	1.7	0.30	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.57	J	1.7	0.37	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.1	J	8.5	1.9	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.5	2.1	ng/L		02/26/25 04:29	02/26/25 18:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.3	0.33	ng/L		02/26/25 04:29	02/26/25 18:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	J	1.7	0.16	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		02/26/25 04:29	02/26/25 18:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.61	ng/L		02/26/25 04:29	02/26/25 18:18	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: INF-Comp 202502

Lab Sample ID: 320-119248-1

Date Collected: 02/17/25 23:59

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		1.7	0.49	ng/L		02/26/25 04:29	02/26/25 18:18	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.7	0.25	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		02/26/25 04:29	02/26/25 18:18	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.61	ng/L		02/26/25 04:29	02/26/25 18:18	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	13		8.5	1.5	ng/L		02/26/25 04:29	02/26/25 18:18	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.5	1.1	ng/L		02/26/25 04:29	02/26/25 18:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88.1	*3	5 - 130	02/26/25 04:29	02/26/25 18:18	1
13C5 PFPeA	62.4		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C5 PFHxA	103		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C4 PFHpA	87.2		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C8 PFOA	99.8		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C9 PFNA	89.2		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C6 PFDA	87.0		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C7 PFUnA	70.8		30 - 130	02/26/25 04:29	02/26/25 18:18	1
13C2 PFDoA	61.7		10 - 130	02/26/25 04:29	02/26/25 18:18	1
13C2 PFTeDA	49.4		10 - 130	02/26/25 04:29	02/26/25 18:18	1
13C3 PFBS	79.8		40 - 135	02/26/25 04:29	02/26/25 18:18	1
13C3 PFHxS	102		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C8 PFOS	90.1		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C8 FOSA	86.1		40 - 130	02/26/25 04:29	02/26/25 18:18	1
D3-NMeFOSAA	48.1		40 - 170	02/26/25 04:29	02/26/25 18:18	1
D5-NEtFOSAA	28.2		25 - 135	02/26/25 04:29	02/26/25 18:18	1
13C2 4:2 FTS	182		40 - 200	02/26/25 04:29	02/26/25 18:18	1
13C2 6:2 FTS	267	*5+	40 - 200	02/26/25 04:29	02/26/25 18:18	1
13C2 8:2 FTS	168		40 - 300	02/26/25 04:29	02/26/25 18:18	1
13C3 HFPO-DA	106		40 - 130	02/26/25 04:29	02/26/25 18:18	1
D7-NMeFOSE	63.3		10 - 130	02/26/25 04:29	02/26/25 18:18	1
D9-NEtFOSE	41.3		10 - 130	02/26/25 04:29	02/26/25 18:18	1
D5-NEtFOSA	13.9		10 - 130	02/26/25 04:29	02/26/25 18:18	1
D3-NMeFOSA	69.2		10 - 130	02/26/25 04:29	02/26/25 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	200		13	13	mg/L			02/24/25 16:04	1

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.29	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoropentanoic acid (PFPeA)	8.9		1.5	0.18	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorohexanoic acid (PFHxA)	5.9		1.5	0.21	ng/L		02/26/25 04:29	02/26/25 18:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.5	0.27	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorooctanoic acid (PFOA)	4.5		1.5	0.30	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorononanoic acid (PFNA)	0.58	J I	1.5	0.35	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorodecanoic acid (PFDA)	0.39	J	1.5	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.43	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorobutanesulfonic acid (PFBS)	7.5	I	1.5	0.22	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoropentanesulfonic acid (PFPeS)	0.41	J	1.5	0.16	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.5	0.19	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.14	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorooctanesulfonic acid (PFOS)	1.8		1.5	0.21	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		02/26/25 04:29	02/26/25 18:35	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.82	J	3.1	0.31	ng/L		02/26/25 04:29	02/26/25 18:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.1	0.69	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorooctanesulfonamide (PFOSA)	0.82	J	1.5	0.17	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.58	J	1.5	0.27	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.7	1.8	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		02/26/25 04:29	02/26/25 18:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.30	ng/L		02/26/25 04:29	02/26/25 18:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		02/26/25 04:29	02/26/25 18:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		02/26/25 04:29	02/26/25 18:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.5	0.45	ng/L		02/26/25 04:29	02/26/25 18:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.5	0.23	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		02/26/25 04:29	02/26/25 18:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		02/26/25 04:29	02/26/25 18:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.7	1.3	ng/L		02/26/25 04:29	02/26/25 18:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.96	ng/L		02/26/25 04:29	02/26/25 18:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130				02/26/25 04:29	02/26/25 18:35	1
13C5 PFPeA	66.0		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C5 PFHxA	115		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C4 PFHpA	90.9		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C8 PFOA	97.4		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C9 PFNA	92.2		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C6 PFDA	96.5		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C7 PFUnA	65.2		30 - 130				02/26/25 04:29	02/26/25 18:35	1
13C2 PFDoA	59.9		10 - 130				02/26/25 04:29	02/26/25 18:35	1
13C2 PFTeDA	39.5		10 - 130				02/26/25 04:29	02/26/25 18:35	1
13C3 PFBS	97.9		40 - 135				02/26/25 04:29	02/26/25 18:35	1
13C3 PFHxS	118		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C8 PFOS	95.2		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C8 FOSA	82.3		40 - 130				02/26/25 04:29	02/26/25 18:35	1
D3-NMeFOSAA	86.1		40 - 170				02/26/25 04:29	02/26/25 18:35	1
D5-NEtFOSAA	81.3		25 - 135				02/26/25 04:29	02/26/25 18:35	1
13C2 4:2 FTS	261	*5+	40 - 200				02/26/25 04:29	02/26/25 18:35	1
13C2 6:2 FTS	194		40 - 200				02/26/25 04:29	02/26/25 18:35	1
13C2 8:2 FTS	138		40 - 300				02/26/25 04:29	02/26/25 18:35	1
13C3 HFPO-DA	92.0		40 - 130				02/26/25 04:29	02/26/25 18:35	1
D7-NMeFOSE	68.9		10 - 130				02/26/25 04:29	02/26/25 18:35	1
D9-NEtFOSE	63.8		10 - 130				02/26/25 04:29	02/26/25 18:35	1
D5-NEtFOSA	74.4		10 - 130				02/26/25 04:29	02/26/25 18:35	1
D3-NMeFOSA	77.9		10 - 130				02/26/25 04:29	02/26/25 18:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	3.3		1.3	1.3	mg/L			02/24/25 16:04	1

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-119248-1	INF-Comp 202502	88.1 *3	62.4	103	87.2	99.8	89.2	87.0	70.8
320-119248-2	Eff-G 202502	102	66.0	115	90.9	97.4	92.2	96.5	65.2
LCS 320-835766/3-A	Lab Control Sample	121	103	113	97.8	96.8	94.6	98.1	89.4
LCSD 320-835766/4-A	Lab Control Sample Dup	123	116	110	110	108	97.6	100	94.3
LLCS 320-835766/2-A	Lab Control Sample	127	88.2	105	88.9	96.1	105	97.4	98.0
MB 320-835766/1-A	Method Blank	126	90.2	107	75.1	98.4	97.8	92.0	94.9

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-119248-1	INF-Comp 202502	61.7	49.4	79.8	102	90.1	86.1	48.1	28.2
320-119248-2	Eff-G 202502	59.9	39.5	97.9	118	95.2	82.3	86.1	81.3
LCS 320-835766/3-A	Lab Control Sample	80.3	83.9	97.3	110	102	86.5	98.9	88.2
LCSD 320-835766/4-A	Lab Control Sample Dup	95.5	73.6	91.6	114	105	74.1	93.7	81.0
LLCS 320-835766/2-A	Lab Control Sample	92.2	92.6	104	120	112	85.5	96.1	100
MB 320-835766/1-A	Method Blank	78.1	78.3	108	108	100	81.1	91.3	92.2

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-119248-1	INF-Comp 202502	182	267 *5+	168	106	63.3	41.3	13.9	69.2
320-119248-2	Eff-G 202502	261 *5+	194	138	92.0	68.9	63.8	74.4	77.9
LCS 320-835766/3-A	Lab Control Sample	108	112	105	104	93.2	90.1	78.5	75.4
LCSD 320-835766/4-A	Lab Control Sample Dup	112	100	114	97.6	74.6	69.5	65.0	64.0
LLCS 320-835766/2-A	Lab Control Sample	101	104	99.1	94.8	87.3	89.8	68.3	65.7
MB 320-835766/1-A	Method Blank	112	116	113	87.7	87.8	80.8	71.5	68.8

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Project/Site: PFAS Sampling

d3NMFSa = D3-NMeFOSA

Job ID: 320-119248-1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-835766/1-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 835766

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		02/26/25 04:29	02/26/25 17:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		4.0	0.44	ng/L		02/26/25 04:29	02/26/25 17:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		4.0	0.41	ng/L		02/26/25 04:29	02/26/25 17:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		4.0	0.90	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		02/26/25 04:29	02/26/25 17:13	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		02/26/25 04:29	02/26/25 17:13	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		02/26/25 04:29	02/26/25 17:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		02/26/25 04:29	02/26/25 17:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		02/26/25 04:29	02/26/25 17:13	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		02/26/25 04:29	02/26/25 17:13	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		02/26/25 04:29	02/26/25 17:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.5	0.39	ng/L		02/26/25 04:29	02/26/25 17:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		02/26/25 04:29	02/26/25 17:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		02/26/25 04:29	02/26/25 17:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	ND		2.0	0.58	ng/L		02/26/25 04:29	02/26/25 17:13	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-835766/1-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 835766

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	0.30	ng/L		02/26/25 04:29	02/26/25 17:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		02/26/25 04:29	02/26/25 17:13	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		02/26/25 04:29	02/26/25 17:13	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		02/26/25 04:29	02/26/25 17:13	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		02/26/25 04:29	02/26/25 17:13	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	126		5 - 130	02/26/25 04:29	02/26/25 17:13	1
13C5 PFPeA	90.2		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C5 PFHxA	107		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C4 PFHpA	75.1		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C8 PFOA	98.4		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C9 PFNA	97.8		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C6 PFDA	92.0		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C7 PFUnA	94.9		30 - 130	02/26/25 04:29	02/26/25 17:13	1
13C2 PFDoA	78.1		10 - 130	02/26/25 04:29	02/26/25 17:13	1
13C2 PFTeDA	78.3		10 - 130	02/26/25 04:29	02/26/25 17:13	1
13C3 PFBS	108		40 - 135	02/26/25 04:29	02/26/25 17:13	1
13C3 PFHxS	108		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C8 PFOS	100		40 - 130	02/26/25 04:29	02/26/25 17:13	1
13C8 FOSA	81.1		40 - 130	02/26/25 04:29	02/26/25 17:13	1
D3-NMeFOSAA	91.3		40 - 170	02/26/25 04:29	02/26/25 17:13	1
D5-NEtFOSAA	92.2		25 - 135	02/26/25 04:29	02/26/25 17:13	1
13C2 4:2 FTS	112		40 - 200	02/26/25 04:29	02/26/25 17:13	1
13C2 6:2 FTS	116		40 - 200	02/26/25 04:29	02/26/25 17:13	1
13C2 8:2 FTS	113		40 - 300	02/26/25 04:29	02/26/25 17:13	1
13C3 HFPO-DA	87.7		40 - 130	02/26/25 04:29	02/26/25 17:13	1
D7-NMeFOSE	87.8		10 - 130	02/26/25 04:29	02/26/25 17:13	1
D9-NEtFOSE	80.8		10 - 130	02/26/25 04:29	02/26/25 17:13	1
D5-NEtFOSA	71.5		10 - 130	02/26/25 04:29	02/26/25 17:13	1
D3-NMeFOSA	68.8		10 - 130	02/26/25 04:29	02/26/25 17:13	1

Lab Sample ID: LCS 320-835766/3-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	75.3		ng/L		94	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	43.4		ng/L		109	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	33.8		ng/L		85	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	40.6		ng/L		102	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	39.5		ng/L		99	70 - 150
Perfluorononanoic acid (PFNA)	40.0	39.3		ng/L		98	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	39.7		ng/L		99	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-835766/3-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	40.0	41.1		ng/L		103	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	43.9		ng/L		110	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	42.0		ng/L		105	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	46.3		ng/L		116	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	38.7		ng/L		109	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	35.4		ng/L		94	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.0		ng/L		99	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	42.7		ng/L		112	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	37.7		ng/L		101	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	35.8		ng/L		93	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.8		ng/L		93	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.4		ng/L		94	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	80.5		ng/L		107	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	75.0		ng/L		99	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	73.5		ng/L		96	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	42.3		ng/L		106	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.6		ng/L		107	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	39.9		ng/L		100	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.7		ng/L		94	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	43.3		ng/L		108	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	189		ng/L		94	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	188		ng/L		94	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	30.6		ng/L		102	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	34.5		ng/L		91	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	39.6		ng/L		99	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.1		ng/L		103	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	35.2		ng/L		88	50 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-835766/3-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	37.4	36.6		ng/L		98	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	37.8	34.2		ng/L		91	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	33.9		ng/L		95	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	90.2		ng/L		113	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	172		ng/L		86	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	136		ng/L		68	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	121		5 - 130
13C5 PFPeA	103		40 - 130
13C5 PFHxA	113		40 - 130
13C4 PFHpA	97.8		40 - 130
13C8 PFOA	96.8		40 - 130
13C9 PFNA	94.6		40 - 130
13C6 PFDA	98.1		40 - 130
13C7 PFUnA	89.4		30 - 130
13C2 PFDoA	80.3		10 - 130
13C2 PFTeDA	83.9		10 - 130
13C3 PFBS	97.3		40 - 135
13C3 PFHxS	110		40 - 130
13C8 PFOS	102		40 - 130
13C8 FOSA	86.5		40 - 130
D3-NMeFOSAA	98.9		40 - 170
D5-NEtFOSAA	88.2		25 - 135
13C2 4:2 FTS	108		40 - 200
13C2 6:2 FTS	112		40 - 200
13C2 8:2 FTS	105		40 - 300
13C3 HFPO-DA	104		40 - 130
D7-NMeFOSE	93.2		10 - 130
D9-NEtFOSE	90.1		10 - 130
D5-NEtFOSA	78.5		10 - 130
D3-NMeFOSA	75.4		10 - 130

Lab Sample ID: LCSD 320-835766/4-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	64.1		ng/L		80	70 - 140	16	30
Perfluoropentanoic acid (PFPeA)	40.0	38.1		ng/L		95	65 - 135	13	30
Perfluorohexanoic acid (PFHxA)	40.0	35.9		ng/L		90	70 - 145	6	30
Perfluoroheptanoic acid (PFHpA)	40.0	39.4		ng/L		99	70 - 150	3	30
Perfluorooctanoic acid (PFOA)	40.0	35.3		ng/L		88	70 - 150	11	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-835766/4-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorononanoic acid (PFNA)	40.0	40.2		ng/L		101	70 - 150	2	30
Perfluorodecanoic acid (PFDA)	40.0	47.0		ng/L		118	70 - 140	17	30
Perfluoroundecanoic acid (PFUnA)	40.0	46.0		ng/L		115	70 - 145	11	30
Perfluorododecanoic acid (PFDoA)	40.0	42.2		ng/L		105	70 - 140	4	30
Perfluorotridecanoic acid (PFTrDA)	40.0	44.4		ng/L		111	65 - 140	6	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	45.2		ng/L		113	60 - 140	2	30
Perfluorobutanesulfonic acid (PFBS)	35.5	46.1		ng/L		130	60 - 145	18	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.1		ng/L		101	65 - 140	7	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.4		ng/L		103	65 - 145	4	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	36.0		ng/L		94	70 - 150	17	30
Perfluorooctanesulfonic acid (PFOS)	37.2	37.5		ng/L		101	55 - 150	0	30
Perfluorononanesulfonic acid (PFNS)	38.5	38.6		ng/L		100	65 - 145	7	30
Perfluorodecanesulfonic acid (PFDS)	38.6	34.1		ng/L		88	60 - 145	5	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	30.1		ng/L		77	50 - 145	19	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	62.1		ng/L		83	70 - 145	26	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	76.8		ng/L		101	65 - 155	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	76.0		ng/L		99	60 - 150	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	43.8		ng/L		110	70 - 145	4	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.1		ng/L		113	60 - 150	6	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.0		ng/L		100	65 - 145	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.8		ng/L		102	50 - 140	8	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.9		ng/L		102	70 - 145	6	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	197		ng/L		98	70 - 145	4	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	205		ng/L		103	70 - 135	9	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	33.7		ng/L		112	70 - 140	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	36.6		ng/L		97	65 - 145	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	36.1		ng/L		90	55 - 140	9	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	38.3		ng/L		96	60 - 150	7	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-835766/4-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	40.0	41.2		ng/L		103	50 - 150	16	30
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid (9CI-PF3ONS)	37.4	40.0		ng/L		107	70 - 155	9	30
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11CI-PF3OUdS)	37.8	36.3		ng/L		96	55 - 160	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	35.8		ng/L		100	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	75.6		ng/L		95	65 - 130	18	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	166		ng/L		83	70 - 135	4	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	145		ng/L		73	50 - 145	7	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	123		5 - 130
13C5 PFPeA	116		40 - 130
13C5 PFHxA	110		40 - 130
13C4 PFHpA	110		40 - 130
13C8 PFOA	108		40 - 130
13C9 PFNA	97.6		40 - 130
13C6 PFDA	100		40 - 130
13C7 PFUnA	94.3		30 - 130
13C2 PFDoA	95.5		10 - 130
13C2 PFTeDA	73.6		10 - 130
13C3 PFBS	91.6		40 - 135
13C3 PFHxS	114		40 - 130
13C8 PFOS	105		40 - 130
13C8 FOSA	74.1		40 - 130
D3-NMeFOSAA	93.7		40 - 170
D5-NEtFOSAA	81.0		25 - 135
13C2 4:2 FTS	112		40 - 200
13C2 6:2 FTS	100		40 - 200
13C2 8:2 FTS	114		40 - 300
13C3 HFPO-DA	97.6		40 - 130
D7-NMeFOSE	74.6		10 - 130
D9-NEtFOSE	69.5		10 - 130
D5-NEtFOSA	65.0		10 - 130
D3-NMeFOSA	64.0		10 - 130

Lab Sample ID: LLCS 320-835766/2-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	6.73		ng/L		84	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.51		ng/L		113	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	3.21		ng/L		80	70 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-835766/2-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	4.00	3.95		ng/L		99	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.49		ng/L		112	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.76		ng/L		94	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.30		ng/L		108	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	3.98		ng/L		100	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.89		ng/L		97	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.36		ng/L		109	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.80		ng/L		120	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	4.13		ng/L		116	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.23		ng/L		86	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.71		ng/L		102	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.19		ng/L		84	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.59		ng/L		97	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.67		ng/L		95	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.47		ng/L		90	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.33		ng/L		86	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	7.55		ng/L		101	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.36		ng/L		110	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.32		ng/L		108	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.13		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.95		ng/L		99	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.61		ng/L		90	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.06		ng/L		101	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.05		ng/L		101	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.0		ng/L		95	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	17.6		ng/L		88	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	2.93		ng/L		98	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.27		ng/L		86	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.05		ng/L		101	55 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-835766/2-A

Matrix: Water

Analysis Batch: 835937

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 835766

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.25		ng/L		106	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.39		ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	3.74	3.67		ng/L		98	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	3.61		ng/L		96	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.24		ng/L		91	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.09		ng/L		101	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	14.6		ng/L		73	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	13.0		ng/L		65	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	127		5 - 130
13C5 PFPeA	88.2		40 - 130
13C5 PFHxA	105		40 - 130
13C4 PFHpA	88.9		40 - 130
13C8 PFOA	96.1		40 - 130
13C9 PFNA	105		40 - 130
13C6 PFDA	97.4		40 - 130
13C7 PFUnA	98.0		30 - 130
13C2 PFDoA	92.2		10 - 130
13C2 PFTeDA	92.6		10 - 130
13C3 PFBS	104		40 - 135
13C3 PFHxS	120		40 - 130
13C8 PFOS	112		40 - 130
13C8 FOSA	85.5		40 - 130
D3-NMeFOSAA	96.1		40 - 170
D5-NEtFOSAA	100		25 - 135
13C2 4:2 FTS	101		40 - 200
13C2 6:2 FTS	104		40 - 200
13C2 8:2 FTS	99.1		40 - 300
13C3 HFPO-DA	94.8		40 - 130
D7-NMeFOSE	87.3		10 - 130
D9-NEtFOSE	89.8		10 - 130
D5-NEtFOSA	68.3		10 - 130
D3-NMeFOSA	65.7		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 320-835389/1

Matrix: Water

Analysis Batch: 835389

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.0	5.0	mg/L			02/24/25 16:04	1

Lab Sample ID: LCS 320-835389/2

Matrix: Water

Analysis Batch: 835389

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	98.0		mg/L		98	85 - 115

Lab Sample ID: LCSD 320-835389/3

Matrix: Water

Analysis Batch: 835389

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	98.8		mg/L		99	85 - 115	1	20

Lab Sample ID: 320-119248-1 DU

Matrix: Water

Analysis Batch: 835389

Client Sample ID: INF-Comp 202502

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	200		234		mg/L		17	20

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

LCMS

Prep Batch: 835766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119248-1	INF-Comp 202502	Total/NA	Water	1633A	
320-119248-2	Eff-G 202502	Total/NA	Water	1633A	
MB 320-835766/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-835766/3-A	Lab Control Sample	Total/NA	Water	1633A	
LCSD 320-835766/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	
LLCS 320-835766/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 835937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119248-1	INF-Comp 202502	Total/NA	Water	1633A	835766
320-119248-2	Eff-G 202502	Total/NA	Water	1633A	835766
MB 320-835766/1-A	Method Blank	Total/NA	Water	1633A	835766
LCS 320-835766/3-A	Lab Control Sample	Total/NA	Water	1633A	835766
LCSD 320-835766/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	835766
LLCS 320-835766/2-A	Lab Control Sample	Total/NA	Water	1633A	835766

General Chemistry

Analysis Batch: 835389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119248-1	INF-Comp 202502	Total/NA	Water	SM 2540D	
320-119248-2	Eff-G 202502	Total/NA	Water	SM 2540D	
MB 320-835389/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 320-835389/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 320-835389/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
320-119248-1 DU	INF-Comp 202502	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: INF-Comp 202502

Lab Sample ID: 320-119248-1

Date Collected: 02/17/25 23:59

Matrix: Water

Date Received: 02/24/25 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			147.6 mL	5.0 mL	835766	02/26/25 04:29	CGL	EET SAC
Total/NA	Analysis	1633A		1			835937	02/26/25 18:18	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	835389	02/24/25 16:04	JCB	EET SAC

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			162 mL	5.0 mL	835766	02/26/25 04:29	CGL	EET SAC
Total/NA	Analysis	1633A		1			835937	02/26/25 18:35	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	835389	02/24/25 16:04	JCB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633A	1633A	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
1633A	1633A	Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
1633A	1633A	Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
1633A	1633A	Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
1633A	1633A	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633A	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633A	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633A	Water	4,8-Dioxo-3H-perfluorononanoic acid (ADONA)
1633A	1633A	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)
1633A	1633A	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
1633A	1633A	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633A	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633A	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633A	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633A	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633A	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633A	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633A	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
1633A	1633A	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633A	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633A	Water	Perfluorobutanesulfonic acid (PFBS)
1633A	1633A	Water	Perfluorobutanoic acid (PFBA)
1633A	1633A	Water	Perfluorodecanesulfonic acid (PFDS)
1633A	1633A	Water	Perfluorodecanoic acid (PFDA)
1633A	1633A	Water	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633A	Water	Perfluorododecanoic acid (PFDaA)
1633A	1633A	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633A	Water	Perfluoroheptanoic acid (PFHpA)
1633A	1633A	Water	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633A	Water	Perfluorohexanoic acid (PFHxA)

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Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633A	Water	Perfluorononanesulfonic acid (PFNS)
1633A	1633A	Water	Perfluorononanoic acid (PFNA)
1633A	1633A	Water	Perfluorooctanesulfonamide (PFOSA)
1633A	1633A	Water	Perfluorooctanesulfonic acid (PFOS)
1633A	1633A	Water	Perfluorooctanoic acid (PFOA)
1633A	1633A	Water	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633A	Water	Perfluoropentanoic acid (PFPeA)
1633A	1633A	Water	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633A	Water	Perfluorotridecanoic acid (PFTTrDA)
1633A	1633A	Water	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2540D		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	EET SAC
1633A	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-119248-1	INF-Comp 202502	Water	02/17/25 23:59	02/24/25 09:25
320-119248-2	Eff-G 202502	Water	02/18/25 06:39	02/24/25 09:25

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880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Environment Testing

Results
to:
→

Results To $\nearrow$

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Ver 01/16/2019

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2/28/2025

March 2025



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 4/17/2025 12:41:19 PM Revision 1

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-119687-1

Eurofins Sacramento

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-119687-1

Job ID: 320-119687-1

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Job Narrative 320-119687-1

Revision

The report being provided is a revision of the original report sent on 3/31/2025. The report (revision 1) is being revised to correct and/or remove several narrations that were originally included by mistake.

Receipt

The samples were received on 3/12/2025 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9° C.

LCMS

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-11-202503 (320-119687-4), INF-18-202503 (320-119687-5), INF-COMP-202503 (320-119687-6), BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9) and BIO-A-24-202503 (320-119687-10). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-11-202503 (320-119687-4), INF-18-202503 (320-119687-5), INF-COMP-202503 (320-119687-6), EFF-G-202503 (320-119687-7) and (LLCS 320-840259/2-A). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633: Internal standard (ISTD) response 13C2 PFDA of several analytes for the following LLCS was outside control limits: (LLCS 320-840259/2-A). The LLCS was re-analyzed with ISTD response outside control limits. There is no adverse impact to data quality as the ISTD is not used to quantitate target analyte results; therefore, the data have been reported.

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-18-202503 (320-119687-5), INF-COMP-202503 (320-119687-6), EFF-G-202503 (320-119687-7) and BIO-A-24-202503 (320-119687-10).

Method 1633: The transition mass ratio was outside of the established ratio limit for Perfluorododecanesulfonic acid (PFDoS) in (CCVL 320-840661/2) associated to this data set. This is indicated by the "R" flag in the raw data. As the flagged data is in control in the low level continuing calibration verification (CCVL), there is no adverse impact to the data.

Method 1633: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-840552 and analytical batch 320-840998 recovered outside control limits for the following analytes: Perfluoro-3-methoxypropanoic acid (PFMPA).

Method 1633: Results for samples BIO-A-23-202503 (320-119687-9) and BIO-A-24-202503 (320-119687-10) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: The following samples in analytical batch 320-840397 were turbid, laden with sediment, and very difficult to filter. As a result, the samples were diluted. Elevated reporting limits (RLs) are provided. The following samples are associated with this narration: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-08-202503 (320-119687-3), INF-11-202503 (320-119687-4), INF-18-202503 (320-119687-5), INF-COMP-202503 (320-119687-6) and (320-119687-D-1 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633: The following samples in preparation batch 320-840259 were light brown in color, contained floating particulates, and were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-08-202503 (320-119687-3), INF-11-202503 (320-119687-4), INF-18-202503 (320-119687-5), INF-COMP-202503 (320-119687-6) and EFF-G-202503 (320-119687-7).

Method 1633: Due to the excess amount of sediment and particulates, the following samples were fortified with Isotope Dilution Analyte (IDA) then centrifuged and decanted into a new container: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-08-202503 (320-119687-3), INF-11-202503 (320-119687-4), INF-18-202503 (320-119687-5), INF-

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-119687-1

Job ID: 320-119687-1 (Continued)

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COMP-202503 (320-119687-6) and EFF-G-202503 (320-119687-7). The samples centrifuged tubes were kept for the eluting process.

Method 1633: The following samples in preparation batch 320-840259 were yellow in color following extraction: INF-02-202503 (320-119687-1), INF-07-202503 (320-119687-2), INF-08-202503 (320-119687-3), INF-11-202503 (320-119687-4), INF-18-202503 (320-119687-5) and INF-COMP-202503 (320-119687-6).

Method 1633 Shake: The following samples in preparation batch 320-840552 were yellow in color following extraction: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9) and BIO-A-24-202503 (320-119687-10).

Method 1633: Due to low isotope dilution analyte (IDA) percent recoveries for several analytes, the following sample in preparation batch 320-841272 deviated from the standard procedure: INF-08-202503 (320-119687-3). A 10x dilution was made on the sample, then fortified with Isotope Dilution Analyte (IDA) and extracted. The reporting limits (RLs) have been adjusted proportionately.

Method 1633: Sample INF-08-202503 (320-119687-3) was originally extracted at the nominal sample volume of 125mL. Due to severe matrix interferences impacting many isotope dilution analyte recoveries, the sample was re-extracted at a reduced volume. In order to provide the client with the lowest possible reporting limit, Perfluorobutanoic acid (PFBA), Perfluoropentanoic acid (PFPeA), 4:2 FTS, Perfluoro-3-methoxypropanoic acid (PFMPA), Perfluoro-4-methoxybutanoic acid (PFMBA) and 3-Perfluoropropylpropanoic acid (3:3 FTCA) were reported from the original 1X extraction, and the remaining analytes reported from the dilution.

Method 1633: The following sample in preparation batch 320-841272 was yellow in color following extraction: INF-08-202503 (320-119687-3).

Method 1633 Shake: The following samples in preparation batch 320-841388 were yellow in color following extraction: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9) and BIO-A-24-202503 (320-119687-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-02-202503

Lab Sample ID: 320-119687-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.1		3.0	0.28	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.99	J	1.5	0.26	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.6		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.6		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.9	I	1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	0.58	J	3.0	0.31	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	0.38	J	1.5	0.33	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	3.5	J	7.6	1.7	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.22	J	1.5	0.14	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.6	J	7.6	1.3	ng/L	1		1633A	Total/NA
Total Suspended Solids	210		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	21		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	8.6		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.1		1.5	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.1		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	8.3		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.6	I	1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	1.5	J	3.1	0.31	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	0.78	J	1.5	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	6.3	J	7.7	1.7	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	J	1.5	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	70		7.7	1.3	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	1.1	J	1.5	0.27	ng/L	1		1633A	Total/NA
Total Suspended Solids	170		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.5		3.4	0.32	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	J	1.7	0.16	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	7.6	J	20	2.7	ng/L	1		1633A	Total/NA
Total Suspended Solids	190		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	1.9		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.46	J	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.2		1.6	0.31	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-11-202503 (Continued)

Lab Sample ID: 320-119687-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.6	0.22	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.6	0.19	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.7	J	7.9	1.8	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25	J	1.6	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.6	J	7.9	1.4	ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	5.0		3.1	0.29	ng/L	1		1633A	Total/NA
Total Suspended Solids	240		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	4.7		1.7	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.4		1.7	0.29	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.9		1.7	0.32	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.4		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	13		1.7	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11	I	1.7	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	2.8	J	3.3	0.33	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.3	J	1.7	0.36	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.8	J	8.3	1.9	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	J	1.7	0.16	ng/L	1		1633A	Total/NA
11CI-PF3OUdS	0.45	J	1.7	0.25	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	6.3	J	8.3	1.4	ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	24		3.3	0.31	ng/L	1		1633A	Total/NA
Perfluoroundecanoic acid (PFUnA) - RA	0.54	J	1.7	0.19	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	0.57	J	1.7	0.29	ng/L	1		1633A	Total/NA
Total Suspended Solids	210		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.7		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.7	0.29	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.3		1.7	0.33	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.5		1.7	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.9	I	1.7	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	1.3	J	3.3	0.34	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.72	J	1.7	0.37	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.1	J	8.4	1.9	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25	J	1.7	0.16	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	13		8.4	1.4	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-COMP-202503 (Continued)

Lab Sample ID: 320-119687-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RA	14		3.3	0.31	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	0.73	J	1.7	0.29	ng/L	1		1633A	Total/NA
Total Suspended Solids	190		16	16	mg/L	1		SM 2540D	Total/NA

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	13		3.0	0.28	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	20		1.5	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	13		1.5	0.20	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.26	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.5		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.63	J I	1.5	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.8		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.6		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.6		1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	0.78	J	3.0	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.92	J	1.5	0.17	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.7	J	7.6	1.3	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA) - RA	0.66	J	1.5	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	0.75	J	1.5	0.27	ng/L	1		1633A	Total/NA
Total Suspended Solids	2.8		1.3	1.3	mg/L	1		SM 2540D	Total/NA

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.3	J	1.9	0.58	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.42	J	1.9	0.27	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	2.2		1.9	0.22	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.65	J	1.9	0.26	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	1.1	J	1.9	0.25	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.35	J	1.9	0.27	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.72	J	1.9	0.19	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.1		1.9	0.23	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	1.0	J	1.9	0.20	ug/Kg	1	✱	1633A	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.52	J	3.7	0.50	ug/Kg	1	✱	1633A	Total/NA
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	J	3.7	0.41	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.91	J	1.9	0.59	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6		1.9	0.16	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.7	J	9.3	0.82	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.5	J	9.3	0.72	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	170		9.3	2.3	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	12		1.9	0.15	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	13		9.4	2.0	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	15		0.52	0.042	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.2		0.26	0.043	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	2.5		0.26	0.038	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	21		0.26	0.031	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.5		0.26	0.036	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	5.1		0.26	0.035	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.68		0.26	0.038	ug/Kg	1	✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	1.4		0.26	0.076	ug/Kg	1	✱	1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.6		0.26	0.033	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4		0.26	0.026	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.19	J	0.26	0.021	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	17		0.26	0.033	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	1.7		0.26	0.027	ug/Kg	1	✱	1633A	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.3		0.52	0.070	ug/Kg	1	✱	1633A	Total/NA
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.5		0.52	0.057	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	2.5		0.26	0.082	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	9.8		0.26	0.022	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.9		1.3	0.11	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.6		1.3	0.10	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		1.3	0.32	ug/Kg	1	✱	1633A	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	30		1.3	0.32	ug/Kg	5	✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	64		1.3	0.26	ug/Kg	5	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA) - DL	58		1.3	0.40	ug/Kg	5	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - DL	31		1.3	0.10	ug/Kg	5	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	9.6		1.3	0.28	ug/Kg	1	✱	1633A	Total/NA

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	12		0.57	0.046	ug/Kg	1	✱	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	34		0.29	0.070	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	5.1		0.29	0.047	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	27		0.29	0.088	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	2.0		0.29	0.041	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	17		0.29	0.034	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.4		0.29	0.040	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	4.3		0.29	0.038	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.62		0.29	0.041	ug/Kg	1	✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	1.2		0.29	0.083	ug/Kg	1	✱	1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.8	I	0.29	0.036	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.29	0.029	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.15	J	0.29	0.023	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15		0.29	0.036	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503 (Continued)

Lab Sample ID: 320-119687-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.6		0.57	0.077	ug/Kg	1		✱	1633A	Total/NA
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.87		0.57	0.063	ug/Kg	1		✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.8		0.29	0.090	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.37		0.29	0.051	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.13	J	0.29	0.030	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10		0.29	0.024	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.2		1.4	0.13	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.6		1.4	0.11	ug/Kg	1		✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12		1.4	0.35	ug/Kg	1		✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	35		1.4	0.29	ug/Kg	5		✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	34		0.29	0.023	ug/Kg	1		✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	7.5		1.4	0.30	ug/Kg	1		✱	1633A	Total/NA

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-02-202503

Lab Sample ID: 320-119687-1

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.1		3.0	0.28	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.18	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorohexanoic acid (PFHxA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoroheptanoic acid (PFHpA)	0.99	J	1.5	0.26	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorooctanoic acid (PFOA)	2.6		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorononanoic acid (PFNA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorobutanesulfonic acid (PFBS)	1.6		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorooctanesulfonic acid (PFOS)	6.9	I	1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.40	ng/L		03/17/25 04:50	03/17/25 21:28	1
4:2 FTS	ND		3.0	0.33	ng/L		03/17/25 04:50	03/17/25 21:28	1
6:2 FTS	0.58	J	3.0	0.31	ng/L		03/17/25 04:50	03/17/25 21:28	1
8:2 FTS	ND		3.0	0.68	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.38	J	1.5	0.33	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.5	J	7.6	1.7	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.6	1.8	ng/L		03/17/25 04:50	03/17/25 21:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.30	ng/L		03/17/25 04:50	03/17/25 21:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.22	J	1.5	0.14	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 21:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		03/17/25 04:50	03/17/25 21:28	1
9CI-PF3ONS	ND		1.5	0.44	ng/L		03/17/25 04:50	03/17/25 21:28	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:28	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.55	ng/L		03/17/25 04:50	03/17/25 21:28	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.6	J	7.6	1.3	ng/L		03/17/25 04:50	03/17/25 21:28	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.6	0.94	ng/L		03/17/25 04:50	03/17/25 21:28	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-02-202503

Lab Sample ID: 320-119687-1

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	80.7		5 - 130	03/17/25 04:50	03/17/25 21:28	1
13C5 PFPeA	76.5		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C5 PFHxA	106		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C4 PFHpA	148	*5+	40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C8 PFOA	101		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C9 PFNA	106		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C3 PFBS	101		40 - 135	03/17/25 04:50	03/17/25 21:28	1
13C3 PFHxS	91.5		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C8 PFOS	77.7		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C8 FOSA	76.0		40 - 130	03/17/25 04:50	03/17/25 21:28	1
D5-NetFOSAA	25.7		25 - 135	03/17/25 04:50	03/17/25 21:28	1
13C2 4:2 FTS	186		40 - 200	03/17/25 04:50	03/17/25 21:28	1
13C2 6:2 FTS	219	*5+	40 - 200	03/17/25 04:50	03/17/25 21:28	1
13C2 8:2 FTS	235		40 - 300	03/17/25 04:50	03/17/25 21:28	1
13C3 HFPO-DA	154	*5+	40 - 130	03/17/25 04:50	03/17/25 21:28	1
D7-NMeFOSE	65.4		10 - 130	03/17/25 04:50	03/17/25 21:28	1
D9-NetFOSE	20.9		10 - 130	03/17/25 04:50	03/17/25 21:28	1
D5-NetFOSA	59.6		10 - 130	03/17/25 04:50	03/17/25 21:28	1
D3-NMeFOSA	78.8		10 - 130	03/17/25 04:50	03/17/25 21:28	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.5	0.44	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.61	ng/L		03/17/25 04:50	03/18/25 12:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.5	0.27	ng/L		03/17/25 04:50	03/18/25 12:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C6 PFDA	102		40 - 130				03/17/25 04:50	03/18/25 12:50	1
13C7 PFUnA	63.3		30 - 130				03/17/25 04:50	03/18/25 12:50	1
13C2 PFDoA	65.2		10 - 130				03/17/25 04:50	03/18/25 12:50	1
13C2 PFTeDA	28.6		10 - 130				03/17/25 04:50	03/18/25 12:50	1
D3-NMeFOSAA	29.3	*5-	40 - 170				03/17/25 04:50	03/18/25 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	210		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	21		3.1	0.29	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.18	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorohexanoic acid (PFHxA)	8.6		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoroheptanoic acid (PFHpA)	2.1		1.5	0.27	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorooctanoic acid (PFOA)	5.1		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 21:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		1.5	0.35	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorobutanesulfonic acid (PFBS)	8.3		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorohexanesulfonic acid (PFHxS)	3.9		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorooctanesulfonic acid (PFOS)	4.6	I	1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		03/17/25 04:50	03/17/25 21:44	1
4:2 FTS	ND		3.1	0.33	ng/L		03/17/25 04:50	03/17/25 21:44	1
6:2 FTS	1.5	J	3.1	0.31	ng/L		03/17/25 04:50	03/17/25 21:44	1
8:2 FTS	ND		3.1	0.69	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.78	J	1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.3	J	7.7	1.7	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		03/17/25 04:50	03/17/25 21:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.30	ng/L		03/17/25 04:50	03/17/25 21:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	J	1.5	0.15	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 21:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		03/17/25 04:50	03/17/25 21:44	1
9Cl-PF3ONS	ND		1.5	0.44	ng/L		03/17/25 04:50	03/17/25 21:44	1
11Cl-PF3OUdS	ND		1.5	0.23	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:44	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		03/17/25 04:50	03/17/25 21:44	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	70		7.7	1.3	ng/L		03/17/25 04:50	03/17/25 21:44	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.95	ng/L		03/17/25 04:50	03/17/25 21:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	67.3		5 - 130				03/17/25 04:50	03/17/25 21:44	1
13C5 PFPeA	76.9		40 - 130				03/17/25 04:50	03/17/25 21:44	1
13C5 PFHxA	102		40 - 130				03/17/25 04:50	03/17/25 21:44	1
13C4 PFHpA	80.0		40 - 130				03/17/25 04:50	03/17/25 21:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	34.4	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C9 PFNA	27.7	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C3 PFBS	57.4		40 - 135	03/17/25 04:50	03/17/25 21:44	1
13C3 PFHxS	26.1	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C8 PFOS	16.7	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C8 FOSA	17.9	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
D5-NEtFOSAA	13.1	*5-	25 - 135	03/17/25 04:50	03/17/25 21:44	1
13C2 4:2 FTS	207	*5+	40 - 200	03/17/25 04:50	03/17/25 21:44	1
13C2 6:2 FTS	53.9		40 - 200	03/17/25 04:50	03/17/25 21:44	1
13C2 8:2 FTS	49.9		40 - 300	03/17/25 04:50	03/17/25 21:44	1
13C3 HFPO-DA	122		40 - 130	03/17/25 04:50	03/17/25 21:44	1
D7-NMeFOSE	5.30	*5-	10 - 130	03/17/25 04:50	03/17/25 21:44	1
D9-NEtFOSE	4.03	*5-	10 - 130	03/17/25 04:50	03/17/25 21:44	1
D5-NEtFOSA	10.1		10 - 130	03/17/25 04:50	03/17/25 21:44	1
D3-NMeFOSA	10.6		10 - 130	03/17/25 04:50	03/17/25 21:44	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		03/17/25 04:50	03/18/25 13:04	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	1.1	J	1.5	0.27	ng/L		03/17/25 04:50	03/18/25 13:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	24.8	*5-	40 - 130	03/17/25 04:50	03/18/25 13:04	1
13C7 PFUnA	16.5	*5-	30 - 130	03/17/25 04:50	03/18/25 13:04	1
13C2 PFDoA	10.9		10 - 130	03/17/25 04:50	03/18/25 13:04	1
13C2 PFTeDA	5.41	*5-	10 - 130	03/17/25 04:50	03/18/25 13:04	1
D3-NMeFOSAA	12.7	*5-	40 - 170	03/17/25 04:50	03/18/25 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	170		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.5		3.4	0.32	ng/L		03/17/25 04:50	03/17/25 22:00	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.20	ng/L		03/17/25 04:50	03/17/25 22:00	1
4:2 FTS	ND		3.4	0.38	ng/L		03/17/25 04:50	03/17/25 22:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	J	1.7	0.16	ng/L		03/17/25 04:50	03/17/25 22:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		03/17/25 04:50	03/17/25 22:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.62	ng/L		03/17/25 04:50	03/17/25 22:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	75.5		5 - 130				03/17/25 04:50	03/17/25 22:00	1
13C5 PFPeA	66.9		40 - 130				03/17/25 04:50	03/17/25 22:00	1
13C2 4:2 FTS	60.3		40 - 200				03/17/25 04:50	03/17/25 22:00	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	7.6	J	20	2.7	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoroheptanoic acid (PFHpA)	ND		20	3.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorooctanoic acid (PFOA)	ND		20	3.9	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorononanoic acid (PFNA)	ND		20	4.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorodecanoic acid (PFDA)	ND		20	4.4	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoroundecanoic acid (PFUnA)	ND		20	2.3	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorododecanoic acid (PFDoA)	ND		20	5.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorotridecanoic acid (PFTrDA)	ND		20	5.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorotetradecanoic acid (PFTeDA)	ND		20	8.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorobutanesulfonic acid (PFBS)	ND		20	2.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoropentanesulfonic acid (PFPeS)	ND		20	2.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		20	2.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		20	1.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorooctanesulfonic acid (PFOS)	ND		20	2.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorononanesulfonic acid (PFNS)	ND		20	3.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorodecanesulfonic acid (PFDS)	ND		20	3.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorododecanesulfonic acid (PFDoS)	ND		20	5.3	ng/L		03/20/25 13:29	03/22/25 15:00	1
6:2 FTS	ND		40	4.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
8:2 FTS	ND		40	9.0	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorooctanesulfonamide (PFOSA)	ND		20	2.3	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		20	3.9	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		20	4.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	4.4	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		100	23	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		100	24	ng/L		03/20/25 13:29	03/22/25 15:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		15	3.9	ng/L		03/20/25 13:29	03/22/25 15:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		20	4.0	ng/L		03/20/25 13:29	03/22/25 15:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		20	7.2	ng/L		03/20/25 13:29	03/22/25 15:00	1
9CI-PF3ONS	ND		20	5.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
11CI-PF3OUs	ND		20	3.0	ng/L		03/20/25 13:29	03/22/25 15:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		20	2.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		100	17	ng/L		03/20/25 13:29	03/22/25 15:00	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		100	12	ng/L		03/20/25 13:29	03/22/25 15:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	97.6		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C4 PFHpA	117		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C8 PFOA	103		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C9 PFNA	92.2		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C6 PFDA	105		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C7 PFUnA	95.7		30 - 130				03/20/25 13:29	03/22/25 15:00	1
13C2 PFDoA	93.2		10 - 130				03/20/25 13:29	03/22/25 15:00	1
13C2 PFTeDA	85.1		10 - 130				03/20/25 13:29	03/22/25 15:00	1
13C3 PFBS	81.3		40 - 135				03/20/25 13:29	03/22/25 15:00	1
13C3 PFHxS	88.3		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C8 PFOS	93.0		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C8 FOSA	108		40 - 130				03/20/25 13:29	03/22/25 15:00	1
D3-NMeFOSAA	87.3		40 - 170				03/20/25 13:29	03/22/25 15:00	1
D5-NEtFOSAA	69.6		25 - 135				03/20/25 13:29	03/22/25 15:00	1
13C2 6:2 FTS	102		40 - 200				03/20/25 13:29	03/22/25 15:00	1
13C2 8:2 FTS	111		40 - 300				03/20/25 13:29	03/22/25 15:00	1
13C3 HFPO-DA	101		40 - 130				03/20/25 13:29	03/22/25 15:00	1
D7-NMeFOSE	76.7		10 - 130				03/20/25 13:29	03/22/25 15:00	1
D9-NEtFOSE	59.3		10 - 130				03/20/25 13:29	03/22/25 15:00	1
D5-NEtFOSA	53.4		10 - 130				03/20/25 13:29	03/22/25 15:00	1
D3-NMeFOSA	69.6		10 - 130				03/20/25 13:29	03/22/25 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	190		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorohexanoic acid (PFHxA)	1.9		1.6	0.21	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoroheptanoic acid (PFHpA)	0.46	J	1.6	0.27	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorooctanoic acid (PFOA)	2.2		1.6	0.31	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.6	0.22	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.6	0.19	ng/L		03/17/25 04:50	03/17/25 22:17	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		03/17/25 04:50	03/17/25 22:17	1
4:2 FTS	ND		3.1	0.34	ng/L		03/17/25 04:50	03/17/25 22:17	1
6:2 FTS	ND		3.1	0.32	ng/L		03/17/25 04:50	03/17/25 22:17	1
8:2 FTS	ND		3.1	0.71	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.7 J		7.9	1.8	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		03/17/25 04:50	03/17/25 22:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		03/17/25 04:50	03/17/25 22:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25 J		1.6	0.15	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 22:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		03/17/25 04:50	03/17/25 22:17	1
9Cl-PF3ONS	ND		1.6	0.46	ng/L		03/17/25 04:50	03/17/25 22:17	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 22:17	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.57	ng/L		03/17/25 04:50	03/17/25 22:17	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.6 J		7.9	1.4	ng/L		03/17/25 04:50	03/17/25 22:17	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		03/17/25 04:50	03/17/25 22:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	67.2		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C5 PFHxA	93.8		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C4 PFHpA	93.1		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C8 PFOA	61.5		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C9 PFNA	56.6		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C3 PFBS	54.6		40 - 135				03/17/25 04:50	03/17/25 22:17	1
13C3 PFHxS	48.6		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C8 PFOS	42.2		40 - 130				03/17/25 04:50	03/17/25 22:17	1
13C8 FOSA	49.4		40 - 130				03/17/25 04:50	03/17/25 22:17	1
D5-NEtFOSAA	19.2	*5-	25 - 135				03/17/25 04:50	03/17/25 22:17	1
13C2 4:2 FTS	204	*5+	40 - 200				03/17/25 04:50	03/17/25 22:17	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 6:2 FTS	134		40 - 200	03/17/25 04:50	03/17/25 22:17	1
13C2 8:2 FTS	106		40 - 300	03/17/25 04:50	03/17/25 22:17	1
13C3 HFPO-DA	101		40 - 130	03/17/25 04:50	03/17/25 22:17	1
D7-NMeFOSE	18.1		10 - 130	03/17/25 04:50	03/17/25 22:17	1
D9-NEtFOSE	9.76	*5-	10 - 130	03/17/25 04:50	03/17/25 22:17	1
D5-NEtFOSA	28.3		10 - 130	03/17/25 04:50	03/17/25 22:17	1
D3-NMeFOSA	35.8		10 - 130	03/17/25 04:50	03/17/25 22:17	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0		3.1	0.29	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		03/17/25 04:50	03/18/25 13:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.28	ng/L		03/17/25 04:50	03/18/25 13:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.4		5 - 130				03/17/25 04:50	03/18/25 13:32	1
13C6 PFDA	55.9		40 - 130				03/17/25 04:50	03/18/25 13:32	1
13C7 PFUnA	41.5		30 - 130				03/17/25 04:50	03/18/25 13:32	1
13C2 PFDoA	29.4		10 - 130				03/17/25 04:50	03/18/25 13:32	1
13C2 PFTeDA	16.5		10 - 130				03/17/25 04:50	03/18/25 13:32	1
D3-NMeFOSAA	23.0	*5-	40 - 170				03/17/25 04:50	03/18/25 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	240		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorohexanoic acid (PFHxA)	4.7		1.7	0.22	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoroheptanoic acid (PFHpA)	2.4		1.7	0.29	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorooctanoic acid (PFOA)	7.9		1.7	0.32	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorohexanesulfonic acid (PFHxS)	13		1.7	0.20	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.14	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorooctanesulfonic acid (PFOS)	11	I	1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:33	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		03/17/25 04:50	03/17/25 22:33	1
4:2 FTS	ND		3.3	0.36	ng/L		03/17/25 04:50	03/17/25 22:33	1
6:2 FTS	2.8	J	3.3	0.33	ng/L		03/17/25 04:50	03/17/25 22:33	1
8:2 FTS	ND		3.3	0.74	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.3	J	1.7	0.36	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.8	J	8.3	1.9	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.3	2.0	ng/L		03/17/25 04:50	03/17/25 22:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		03/17/25 04:50	03/17/25 22:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.33	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	J	1.7	0.16	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.21	ng/L		03/17/25 04:50	03/17/25 22:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.59	ng/L		03/17/25 04:50	03/17/25 22:33	1
9CI-PF3ONS	ND		1.7	0.48	ng/L		03/17/25 04:50	03/17/25 22:33	1
11CI-PF3OUdS	0.45	J	1.7	0.25	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		03/17/25 04:50	03/17/25 22:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		03/17/25 04:50	03/17/25 22:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	6.3	J	8.3	1.4	ng/L		03/17/25 04:50	03/17/25 22:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.3	1.0	ng/L		03/17/25 04:50	03/17/25 22:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	66.8		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C5 PFHxA	109		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C4 PFHpA	102		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C8 PFOA	102		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C9 PFNA	91.8		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C3 PFBS	94.3		40 - 135	03/17/25 04:50	03/17/25 22:33	1
13C3 PFHxS	97.3		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C8 PFOS	79.9		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C8 FOSA	69.3		40 - 130	03/17/25 04:50	03/17/25 22:33	1
D5-NEtFOSAA	22.0	*5-	25 - 135	03/17/25 04:50	03/17/25 22:33	1
13C2 4:2 FTS	211	*5+	40 - 200	03/17/25 04:50	03/17/25 22:33	1
13C2 6:2 FTS	211	*5+	40 - 200	03/17/25 04:50	03/17/25 22:33	1
13C2 8:2 FTS	209		40 - 300	03/17/25 04:50	03/17/25 22:33	1
13C3 HFPO-DA	129		40 - 130	03/17/25 04:50	03/17/25 22:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D7-NMeFOSE	67.7		10 - 130	03/17/25 04:50	03/17/25 22:33	1
D9-NEtFOSE	18.9		10 - 130	03/17/25 04:50	03/17/25 22:33	1
D5-NEtFOSA	64.0		10 - 130	03/17/25 04:50	03/17/25 22:33	1
D3-NMeFOSA	79.0		10 - 130	03/17/25 04:50	03/17/25 22:33	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	24		3.3	0.31	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.36	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluoroundecanoic acid (PFUnA)	0.54	J	1.7	0.19	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.48	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.67	ng/L		03/17/25 04:50	03/18/25 13:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.57	J	1.7	0.29	ng/L		03/17/25 04:50	03/18/25 13:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	104		5 - 130				03/17/25 04:50	03/18/25 13:46	1
13C6 PFDA	109		40 - 130				03/17/25 04:50	03/18/25 13:46	1
13C7 PFUnA	58.3		30 - 130				03/17/25 04:50	03/18/25 13:46	1
13C2 PFDoA	50.2		10 - 130				03/17/25 04:50	03/18/25 13:46	1
13C2 PFTeDA	36.1		10 - 130				03/17/25 04:50	03/18/25 13:46	1
D3-NMeFOSAA	35.7	*5-	40 - 170				03/17/25 04:50	03/18/25 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	210		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorohexanoic acid (PFHxA)	3.7		1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.7	0.29	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorooctanoic acid (PFOA)	4.3		1.7	0.33	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.38	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorobutanesulfonic acid (PFBS)	2.7		1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorohexanesulfonic acid (PFHxS)	5.5		1.7	0.20	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorooctanesulfonic acid (PFOS)	7.9	I	1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:49	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		03/17/25 04:50	03/17/25 22:49	1
4:2 FTS	ND		3.3	0.37	ng/L		03/17/25 04:50	03/17/25 22:49	1
6:2 FTS	1.3	J	3.3	0.34	ng/L		03/17/25 04:50	03/17/25 22:49	1
8:2 FTS	ND		3.3	0.75	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.72	J	1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.1	J	8.4	1.9	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.4	2.0	ng/L		03/17/25 04:50	03/17/25 22:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		03/17/25 04:50	03/17/25 22:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.33	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25	J	1.7	0.16	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		03/17/25 04:50	03/17/25 22:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.60	ng/L		03/17/25 04:50	03/17/25 22:49	1
9Cl-PF3ONS	ND		1.7	0.48	ng/L		03/17/25 04:50	03/17/25 22:49	1
11Cl-PF3OUdS	ND		1.7	0.25	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		03/17/25 04:50	03/17/25 22:49	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.60	ng/L		03/17/25 04:50	03/17/25 22:49	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	13		8.4	1.4	ng/L		03/17/25 04:50	03/17/25 22:49	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.4	1.0	ng/L		03/17/25 04:50	03/17/25 22:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	77.1		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C5 PFHxA	104		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C4 PFHpA	121		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C8 PFOA	89.7		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C9 PFNA	86.4		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C3 PFBS	81.0		40 - 135	03/17/25 04:50	03/17/25 22:49	1
13C3 PFHxS	87.3		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C8 PFOS	77.1		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C8 FOSA	73.4		40 - 130	03/17/25 04:50	03/17/25 22:49	1
D5-NEtFOSAA	21.5	*5-	25 - 135	03/17/25 04:50	03/17/25 22:49	1
13C2 4:2 FTS	173		40 - 200	03/17/25 04:50	03/17/25 22:49	1
13C2 6:2 FTS	168		40 - 200	03/17/25 04:50	03/17/25 22:49	1
13C2 8:2 FTS	182		40 - 300	03/17/25 04:50	03/17/25 22:49	1
13C3 HFPO-DA	146	*5+	40 - 130	03/17/25 04:50	03/17/25 22:49	1
D7-NMeFOSE	60.2		10 - 130	03/17/25 04:50	03/17/25 22:49	1
D9-NEtFOSE	19.2		10 - 130	03/17/25 04:50	03/17/25 22:49	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D5-NEtFOSA	63.8		10 - 130	03/17/25 04:50	03/17/25 22:49	1
D3-NMeFOSA	73.7		10 - 130	03/17/25 04:50	03/17/25 22:49	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.3	0.31	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.48	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		03/17/25 04:50	03/18/25 14:00	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	0.73	J	1.7	0.29	ng/L		03/17/25 04:50	03/18/25 14:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	103		5 - 130	03/17/25 04:50	03/18/25 14:00	1
13C6 PFDA	94.4		40 - 130	03/17/25 04:50	03/18/25 14:00	1
13C7 PFUnA	59.5		30 - 130	03/17/25 04:50	03/18/25 14:00	1
13C2 PFDoA	41.1		10 - 130	03/17/25 04:50	03/18/25 14:00	1
13C2 PFTeDA	28.6		10 - 130	03/17/25 04:50	03/18/25 14:00	1
D3-NMeFOSAA	37.8	*5-	40 - 170	03/17/25 04:50	03/18/25 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	190		16	16	mg/L			03/17/25 13:47	1

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	13		3.0	0.28	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoropentanoic acid (PFPeA)	20		1.5	0.18	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorohexanoic acid (PFHxA)	13		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.26	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorooctanoic acid (PFOA)	5.5		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorononanoic acid (PFNA)	0.63	J I	1.5	0.34	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorobutanesulfonic acid (PFBS)	3.8		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorohexanesulfonic acid (PFHxS)	6.6		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorooctanesulfonic acid (PFOS)	2.6		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.40	ng/L		03/17/25 04:50	03/17/25 23:38	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.0	0.33	ng/L		03/17/25 04:50	03/17/25 23:38	1
6:2 FTS	0.78	J	3.0	0.31	ng/L		03/17/25 04:50	03/17/25 23:38	1
8:2 FTS	ND		3.0	0.68	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorooctanesulfonamide (PFOSA)	0.92	J	1.5	0.17	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.6	1.7	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.6	1.8	ng/L		03/17/25 04:50	03/17/25 23:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.30	ng/L		03/17/25 04:50	03/17/25 23:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.14	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 23:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		03/17/25 04:50	03/17/25 23:38	1
9CI-PF3ONS	ND		1.5	0.44	ng/L		03/17/25 04:50	03/17/25 23:38	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 23:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.55	ng/L		03/17/25 04:50	03/17/25 23:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.7	J	7.6	1.3	ng/L		03/17/25 04:50	03/17/25 23:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.6	0.94	ng/L		03/17/25 04:50	03/17/25 23:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	96.4		5 - 130	03/17/25 04:50	03/17/25 23:38	1
13C5 PFPeA	84.3		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C5 PFHxA	101		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C4 PFHpA	124		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C8 PFOA	108		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C9 PFNA	86.2		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C3 PFBS	89.4		40 - 135	03/17/25 04:50	03/17/25 23:38	1
13C3 PFHxS	80.5		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C8 PFOS	85.4		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C8 FOSA	71.4		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C2 4:2 FTS	231	*5+	40 - 200	03/17/25 04:50	03/17/25 23:38	1
13C2 6:2 FTS	115		40 - 200	03/17/25 04:50	03/17/25 23:38	1
13C2 8:2 FTS	105		40 - 300	03/17/25 04:50	03/17/25 23:38	1
13C3 HFPO-DA	139	*5+	40 - 130	03/17/25 04:50	03/17/25 23:38	1
D7-NMeFOSE	60.2		10 - 130	03/17/25 04:50	03/17/25 23:38	1
D9-NEtFOSE	51.0		10 - 130	03/17/25 04:50	03/17/25 23:38	1
D5-NEtFOSA	65.7		10 - 130	03/17/25 04:50	03/17/25 23:38	1
D3-NMeFOSA	61.6		10 - 130	03/17/25 04:50	03/17/25 23:38	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.66	J	1.5	0.34	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		03/17/25 04:50	03/18/25 14:41	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	0.75	J	1.5	0.27	ng/L		03/17/25 04:50	03/18/25 14:41	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	ND		1.5	0.33	ng/L		03/17/25 04:50	03/18/25 14:41	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C6 PFDA	92.0		40 - 130				03/17/25 04:50	03/18/25 14:41	1
13C7 PFUnA	107		30 - 130				03/17/25 04:50	03/18/25 14:41	1
13C2 PFDoA	98.8		10 - 130				03/17/25 04:50	03/18/25 14:41	1
13C2 PFTrDA	54.8		10 - 130				03/17/25 04:50	03/18/25 14:41	1
D3-NMeFOSAA	72.3		40 - 170				03/17/25 04:50	03/18/25 14:41	1
D5-NEtFOSAA	70.2		25 - 135				03/17/25 04:50	03/18/25 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	2.8		1.3	1.3	mg/L			03/17/25 13:47	1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.7	0.30	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoropentanoic acid (PFPeA)	ND		1.9	0.46	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.37	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.31	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorooctanoic acid (PFOA)	1.3	J	1.9	0.58	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorononanoic acid (PFNA)	0.42	J	1.9	0.27	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorodecanoic acid (PFDA)	2.2		1.9	0.22	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoroundecanoic acid (PFUnA)	0.65	J	1.9	0.26	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorododecanoic acid (PFDoA)	1.1	J	1.9	0.25	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorotridecanoic acid (PFTrDA)	0.35	J	1.9	0.27	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.9	0.54	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.23	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.9	0.37	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorohexanesulfonic acid (PFHxS)	0.72	J	1.9	0.19	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.9	0.15	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorooctanesulfonic acid (PFOS)	8.1		1.9	0.23	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorononanesulfonic acid (PFNS)	ND		1.9	0.21	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	1.0	J	1.9	0.20	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.9	0.35	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.52	J	3.7	0.50	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	J	3.7	0.41	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluorooctanesulfonamide (PFOSA)	0.91	J	1.9	0.59	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.9	0.34	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.9	0.20	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6		1.9	0.16	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.7	J	9.3	0.82	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.5	J	9.3	0.72	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.9	0.27	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.9	0.23	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*1	1.9	0.21	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.9	0.34	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.9	0.58	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		1.9	0.35	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.9	0.70	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.9	0.35	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	170		9.3	2.3	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	16.1		8 - 130	03/18/25 04:19	03/19/25 22:28	1
13C5 PFPeA	48.5		35 - 130	03/18/25 04:19	03/19/25 22:28	1
13C5 PFHxA	91.9		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C4 PFHpA	109		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C8 PFOA	85.8		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C9 PFNA	81.9		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C6 PFDA	98.5		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C7 PFUnA	76.9		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C2 PFDoA	82.6		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C2 PFTeDA	40.6		20 - 130	03/18/25 04:19	03/19/25 22:28	1
13C3 PFBS	78.6		40 - 135	03/18/25 04:19	03/19/25 22:28	1
13C3 PFHxS	75.0		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C8 PFOS	72.3		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C8 FOSA	47.3		40 - 130	03/18/25 04:19	03/19/25 22:28	1
D5-NEtFOSAA	25.9	*5-	40 - 150	03/18/25 04:19	03/19/25 22:28	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 6:2 FTS	156		40 - 215	03/18/25 04:19	03/19/25 22:28	1
13C2 8:2 FTS	211		40 - 275	03/18/25 04:19	03/19/25 22:28	1
13C3 HFPO-DA	112		40 - 130	03/18/25 04:19	03/19/25 22:28	1
D7-NMeFOSE	83.2		20 - 130	03/18/25 04:19	03/19/25 22:28	1
D9-NEtFOSE	30.3		15 - 130	03/18/25 04:19	03/19/25 22:28	1
D5-NEtFOSA	48.8		10 - 130	03/18/25 04:19	03/19/25 22:28	1
D3-NMeFOSA	75.9		10 - 130	03/18/25 04:19	03/19/25 22:28	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.7	0.61	ug/Kg	☼	03/18/25 04:19	03/20/25 09:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		1.9	0.15	ug/Kg	☼	03/18/25 04:19	03/20/25 09:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	41.2		40 - 135				03/18/25 04:19	03/20/25 09:27	1
13C2 4:2 FTS	149		40 - 165				03/18/25 04:19	03/20/25 09:27	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.7	0.70	ug/Kg	☼	03/21/25 04:32	03/23/25 22:49	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		9.4	2.0	ug/Kg	☼	03/21/25 04:32	03/23/25 22:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	89.2		35 - 130				03/21/25 04:32	03/23/25 22:49	1
13C5 PFHxA	94.4		40 - 130				03/21/25 04:32	03/23/25 22:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	95		0.10	0.10	%			03/13/25 15:02	1
Percent Solids (EPA 1633)	5.2		0.10	0.10	%			03/13/25 15:02	1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	15		0.52	0.042	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluoroheptanoic acid (PFHpA)	6.2		0.26	0.043	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorononanoic acid (PFNA)	2.5		0.26	0.038	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorodecanoic acid (PFDA)	21		0.26	0.031	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluoroundecanoic acid (PFUnA)	1.5		0.26	0.036	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorododecanoic acid (PFDoA)	5.1		0.26	0.035	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorotridecanoic acid (PFTTrDA)	0.68		0.26	0.038	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorotetradecanoic acid (PFTeDA)	1.4		0.26	0.076	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	4.6		0.26	0.033	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.26	0.052	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorohexanesulfonic acid (PFHxS)	1.4		0.26	0.026	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoroheptanesulfonic acid (PFHpS)	0.19	J	0.26	0.021	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorooctanesulfonic acid (PFOS)	17		0.26	0.033	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorononanesulfonic acid (PFNS)	ND		0.26	0.030	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorodecanesulfonic acid (PFDS)	1.7		0.26	0.027	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.26	0.048	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.3		0.52	0.070	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.5		0.52	0.057	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorooctanesulfonamide (PFOSA)	2.5		0.26	0.082	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.26	0.047	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.26	0.027	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.8		0.26	0.022	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.9		1.3	0.11	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.6		1.3	0.10	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.26	0.038	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.26	0.033	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*1	0.26	0.029	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.26	0.047	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.26	0.081	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		0.26	0.050	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.26	0.098	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.26	0.050	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		1.3	0.32	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	64.4		8 - 130	03/18/25 04:19	03/19/25 22:44	1
13C5 PFPeA	63.5		35 - 130	03/18/25 04:19	03/19/25 22:44	1
13C5 PFHxA	76.5		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C4 PFHpA	121		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C9 PFNA	66.4		40 - 130	03/18/25 04:19	03/19/25 22:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	74.4		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C7 PFUnA	57.9		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C2 PFDoA	55.7		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C2 PFTeDA	49.8		20 - 130	03/18/25 04:19	03/19/25 22:44	1
13C3 PFBS	61.2		40 - 135	03/18/25 04:19	03/19/25 22:44	1
13C3 PFHxS	71.3		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C8 PFOS	55.8		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C8 FOSA	36.9	*5-	40 - 130	03/18/25 04:19	03/19/25 22:44	1
D5-NEtFOSAA	28.0	*5-	40 - 150	03/18/25 04:19	03/19/25 22:44	1
13C2 6:2 FTS	178		40 - 215	03/18/25 04:19	03/19/25 22:44	1
13C2 8:2 FTS	114		40 - 275	03/18/25 04:19	03/19/25 22:44	1
13C3 HFPO-DA	128		40 - 130	03/18/25 04:19	03/19/25 22:44	1
D7-NMeFOSE	52.3		20 - 130	03/18/25 04:19	03/19/25 22:44	1
D9-NEtFOSE	32.9		15 - 130	03/18/25 04:19	03/19/25 22:44	1
D5-NEtFOSA	38.2		10 - 130	03/18/25 04:19	03/19/25 22:44	1
D3-NMeFOSA	41.5		10 - 130	03/18/25 04:19	03/19/25 22:44	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	30		1.3	0.32	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5
Perfluorohexanoic acid (PFHxA)	64		1.3	0.26	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5
Perfluorooctanoic acid (PFOA)	58		1.3	0.40	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	31		1.3	0.10	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	98.9	*3	35 - 130	03/18/25 04:19	03/21/25 19:02	5
13C5 PFHxA	69.0	*3	40 - 130	03/18/25 04:19	03/21/25 19:02	5
13C8 PFOA	68.8	*3	40 - 130	03/18/25 04:19	03/21/25 19:02	5
D3-NMeFOSAA	67.2	*3	40 - 135	03/18/25 04:19	03/21/25 19:02	5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.52	0.085	ug/Kg	☼	03/18/25 04:19	03/20/25 09:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	132		40 - 165	03/18/25 04:19	03/20/25 09:41	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.53	0.098	ug/Kg	☼	03/21/25 04:32	03/23/25 23:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.6		1.3	0.28	ug/Kg	☼	03/21/25 04:32	03/23/25 23:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	68.8		35 - 130	03/21/25 04:32	03/23/25 23:05	1
13C5 PFHxA	73.5		40 - 130	03/21/25 04:32	03/23/25 23:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	62		0.10	0.10	%			03/13/25 15:02	1
Percent Solids (EPA 1633)	38		0.10	0.10	%			03/13/25 15:02	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		0.57	0.046	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoropentanoic acid (PFPeA)	34		0.29	0.070	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoroheptanoic acid (PFHpA)	5.1		0.29	0.047	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorooctanoic acid (PFOA)	27		0.29	0.088	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorononanoic acid (PFNA)	2.0		0.29	0.041	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorodecanoic acid (PFDA)	17		0.29	0.034	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoroundecanoic acid (PFUnA)	1.4		0.29	0.040	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorododecanoic acid (PFDoA)	4.3		0.29	0.038	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorotridecanoic acid (PFTTrDA)	0.62		0.29	0.041	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorotetradecanoic acid (PFTeDA)	1.2		0.29	0.083	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorobutanesulfonic acid (PFBS)	4.8 I		0.29	0.036	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.29	0.057	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.29	0.029	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoroheptanesulfonic acid (PFHpS)	0.15 J		0.29	0.023	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorooctanesulfonic acid (PFOS)	15		0.29	0.036	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorononanesulfonic acid (PFNS)	ND		0.29	0.033	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.29	0.030	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.29	0.053	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.6		0.57	0.077	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.87		0.57	0.063	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorooctanesulfonamide (PFOSA)	1.8		0.29	0.090	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.37		0.29	0.051	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.13 J		0.29	0.030	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10		0.29	0.024	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.2		1.4	0.13	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.6		1.4	0.11	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.29	0.041	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.29	0.036	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND *1		0.29	0.031	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.29	0.051	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.29	0.088	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		0.29	0.054	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.29	0.11	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.29	0.054	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12		1.4	0.35	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	68.8		8 - 130	03/18/25 04:19	03/19/25 23:01	1
13C5 PFPeA	56.3		35 - 130	03/18/25 04:19	03/19/25 23:01	1
13C5 PFHxA	75.5		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C4 PFHpA	102		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C8 PFOA	76.9		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C9 PFNA	69.2		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C6 PFDA	72.1		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C7 PFUnA	48.0		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C2 PFDoA	51.8		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C2 PFTeDA	44.3		20 - 130	03/18/25 04:19	03/19/25 23:01	1
13C3 PFBS	54.4		40 - 135	03/18/25 04:19	03/19/25 23:01	1
13C3 PFHxS	65.2		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C8 PFOS	66.8		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C8 FOSA	31.0	*5-	40 - 130	03/18/25 04:19	03/19/25 23:01	1
D5-NetFOSAA	15.1	*5-	40 - 150	03/18/25 04:19	03/19/25 23:01	1
13C2 6:2 FTS	165		40 - 215	03/18/25 04:19	03/19/25 23:01	1
13C2 8:2 FTS	121		40 - 275	03/18/25 04:19	03/19/25 23:01	1
13C3 HFPO-DA	114		40 - 130	03/18/25 04:19	03/19/25 23:01	1
D7-NMeFOSE	51.1		20 - 130	03/18/25 04:19	03/19/25 23:01	1
D9-NetFOSE	28.3		15 - 130	03/18/25 04:19	03/19/25 23:01	1
D5-NetFOSA	34.8		10 - 130	03/18/25 04:19	03/19/25 23:01	1
D3-NMeFOSA	38.3		10 - 130	03/18/25 04:19	03/19/25 23:01	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	35		1.4	0.29	ug/Kg	☼	03/18/25 04:19	03/20/25 16:10	5
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	77.8	*3	40 - 130				03/18/25 04:19	03/20/25 16:10	5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.57	0.093	ug/Kg	☼	03/18/25 04:19	03/20/25 09:55	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	34		0.29	0.023	ug/Kg	☼	03/18/25 04:19	03/20/25 09:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	28.9	*5-	40 - 135				03/18/25 04:19	03/20/25 09:55	1
13C2 4:2 FTS	118		40 - 165				03/18/25 04:19	03/20/25 09:55	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.57	0.11	ug/Kg	☆	03/21/25 04:32	03/23/25 23:21	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.5		1.4	0.30	ug/Kg	☆	03/21/25 04:32	03/23/25 23:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	56.7		35 - 130				03/21/25 04:32	03/23/25 23:21	1
13C5 PFHxA	72.3		40 - 130				03/21/25 04:32	03/23/25 23:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	65		0.10	0.10	%			03/13/25 15:02	1
Percent Solids (EPA 1633)	35		0.10	0.10	%			03/13/25 15:02	1

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

Date Collected: 03/10/25 13:17

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.3	0.30	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.32	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.37	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.23	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.23	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		03/17/25 04:50	03/17/25 23:55	1
4:2 FTS	ND		3.3	0.36	ng/L		03/17/25 04:50	03/17/25 23:55	1
6:2 FTS	ND		3.3	0.33	ng/L		03/17/25 04:50	03/17/25 23:55	1
8:2 FTS	ND		3.3	0.73	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.2	1.9	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		03/17/25 04:50	03/17/25 23:55	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		03/17/25 04:50	03/17/25 23:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		03/17/25 04:50	03/17/25 23:55	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

Date Collected: 03/10/25 13:17

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		03/17/25 04:50	03/17/25 23:55	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	ND		1.6	0.59	ng/L		03/17/25 04:50	03/17/25 23:55	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		03/17/25 04:50	03/17/25 23:55	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 23:55	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		03/17/25 04:50	03/17/25 23:55	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.2	1.4	ng/L		03/17/25 04:50	03/17/25 23:55	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		03/17/25 04:50	03/17/25 23:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	103		5 - 130				03/17/25 04:50	03/17/25 23:55	1
13C5 PFPeA	113		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C5 PFHxA	102		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C4 PFHpA	96.2		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C8 PFOA	94.2		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C9 PFNA	91.6		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C3 PFBS	93.9		40 - 135				03/17/25 04:50	03/17/25 23:55	1
13C3 PFHxS	81.6		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C8 PFOS	83.1		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C2 4:2 FTS	97.2		40 - 200				03/17/25 04:50	03/17/25 23:55	1
13C2 6:2 FTS	71.1		40 - 200				03/17/25 04:50	03/17/25 23:55	1
13C2 8:2 FTS	91.9		40 - 300				03/17/25 04:50	03/17/25 23:55	1
13C3 HFPO-DA	103		40 - 130				03/17/25 04:50	03/17/25 23:55	1
D7-NMeFOSE	66.4		10 - 130				03/17/25 04:50	03/17/25 23:55	1
D9-NEtFOSE	60.0		10 - 130				03/17/25 04:50	03/17/25 23:55	1
D5-NEtFOSA	63.9		10 - 130				03/17/25 04:50	03/17/25 23:55	1
D3-NMeFOSA	61.3		10 - 130				03/17/25 04:50	03/17/25 23:55	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.22	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/18/25 14:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.29	ng/L		03/17/25 04:50	03/18/25 14:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/18/25 14:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	105		40 - 130				03/17/25 04:50	03/18/25 14:55	1
13C6 PFDA	106		40 - 130				03/17/25 04:50	03/18/25 14:55	1
13C7 PFUnA	127		30 - 130				03/17/25 04:50	03/18/25 14:55	1
13C2 PFDoA	122		10 - 130				03/17/25 04:50	03/18/25 14:55	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

Date Collected: 03/10/25 13:17

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	109		10 - 130	03/17/25 04:50	03/18/25 14:55	1
13C8 FOSA	84.6		40 - 130	03/17/25 04:50	03/18/25 14:55	1
D3-NMeFOSAA	68.5		40 - 170	03/17/25 04:50	03/18/25 14:55	1
D5-NEtFOSAA	71.5		25 - 135	03/17/25 04:50	03/18/25 14:55	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFPeA (35-130)	13C5PHA (40-130)	C8PFOA (40-130)	d3NMFOS (40-135)
320-119687-9 - DL	BIO-A-23-202503	98.9 *3	69.0 *3	68.8 *3	67.2 *3

Surrogate Legend

PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C8PFOA = 13C8 PFOA
d3NMFOS = D3-NMeFOSAA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFPeA (35-130)	13C5PHA (40-130)	d3NMFOS (40-135)
LCS 320-841388/3-A	Lab Control Sample	114	99.0	90.6
LCSD 320-841388/4-A	Lab Control Sample Dup	107	92.6	87.6
LLCS 320-841388/2-A	Lab Control Sample	99.9	89.4	86.7
MB 320-841388/1-A	Method Blank	107	100	89.2

Surrogate Legend

PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
d3NMFOS = D3-NMeFOSAA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (8-130)	PFPeA (35-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (40-130)
320-119687-8	BIO-B-202503	16.1	48.5	91.9	109	85.8	81.9	98.5	76.9
320-119687-8 - RE	BIO-B-202503		89.2	94.4					
320-119687-9	BIO-A-23-202503	64.4	63.5	76.5	121		66.4	74.4	57.9
320-119687-9 - RE	BIO-A-23-202503		68.8	73.5					
320-119687-10	BIO-A-24-202503	68.8	56.3	75.5	102	76.9	69.2	72.1	48.0
320-119687-10 - DL	BIO-A-24-202503			77.8 *3					
320-119687-10 - RE	BIO-A-24-202503		56.7	72.3					
LCS 320-840552/3-A	Lab Control Sample	21.1	71.6	95.5	99.2	87.9	86.9	83.8	82.4
LCSD 320-840552/4-A	Lab Control Sample Dup	97.3	90.9	94.5	99.3	92.9	84.0	90.7	82.2
LLCS 320-840552/2-A	Lab Control Sample	99.1	106	101	101	81.3	86.4	85.5	76.2
MB 320-840552/1-A	Method Blank	89.8	107	103	107	102	99.1	93.8	101

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (40-130)	PFTDA (20-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d5NEFOS (40-150)	M262FTS (40-215)
320-119687-8	BIO-B-202503	82.6	40.6	78.6	75.0	72.3	47.3	25.9 *5-	156
320-119687-8 - RE	BIO-B-202503								
320-119687-9	BIO-A-23-202503	55.7	49.8	61.2	71.3	55.8	36.9 *5-	28.0 *5-	178
320-119687-9 - RE	BIO-A-23-202503								
320-119687-10	BIO-A-24-202503	51.8	44.3	54.4	65.2	66.8	31.0 *5-	15.1 *5-	165
320-119687-10 - DL	BIO-A-24-202503								
320-119687-10 - RE	BIO-A-24-202503								

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFD _o A (40-130)	PFTDA (20-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d5NEFOS (40-150)	M262FTS (40-215)
LCS 320-840552/3-A	Lab Control Sample	78.3	70.4	88.9	81.4	80.0	68.7	72.8	75.9
LCSD 320-840552/4-A	Lab Control Sample Dup	72.4	75.2	94.5	77.1	73.9	51.9	50.1	83.8
LLCS 320-840552/2-A	Lab Control Sample	72.2	69.5	95.0	82.3	72.3	56.2	55.8	79.9
MB 320-840552/1-A	Method Blank	93.1	78.4	86.8	83.6	78.1	67.7	68.0	84.8

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (40-275)	HFPODA (40-130)	NMFM (20-130)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-119687-8	BIO-B-202503	211	112	83.2	30.3	48.8	75.9
320-119687-8 - RE	BIO-B-202503						
320-119687-9	BIO-A-23-202503	114	128	52.3	32.9	38.2	41.5
320-119687-9 - RE	BIO-A-23-202503						
320-119687-10	BIO-A-24-202503	121	114	51.1	28.3	34.8	38.3
320-119687-10 - DL	BIO-A-24-202503						
320-119687-10 - RE	BIO-A-24-202503						
LCS 320-840552/3-A	Lab Control Sample	81.3	97.5	66.3	59.9	79.8	77.8
LCSD 320-840552/4-A	Lab Control Sample Dup	71.8	101	54.0	48.7	48.8	47.2
LLCS 320-840552/2-A	Lab Control Sample	74.6	106	58.7	55.3	50.9	49.8
MB 320-840552/1-A	Method Blank	85.6	115	70.0	61.9	74.4	77.4

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFD_oA = 13C2 PFD_oA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d5NEFOS = D5-NEtFOSAA
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d3NMFOS (40-135)	M242FTS (40-165)
320-119687-8 - RA	BIO-B-202503	41.2	149
320-119687-10 - RA	BIO-A-24-202503	28.9 *5-	118

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	d3NMFOS	M242FTS				
		(40-135)	(40-165)				
LCS 320-840552/3-A - RA	Lab Control Sample	82.7	74.0				
LCSD 320-840552/4-A - RA	Lab Control Sample Dup	72.2	77.4				
LLCS 320-840552/2-A - RA	Lab Control Sample	64.0	72.9				
MB 320-840552/1-A - RA	Method Blank	83.6	72.9				
Surrogate Legend							
d3NMFOS = D3-NMeFOSAA							
M242FTS = 13C2 4:2 FTS							

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	M242FTS					
		(40-165)					
320-119687-9 - RA	BIO-A-23-202503	132					
Surrogate Legend							
M242FTS = 13C2 4:2 FTS							

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C3PFBS	C3PFHS
		(5-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-130)	(40-135)	(40-130)
320-119687-1	INF-02-202503	80.7	76.5	106	148 *5+	101	106	101	91.5
320-119687-2	INF-07-202503	67.3	76.9	102	80.0	34.4 *5-	27.7 *5-	57.4	26.1 *5-
320-119687-3	INF-08-202503	75.5	66.9						
320-119687-4	INF-11-202503		67.2	93.8	93.1	61.5	56.6	54.6	48.6
320-119687-5	INF-18-202503		66.8	109	102	102	91.8	94.3	97.3
320-119687-6	INF-COMP-202503		77.1	104	121	89.7	86.4	81.0	87.3
320-119687-7	EFF-G-202503	96.4	84.3	101	124	108	86.2	89.4	80.5
320-119687-11	EB01-202503	103	113	102	96.2	94.2	91.6	93.9	81.6
LCS 320-840259/3-A	Lab Control Sample	104	92.9	99.4	112	90.8	97.0	95.5	89.9
LCSD 320-840259/4-A	Lab Control Sample Dup	104	122	127	120	113	98.6	98.8	87.7
LLCS 320-840259/2-A	Lab Control Sample	108	103	109	106	101	99.6	111	102
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C8PFOS	PFOSA	d5NEFOS	M242FTS	M262FTS	M282FTS	HFPODA	NMFM
		(40-130)	(40-130)	(25-135)	(40-200)	(40-200)	(40-300)	(40-130)	(10-130)
320-119687-1	INF-02-202503	77.7	76.0	25.7	186	219 *5+	235	154 *5+	65.4
320-119687-2	INF-07-202503	16.7 *5-	17.9 *5-	13.1 *5-	207 *5+	53.9	49.9	122	5.30 *5-
320-119687-3	INF-08-202503				60.3				
320-119687-4	INF-11-202503	42.2	49.4	19.2 *5-	204 *5+	134	106	101	18.1
320-119687-5	INF-18-202503	79.9	69.3	22.0 *5-	211 *5+	211 *5+	209	129	67.7
320-119687-6	INF-COMP-202503	77.1	73.4	21.5 *5-	173	168	182	146 *5+	60.2
320-119687-7	EFF-G-202503	85.4	71.4		231 *5+	115	105	139 *5+	60.2
320-119687-11	EB01-202503	83.1			97.2	71.1	91.9	103	66.4
LCS 320-840259/3-A	Lab Control Sample	89.7	64.8	68.5	111	90.1	102	105	70.1
LCSD 320-840259/4-A	Lab Control Sample Dup	90.2	73.3	76.2	94.5	90.5	98.3	130	77.7
LLCS 320-840259/2-A	Lab Control Sample	88.8	70.3	69.4	138	94.5	104	117	72.1

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSa (10-130)
320-119687-1	INF-02-202503	20.9	59.6	78.8
320-119687-2	INF-07-202503	4.03 *5-	10.1	10.6
320-119687-3	INF-08-202503			
320-119687-4	INF-11-202503	9.76 *5-	28.3	35.8
320-119687-5	INF-18-202503	18.9	64.0	79.0
320-119687-6	INF-COMP-202503	19.2	63.8	73.7
320-119687-7	EFF-G-202503	51.0	65.7	61.6
320-119687-11	EB01-202503	60.0	63.9	61.3
LCS 320-840259/3-A	Lab Control Sample	64.2	61.8	60.4
LCSD 320-840259/4-A	Lab Control Sample Dup	69.4	73.9	68.3
LLCS 320-840259/2-A	Lab Control Sample	65.7	63.2	60.8

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSa = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C6PFDA (40-130)	13C7PUA (30-130)	PFDaA (10-130)	PFTDA (10-130)	d3NMFOs (40-170)
320-119687-1 - RA	INF-02-202503	102	63.3	65.2	28.6	29.3 *5-
320-119687-2 - RA	INF-07-202503	24.8 *5-	16.5 *5-	10.9	5.41 *5-	12.7 *5-
LCS 320-840259/3-A - RA	Lab Control Sample	114	129	123	108	78.0
LCSD 320-840259/4-A - RA	Lab Control Sample Dup	109	126	118	89.7	78.4
LLCS 320-840259/2-A - RA	Lab Control Sample	109 *3	159 *3	127 *3	114 *3	77.9

*5+

Surrogate Legend

C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
d3NMFOs = D3-NMeFOSAA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	13C5PHA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)	PFDaA (10-130)	PFTDA (10-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-119687-11 - RA	EB01-202503	105	106	127	122	109	84.6	68.5	71.5

Surrogate Legend

13C5PHA = 13C5 PFHxA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-119687-3 - RE	INF-08-202503			97.6	117	103	92.2	105	95.7
LCS 320-841272/3-A	Lab Control Sample	95.8	123	113	124	108	95.1	109	105
LCSD 320-841272/4-A	Lab Control Sample Dup	97.4	127	117	128	107	93.5	112	104
LLCS 320-841272/2-A	Lab Control Sample	96.9	118	112	118	107	102	109	99.3
MB 320-840259/1-A	Method Blank	109	108	110	106	105	99.4	105	107
MB 320-841272/1-A	Method Blank	97.8	120	110	122	107	91.0	114	103

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-119687-3 - RE	INF-08-202503	93.2	85.1	81.3	88.3	93.0	108	87.3	69.6
LCS 320-841272/3-A	Lab Control Sample	101	83.4	92.2	92.7	101	93.9	93.5	83.5
LCSD 320-841272/4-A	Lab Control Sample Dup	103	88.7	85.4	89.6	98.3	92.4	91.1	82.5
LLCS 320-841272/2-A	Lab Control Sample	98.3	83.8	95.6	91.1	99.1	93.8	91.4	80.5
MB 320-840259/1-A	Method Blank	110	96.5	94.6	90.5	88.0	76.1	80.7	73.4
MB 320-841272/1-A	Method Blank	103	88.6	93.7	93.7	102	96.3	93.8	86.8

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-119687-3 - RE	INF-08-202503		102	111	101	76.7	59.3	53.4	69.6
LCS 320-841272/3-A	Lab Control Sample	80.2	90.2	90.4	119	98.0	83.9	75.1	75.1
LCSD 320-841272/4-A	Lab Control Sample Dup	62.8	87.7	85.8	124	91.6	80.7	65.9	67.6
LLCS 320-841272/2-A	Lab Control Sample	92.6	101	107	127	100	79.5	78.5	77.0
MB 320-840259/1-A	Method Blank	89.1	85.6	95.9	109	84.0	72.2	77.6	69.7
MB 320-841272/1-A	Method Blank	87.4	94.8	113	121	106	88.5	80.1	79.4

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-119687-1

Project/Site: PFAS Sampling

C6PFDA = 13C6 PFDA
 13C7PUA = 13C7 PFUnA
 PFDoA = 13C2 PFDoA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 C3PFHS = 13C3 PFHxS
 C8PFOS = 13C8 PFOS
 PFOSA = 13C8 FOSA
 d3NMFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS
 HFPODA = 13C3 HFPO-DA
 NMFM = D7-NMeFOSE
 NEFM = D9-NEtFOSE
 d5NPFSA = D5-NEtFOSA
 d3NMFSA = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	C6PFDA (40-130)	13C7PUA (30-130)	PFDoA (10-130)	PFTDA (10-130)	d3NMFOS (40-170)
320-119687-4 - RA	INF-11-202503	99.4	55.9	41.5	29.4	16.5	23.0 *5-
320-119687-5 - RA	INF-18-202503	104	109	58.3	50.2	36.1	35.7 *5-
320-119687-6 - RA	INF-COMP-202503	103	94.4	59.5	41.1	28.6	37.8 *5-

Surrogate Legend

PFBA = 13C4 PFBA
 C6PFDA = 13C6 PFDA
 13C7PUA = 13C7 PFUnA
 PFDoA = 13C2 PFDoA
 PFTDA = 13C2 PFTeDA
 d3NMFOS = D3-NMeFOSAA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C6PFDA (40-130)	13C7PUA (30-130)	PFDoA (10-130)	PFTDA (10-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-119687-7 - RA	EFF-G-202503	92.0	107	98.8	54.8	72.3	70.2

Surrogate Legend

C6PFDA = 13C6 PFDA
 13C7PUA = 13C7 PFUnA
 PFDoA = 13C2 PFDoA
 PFTDA = 13C2 PFTeDA
 d3NMFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-840259/1-A

Matrix: Water

Analysis Batch: 840938

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 840259

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		03/17/25 04:50	03/19/25 11:35	1
4:2 FTS	ND		4.0	0.44	ng/L		03/17/25 04:50	03/19/25 11:35	1
6:2 FTS	ND		4.0	0.41	ng/L		03/17/25 04:50	03/19/25 11:35	1
8:2 FTS	ND		4.0	0.90	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		03/17/25 04:50	03/19/25 11:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		03/17/25 04:50	03/19/25 11:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		03/17/25 04:50	03/19/25 11:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		03/17/25 04:50	03/19/25 11:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		03/17/25 04:50	03/19/25 11:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		03/17/25 04:50	03/19/25 11:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		03/17/25 04:50	03/19/25 11:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		03/17/25 04:50	03/19/25 11:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		03/17/25 04:50	03/19/25 11:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		03/17/25 04:50	03/19/25 11:35	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		03/17/25 04:50	03/19/25 11:35	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		03/17/25 04:50	03/19/25 11:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		03/17/25 04:50	03/19/25 11:35	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-840259/1-A

Matrix: Water

Analysis Batch: 840938

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 840259

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		03/17/25 04:50	03/19/25 11:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		03/17/25 04:50	03/19/25 11:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		03/17/25 04:50	03/19/25 11:35	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	109		5 - 130	03/17/25 04:50	03/19/25 11:35	1
13C5 PFPeA	108		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C5 PFHxA	110		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C4 PFHpA	106		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C8 PFOA	105		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C9 PFNA	99.4		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C6 PFDA	105		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C7 PFUnA	107		30 - 130	03/17/25 04:50	03/19/25 11:35	1
13C2 PFDaA	110		10 - 130	03/17/25 04:50	03/19/25 11:35	1
13C2 PFTeDA	96.5		10 - 130	03/17/25 04:50	03/19/25 11:35	1
13C3 PFBS	94.6		40 - 135	03/17/25 04:50	03/19/25 11:35	1
13C3 PFHxS	90.5		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C8 PFOS	88.0		40 - 130	03/17/25 04:50	03/19/25 11:35	1
13C8 FOSA	76.1		40 - 130	03/17/25 04:50	03/19/25 11:35	1
D3-NMeFOSAA	80.7		40 - 170	03/17/25 04:50	03/19/25 11:35	1
D5-NEtFOSAA	73.4		25 - 135	03/17/25 04:50	03/19/25 11:35	1
13C2 4:2 FTS	89.1		40 - 200	03/17/25 04:50	03/19/25 11:35	1
13C2 6:2 FTS	85.6		40 - 200	03/17/25 04:50	03/19/25 11:35	1
13C2 8:2 FTS	95.9		40 - 300	03/17/25 04:50	03/19/25 11:35	1
13C3 HFPO-DA	109		40 - 130	03/17/25 04:50	03/19/25 11:35	1
D7-NMeFOSE	84.0		10 - 130	03/17/25 04:50	03/19/25 11:35	1
D9-NEtFOSE	72.2		10 - 130	03/17/25 04:50	03/19/25 11:35	1
D5-NEtFOSA	77.6		10 - 130	03/17/25 04:50	03/19/25 11:35	1
D3-NMeFOSA	69.7		10 - 130	03/17/25 04:50	03/19/25 11:35	1

Lab Sample ID: LCS 320-840259/3-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	78.8		ng/L		98	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	42.6		ng/L		107	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.3		ng/L		91	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	38.2		ng/L		95	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	40.9		ng/L		102	70 - 150
Perfluorononanoic acid (PFNA)	40.0	41.7		ng/L		104	70 - 150
Perfluorobutanesulfonic acid (PFBS)	35.5	37.2		ng/L		105	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.4		ng/L		100	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.8		ng/L		98	65 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-840259/3-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.8		ng/L		104	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	35.5		ng/L		95	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	39.5		ng/L		103	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.5		ng/L		92	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.1		ng/L		93	50 - 145
4:2 FTS	75.0	64.1		ng/L		85	70 - 145
6:2 FTS	76.2	84.2		ng/L		111	65 - 155
8:2 FTS	76.8	71.2		ng/L		93	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	41.8		ng/L		104	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.2		ng/L		101	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	39.4		ng/L		98	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.2		ng/L		95	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	198		ng/L		99	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	214		ng/L		107	70 - 135
Hexafluoropropylene Oxide	30.0	30.8		ng/L		103	70 - 140
Dimer Acid (HFPO-DA/GenX)	37.8	34.8		ng/L		92	65 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	40.0	39.6		ng/L		99	55 - 140
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	40.1		ng/L		100	60 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	31.9		ng/L		80	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	37.4	36.2		ng/L		97	70 - 155
9CI-PF3ONS	37.8	29.8		ng/L		79	55 - 160
11CI-PF3OUdS	35.7	39.0		ng/L		109	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	80.0	66.7		ng/L		83	65 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	200	153		ng/L		77	70 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	158		ng/L		79	50 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)							

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	104		5 - 130
13C5 PFPeA	92.9		40 - 130
13C5 PFHxA	99.4		40 - 130
13C4 PFHpA	112		40 - 130
13C8 PFOA	90.8		40 - 130
13C9 PFNA	97.0		40 - 130
13C3 PFBS	95.5		40 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-840259/3-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 PFHxS	89.9		40 - 130
13C8 PFOS	89.7		40 - 130
13C8 FOSA	64.8		40 - 130
D5-NEtFOSAA	68.5		25 - 135
13C2 4:2 FTS	111		40 - 200
13C2 6:2 FTS	90.1		40 - 200
13C2 8:2 FTS	102		40 - 300
13C3 HFPO-DA	105		40 - 130
D7-NMeFOSE	70.1		10 - 130
D9-NEtFOSE	64.2		10 - 130
D5-NEtFOSA	61.8		10 - 130
D3-NMeFOSA	60.4		10 - 130

Lab Sample ID: LCSD 320-840259/4-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	79.3		ng/L		99	70 - 140	1	30
Perfluoropentanoic acid (PFPeA)	40.0	39.4		ng/L		98	65 - 135	8	30
Perfluorohexanoic acid (PFHxA)	40.0	37.2		ng/L		93	70 - 145	3	30
Perfluoroheptanoic acid (PFHpA)	40.0	41.9		ng/L		105	70 - 150	9	30
Perfluorooctanoic acid (PFOA)	40.0	38.3		ng/L		96	70 - 150	6	30
Perfluorononanoic acid (PFNA)	40.0	38.8		ng/L		97	70 - 150	7	30
Perfluorobutanesulfonic acid (PFBS)	35.5	32.4		ng/L		91	60 - 145	14	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.2		ng/L		104	65 - 140	4	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.0		ng/L		93	65 - 145	5	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.9		ng/L		105	70 - 150	0	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.0		ng/L		102	55 - 150	7	30
Perfluorononanesulfonic acid (PFNS)	38.5	41.0		ng/L		107	65 - 145	4	30
Perfluorodecanesulfonic acid (PFDS)	38.6	41.1		ng/L		107	60 - 145	15	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	38.2		ng/L		99	50 - 145	6	30
4:2 FTS	75.0	74.7		ng/L		100	70 - 145	15	30
6:2 FTS	76.2	76.5		ng/L		100	65 - 155	10	30
8:2 FTS	76.8	69.3		ng/L		90	60 - 150	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	39.8		ng/L		99	70 - 145	5	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.0		ng/L		100	60 - 150	1	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	38.4		ng/L		96	65 - 145	2	30
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	40.0	35.2		ng/L		88	70 - 145	8	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-840259/4-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	187		ng/L		94	70 - 145	6	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	209		ng/L		104	70 - 135	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	27.7		ng/L		92	70 - 140	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.2		ng/L		98	65 - 145	7	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	40.8		ng/L		102	55 - 140	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	36.8		ng/L		92	60 - 150	9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	28.4		ng/L		71	50 - 150	12	30
9CI-PF3ONS	37.4	36.2		ng/L		97	70 - 155	0	30
11CI-PF3OUdS	37.8	35.1		ng/L		93	55 - 160	16	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	36.1		ng/L		101	70 - 140	8	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	62.0		ng/L		77	65 - 130	7	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	158		ng/L		79	70 - 135	3	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	150		ng/L		75	50 - 145	5	30

Isotope Dilution	%Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	104		5 - 130
13C5 PFPeA	122		40 - 130
13C5 PFHxA	127		40 - 130
13C4 PFHpA	120		40 - 130
13C8 PFOA	113		40 - 130
13C9 PFNA	98.6		40 - 130
13C3 PFBS	98.8		40 - 135
13C3 PFHxS	87.7		40 - 130
13C8 PFOS	90.2		40 - 130
13C8 FOSA	73.3		40 - 130
D5-NEtFOSAA	76.2		25 - 135
13C2 4:2 FTS	94.5		40 - 200
13C2 6:2 FTS	90.5		40 - 200
13C2 8:2 FTS	98.3		40 - 300
13C3 HFPO-DA	130		40 - 130
D7-NMeFOSE	77.7		10 - 130
D9-NEtFOSE	69.4		10 - 130
D5-NEtFOSA	73.9		10 - 130
D3-NMeFOSA	68.3		10 - 130

Lab Sample ID: LLCS 320-840259/2-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	7.84		ng/L		98	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-840259/2-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	4.00	4.31		ng/L		108	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.37		ng/L		109	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.40		ng/L		110	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.42		ng/L		111	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.28		ng/L		107	70 - 150
Perfluorobutanesulfonic acid (PFBS)	3.55	3.41		ng/L		96	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.52		ng/L		120	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.90		ng/L		107	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.80		ng/L		100	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	4.28		ng/L		115	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.13		ng/L		107	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.84		ng/L		99	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.78		ng/L		98	50 - 145
4:2 FTS	7.50	7.04		ng/L		94	70 - 145
6:2 FTS	7.62	7.93		ng/L		104	65 - 155
8:2 FTS	7.68	7.33		ng/L		95	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.02		ng/L		100	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.53		ng/L		88	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.76		ng/L		94	65 - 145
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.90		ng/L		97	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.6		ng/L		98	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	20.8		ng/L		104	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	3.19		ng/L		106	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.34		ng/L		88	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.07		ng/L		102	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.40		ng/L		110	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.80		ng/L		120	50 - 150
9CI-PF3ONS	3.74	3.64		ng/L		97	70 - 155
11CI-PF3OUdS	3.78	3.15		ng/L		83	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.51		ng/L		98	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	6.63		ng/L		83	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	15.5		ng/L		78	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-840259/2-A

Matrix: Water

Analysis Batch: 840477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	15.4		ng/L		77	50 - 145
	LLCS	LLCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C4 PFBA	108		5 - 130				
13C5 PFPeA	103		40 - 130				
13C5 PFHxA	109		40 - 130				
13C4 PFHpA	106		40 - 130				
13C8 PFOA	101		40 - 130				
13C9 PFNA	99.6		40 - 130				
13C3 PFBS	111		40 - 135				
13C3 PFHxS	102		40 - 130				
13C8 PFOS	88.8		40 - 130				
13C8 FOSA	70.3		40 - 130				
D5-NEtFOSAA	69.4		25 - 135				
13C2 4:2 FTS	138		40 - 200				
13C2 6:2 FTS	94.5		40 - 200				
13C2 8:2 FTS	104		40 - 300				
13C3 HFPO-DA	117		40 - 130				
D7-NMeFOSE	72.1		10 - 130				
D9-NEtFOSE	65.7		10 - 130				
D5-NEtFOSA	63.2		10 - 130				
D3-NMeFOSA	60.8		10 - 130				

Lab Sample ID: MB 320-840552/1-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 840552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.40	0.032	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.049	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.040	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.033	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.062	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.029	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.024	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.028	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.027	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.029	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.058	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.025	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.040	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.020	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.016	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.025	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.023	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.021	ug/Kg		03/18/25 04:19	03/19/25 21:23	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-840552/1-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 840552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.037	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		0.40	0.054	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		0.40	0.044	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.063	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.20	0.036	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.20	0.021	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.20	0.017	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.088	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.077	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.20	0.029	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.025	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.20	0.022	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.20	0.036	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.20	0.062	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.20	0.038	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.20	0.075	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.20	0.038	ug/Kg		03/18/25 04:19	03/19/25 21:23	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.25	ug/Kg		03/18/25 04:19	03/19/25 21:23	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	89.8		8 - 130	03/18/25 04:19	03/19/25 21:23	1
13C5 PFPeA	107		35 - 130	03/18/25 04:19	03/19/25 21:23	1
13C5 PFHxA	103		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C4 PFHpA	107		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C8 PFOA	102		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C9 PFNA	99.1		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C6 PFDA	93.8		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C7 PFUnA	101		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C2 PFDoA	93.1		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C2 PFTeDA	78.4		20 - 130	03/18/25 04:19	03/19/25 21:23	1
13C3 PFBS	86.8		40 - 135	03/18/25 04:19	03/19/25 21:23	1
13C3 PFHxS	83.6		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C8 PFOS	78.1		40 - 130	03/18/25 04:19	03/19/25 21:23	1
13C8 FOSA	67.7		40 - 130	03/18/25 04:19	03/19/25 21:23	1
D5-NEtFOSAA	68.0		40 - 150	03/18/25 04:19	03/19/25 21:23	1
13C2 6:2 FTS	84.8		40 - 215	03/18/25 04:19	03/19/25 21:23	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-840552/1-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 840552

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 8:2 FTS	85.6		40 - 275	03/18/25 04:19	03/19/25 21:23	1
13C3 HFPO-DA	115		40 - 130	03/18/25 04:19	03/19/25 21:23	1
D7-NMeFOSE	70.0		20 - 130	03/18/25 04:19	03/19/25 21:23	1
D9-NEtFOSE	61.9		15 - 130	03/18/25 04:19	03/19/25 21:23	1
D5-NEtFOSA	74.4		10 - 130	03/18/25 04:19	03/19/25 21:23	1
D3-NMeFOSA	77.4		10 - 130	03/18/25 04:19	03/19/25 21:23	1

Lab Sample ID: LCS 320-840552/3-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	5.00	4.67		ug/Kg		93	70 - 140
Perfluoropentanoic acid (PFPeA)	2.50	2.63		ug/Kg		105	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.35		ug/Kg		94	65 - 140
Perfluoroheptanoic acid (PFHpA)	2.50	2.45		ug/Kg		98	65 - 145
Perfluorooctanoic acid (PFOA)	2.50	2.55		ug/Kg		102	70 - 150
Perfluorononanoic acid (PFNA)	2.50	2.28		ug/Kg		91	70 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.96		ug/Kg		119	70 - 155
Perfluoroundecanoic acid (PFUnA)	2.50	2.49		ug/Kg		99	70 - 155
Perfluorododecanoic acid (PFDoA)	2.50	2.47		ug/Kg		99	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.51		ug/Kg		100	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.72		ug/Kg		109	65 - 150
Perfluorobutanesulfonic acid (PFBS)	2.22	2.24		ug/Kg		101	65 - 145
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.41		ug/Kg		102	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.41		ug/Kg		106	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.57		ug/Kg		108	65 - 155
Perfluorooctanesulfonic acid (PFOS)	2.33	2.34		ug/Kg		101	65 - 160
Perfluorononanesulfonic acid (PFNS)	2.41	2.44		ug/Kg		101	55 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.38		ug/Kg		99	40 - 155
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.45		ug/Kg		101	25 - 160
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	4.77		ug/Kg		100	55 - 200
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	5.15		ug/Kg		107	70 - 150
Perfluorooctanesulfonamide (PFOSA)	2.50	2.50		ug/Kg		100	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.52		ug/Kg		101	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.37		ug/Kg		95	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-840552/3-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	2.50	2.25		ug/Kg		90	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	12.4		ug/Kg		99	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.3		ug/Kg		107	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	1.84		ug/Kg		98	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.05		ug/Kg		86	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	1.16		ug/Kg		46	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.92		ug/Kg		117	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	1.85		ug/Kg		74	60 - 155
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.48		ug/Kg		106	70 - 150
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	2.17		ug/Kg		92	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.40		ug/Kg		107	70 - 140
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	9.79		ug/Kg		78	60 - 130

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	21.1		8 - 130
13C5 PFPeA	71.6		35 - 130
13C5 PFHxA	95.5		40 - 130
13C4 PFHpA	99.2		40 - 130
13C8 PFOA	87.9		40 - 130
13C9 PFNA	86.9		40 - 130
13C6 PFDA	83.8		40 - 130
13C7 PFUnA	82.4		40 - 130
13C2 PFDoA	78.3		40 - 130
13C2 PFTeDA	70.4		20 - 130
13C3 PFBS	88.9		40 - 135
13C3 PFHxS	81.4		40 - 130
13C8 PFOS	80.0		40 - 130
13C8 FOSA	68.7		40 - 130
D5-NEtFOSAA	72.8		40 - 150
13C2 6:2 FTS	75.9		40 - 215
13C2 8:2 FTS	81.3		40 - 275
13C3 HFPO-DA	97.5		40 - 130
D7-NMeFOSE	66.3		20 - 130
D9-NEtFOSE	59.9		15 - 130
D5-NEtFOSA	79.8		10 - 130
D3-NMeFOSA	77.8		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-840552/4-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	5.00	4.58		ug/Kg		92	70 - 140	2	30
Perfluoropentanoic acid (PFPeA)	2.50	2.71		ug/Kg		108	60 - 150	3	30
Perfluorohexanoic acid (PFHxA)	2.50	2.48		ug/Kg		99	65 - 140	6	30
Perfluoroheptanoic acid (PFHpA)	2.50	2.39		ug/Kg		96	65 - 145	3	30
Perfluorooctanoic acid (PFOA)	2.50	2.32		ug/Kg		93	70 - 150	9	30
Perfluorononanoic acid (PFNA)	2.50	2.50		ug/Kg		100	70 - 155	9	30
Perfluorodecanoic acid (PFDA)	2.50	2.83		ug/Kg		113	70 - 155	5	30
Perfluoroundecanoic acid (PFUnA)	2.50	2.29		ug/Kg		92	70 - 155	8	30
Perfluorododecanoic acid (PFDoA)	2.50	2.38		ug/Kg		95	70 - 150	4	30
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.61		ug/Kg		104	65 - 150	4	30
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.65		ug/Kg		106	65 - 150	3	30
Perfluorobutanesulfonic acid (PFBS)	2.22	2.26		ug/Kg		102	65 - 145	1	30
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.43		ug/Kg		104	55 - 160	1	30
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.56		ug/Kg		112	60 - 150	6	30
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.47		ug/Kg		104	65 - 155	4	30
Perfluorooctanesulfonic acid (PFOS)	2.33	2.29		ug/Kg		98	65 - 160	2	30
Perfluorononanesulfonic acid (PFNS)	2.41	2.22		ug/Kg		92	55 - 140	9	30
Perfluorodecanesulfonic acid (PFDS)	2.41	1.88		ug/Kg		78	40 - 155	23	30
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.06		ug/Kg		85	25 - 160	17	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76	4.86		ug/Kg		102	55 - 200	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.80	4.82		ug/Kg		101	70 - 150	7	30
Perfluorooctanesulfonamide (PFOSA)	2.50	2.55		ug/Kg		102	70 - 140	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.55		ug/Kg		102	70 - 155	1	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.33		ug/Kg		93	70 - 140	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.31		ug/Kg		92	65 - 165	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	11.6		ug/Kg		93	70 - 140	7	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.0		ug/Kg		104	70 - 135	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.88	1.81		ug/Kg		96	70 - 145	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.01		ug/Kg		85	70 - 160	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.41	*1	ug/Kg		96	30 - 140	70	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-840552/4-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.57		ug/Kg		103	60 - 150	13	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	1.76		ug/Kg		70	60 - 155	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.34	2.00		ug/Kg		86	70 - 150	22	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36	1.79		ug/Kg		76	45 - 160	19	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.23	2.33		ug/Kg		105	70 - 140	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	9.64		ug/Kg		77	60 - 130	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	97.3		8 - 130
13C5 PFPeA	90.9		35 - 130
13C5 PFHxA	94.5		40 - 130
13C4 PFHpA	99.3		40 - 130
13C8 PFOA	92.9		40 - 130
13C9 PFNA	84.0		40 - 130
13C6 PFDA	90.7		40 - 130
13C7 PFUnA	82.2		40 - 130
13C2 PFDoA	72.4		40 - 130
13C2 PFTeDA	75.2		20 - 130
13C3 PFBS	94.5		40 - 135
13C3 PFHxS	77.1		40 - 130
13C8 PFOS	73.9		40 - 130
13C8 FOSA	51.9		40 - 130
D5-NEtFOSAA	50.1		40 - 150
13C2 6:2 FTS	83.8		40 - 215
13C2 8:2 FTS	71.8		40 - 275
13C3 HFPO-DA	101		40 - 130
D7-NMeFOSE	54.0		20 - 130
D9-NEtFOSE	48.7		15 - 130
D5-NEtFOSA	48.8		10 - 130
D3-NMeFOSA	47.2		10 - 130

Lab Sample ID: LLCS 320-840552/2-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.800	0.779		ug/Kg		97	70 - 140
Perfluoropentanoic acid (PFPeA)	0.400	0.347		ug/Kg		87	60 - 150
Perfluorohexanoic acid (PFHxA)	0.400	0.392		ug/Kg		98	65 - 140
Perfluoroheptanoic acid (PFHpA)	0.400	0.421		ug/Kg		105	65 - 145
Perfluorooctanoic acid (PFOA)	0.400	0.396		ug/Kg		99	70 - 150
Perfluorononanoic acid (PFNA)	0.400	0.365		ug/Kg		91	70 - 155
Perfluorodecanoic acid (PFDA)	0.400	0.396		ug/Kg		99	70 - 155

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-840552/2-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	0.400	0.354		ug/Kg		88	70 - 155
Perfluorododecanoic acid (PFDoA)	0.400	0.382		ug/Kg		96	70 - 150
Perfluorotridecanoic acid (PFTrDA)	0.400	0.395		ug/Kg		99	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.400	0.439		ug/Kg		110	65 - 150
Perfluorobutanesulfonic acid (PFBS)	0.355	0.322		ug/Kg		91	65 - 145
Perfluoropentanesulfonic acid (PFPeS)	0.376	0.349		ug/Kg		93	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	0.365	0.374		ug/Kg		103	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.382	0.395		ug/Kg		103	65 - 155
Perfluorooctanesulfonic acid (PFOS)	0.372	0.409		ug/Kg		110	65 - 160
Perfluorononanesulfonic acid (PFNS)	0.385	0.398		ug/Kg		103	55 - 140
Perfluorodecanesulfonic acid (PFDS)	0.386	0.357		ug/Kg		93	40 - 155
Perfluorododecanesulfonic acid (PFDoS)	0.388	0.363		ug/Kg		93	25 - 160
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.762	0.746		ug/Kg		98	55 - 200
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.768	0.684		ug/Kg		89	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.400	0.399		ug/Kg		100	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.400	0.385		ug/Kg		96	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.400	0.373		ug/Kg		93	70 - 140
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	0.400	0.383		ug/Kg		96	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.00	1.74		ug/Kg		87	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.00	1.88		ug/Kg		94	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.300	0.282		ug/Kg		94	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.378	0.302		ug/Kg		80	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.400	0.357		ug/Kg		89	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.400	0.372		ug/Kg		93	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.400	0.300		ug/Kg		75	60 - 155
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.374	0.347		ug/Kg		93	70 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.378	0.288		ug/Kg		76	45 - 160

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-840552/2-A

Matrix: Solid

Analysis Batch: 840998

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	0.357	0.360		ug/Kg		101	70 - 140
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.00	1.25		ug/Kg		62	60 - 130

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	99.1		8 - 130
13C5 PFPeA	106		35 - 130
13C5 PFHxA	101		40 - 130
13C4 PFHpA	101		40 - 130
13C8 PFOA	81.3		40 - 130
13C9 PFNA	86.4		40 - 130
13C6 PFDA	85.5		40 - 130
13C7 PFUnA	76.2		40 - 130
13C2 PFDoA	72.2		40 - 130
13C2 PFTeDA	69.5		20 - 130
13C3 PFBS	95.0		40 - 135
13C3 PFHxS	82.3		40 - 130
13C8 PFOS	72.3		40 - 130
13C8 FOSA	56.2		40 - 130
D5-NEtFOSAA	55.8		40 - 150
13C2 6:2 FTS	79.9		40 - 215
13C2 8:2 FTS	74.6		40 - 275
13C3 HFPO-DA	106		40 - 130
D7-NMeFOSE	58.7		20 - 130
D9-NEtFOSE	55.3		15 - 130
D5-NEtFOSA	50.9		10 - 130
D3-NMeFOSA	49.8		10 - 130

Lab Sample ID: MB 320-841272/1-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 841272

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorotridecanoic acid (PFTeDA)	ND		2.0	0.58	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		03/20/25 13:29	03/22/25 13:55	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-841272/1-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 841272

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		03/20/25 13:29	03/22/25 13:55	1
4:2 FTS	ND		4.0	0.44	ng/L		03/20/25 13:29	03/22/25 13:55	1
6:2 FTS	ND		4.0	0.41	ng/L		03/20/25 13:29	03/22/25 13:55	1
8:2 FTS	ND		4.0	0.90	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		03/20/25 13:29	03/22/25 13:55	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		03/20/25 13:29	03/22/25 13:55	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		03/20/25 13:29	03/22/25 13:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		03/20/25 13:29	03/22/25 13:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		03/20/25 13:29	03/22/25 13:55	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		03/20/25 13:29	03/22/25 13:55	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		03/20/25 13:29	03/22/25 13:55	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		03/20/25 13:29	03/22/25 13:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		03/20/25 13:29	03/22/25 13:55	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		03/20/25 13:29	03/22/25 13:55	1
9Cl-PF3ONS	ND		2.0	0.58	ng/L		03/20/25 13:29	03/22/25 13:55	1
11Cl-PF3OUdS	ND		2.0	0.30	ng/L		03/20/25 13:29	03/22/25 13:55	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		03/20/25 13:29	03/22/25 13:55	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		03/20/25 13:29	03/22/25 13:55	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		03/20/25 13:29	03/22/25 13:55	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		03/20/25 13:29	03/22/25 13:55	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	97.8		5 - 130	03/20/25 13:29	03/22/25 13:55	1
13C5 PFPeA	120		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C5 PFHxA	110		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C4 PFHpA	122		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C8 PFOA	107		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C9 PFNA	91.0		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C6 PFDA	114		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C7 PFUnA	103		30 - 130	03/20/25 13:29	03/22/25 13:55	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-841272/1-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 841272

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDa	103		10 - 130	03/20/25 13:29	03/22/25 13:55	1
13C2 PFTeDA	88.6		10 - 130	03/20/25 13:29	03/22/25 13:55	1
13C3 PFBS	93.7		40 - 135	03/20/25 13:29	03/22/25 13:55	1
13C3 PFHxS	93.7		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C8 PFOS	102		40 - 130	03/20/25 13:29	03/22/25 13:55	1
13C8 FOSA	96.3		40 - 130	03/20/25 13:29	03/22/25 13:55	1
D3-NMeFOSAA	93.8		40 - 170	03/20/25 13:29	03/22/25 13:55	1
D5-NEtFOSAA	86.8		25 - 135	03/20/25 13:29	03/22/25 13:55	1
13C2 4:2 FTS	87.4		40 - 200	03/20/25 13:29	03/22/25 13:55	1
13C2 6:2 FTS	94.8		40 - 200	03/20/25 13:29	03/22/25 13:55	1
13C2 8:2 FTS	113		40 - 300	03/20/25 13:29	03/22/25 13:55	1
13C3 HFPO-DA	121		40 - 130	03/20/25 13:29	03/22/25 13:55	1
D7-NMeFOSE	106		10 - 130	03/20/25 13:29	03/22/25 13:55	1
D9-NEtFOSE	88.5		10 - 130	03/20/25 13:29	03/22/25 13:55	1
D5-NEtFOSA	80.1		10 - 130	03/20/25 13:29	03/22/25 13:55	1
D3-NMeFOSA	79.4		10 - 130	03/20/25 13:29	03/22/25 13:55	1

Lab Sample ID: LCS 320-841272/3-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841272

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	76.7		ng/L		96	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	34.1		ng/L		85	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	35.5		ng/L		89	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	35.2		ng/L		88	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	37.2		ng/L		93	70 - 150
Perfluorononanoic acid (PFNA)	40.0	37.4		ng/L		93	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	36.3		ng/L		91	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	39.1		ng/L		98	70 - 145
Perfluorododecanoic acid (PFDaA)	40.0	36.6		ng/L		91	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	40.0	40.6		ng/L		102	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	40.2		ng/L		101	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	26.9		ng/L		76	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	33.9		ng/L		90	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.6		ng/L		87	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.1		ng/L		97	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	34.0		ng/L		91	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	35.2		ng/L		92	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	34.2		ng/L		89	60 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-841272/3-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841272

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid (PFDoS)	38.8	33.7		ng/L		87	50 - 145
4:2 FTS	75.0	78.5		ng/L		105	70 - 145
6:2 FTS	76.2	74.7		ng/L		98	65 - 155
8:2 FTS	76.8	76.7		ng/L		100	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	42.7		ng/L		107	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	38.8		ng/L		97	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	37.8		ng/L		95	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	36.3		ng/L		91	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.0		ng/L		93	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	180		ng/L		90	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	198		ng/L		99	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	29.7		ng/L		99	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	33.3		ng/L		88	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	30.6		ng/L		77	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	36.7		ng/L		92	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	32.0		ng/L		80	50 - 150
9Cl-PF3ONS	37.4	37.0		ng/L		99	70 - 155
11Cl-PF3OUdS	37.8	33.7		ng/L		89	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	30.4		ng/L		85	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	65.2		ng/L		81	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	190		ng/L		95	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	182		ng/L		91	50 - 145

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	95.8		5 - 130
13C5 PFPeA	123		40 - 130
13C5 PFHxA	113		40 - 130
13C4 PFHpA	124		40 - 130
13C8 PFOA	108		40 - 130
13C9 PFNA	95.1		40 - 130
13C6 PFDA	109		40 - 130
13C7 PFUnA	105		30 - 130
13C2 PFDoA	101		10 - 130
13C2 PFTeDA	83.4		10 - 130
13C3 PFBS	92.2		40 - 135
13C3 PFHxS	92.7		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-841272/3-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841272

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 PFOS	101		40 - 130
13C8 FOSA	93.9		40 - 130
D3-NMeFOSAA	93.5		40 - 170
D5-NEtFOSAA	83.5		25 - 135
13C2 4:2 FTS	80.2		40 - 200
13C2 6:2 FTS	90.2		40 - 200
13C2 8:2 FTS	90.4		40 - 300
13C3 HFPO-DA	119		40 - 130
D7-NMeFOSE	98.0		10 - 130
D9-NEtFOSE	83.9		10 - 130
D5-NEtFOSA	75.1		10 - 130
D3-NMeFOSA	75.1		10 - 130

Lab Sample ID: LCSD 320-841272/4-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 841272

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	74.5		ng/L		93	70 - 140	3	30
Perfluoropentanoic acid (PFPeA)	40.0	33.2		ng/L		83	65 - 135	3	30
Perfluorohexanoic acid (PFHxA)	40.0	36.6		ng/L		91	70 - 145	3	30
Perfluoroheptanoic acid (PFHpA)	40.0	34.9		ng/L		87	70 - 150	1	30
Perfluorooctanoic acid (PFOA)	40.0	36.6		ng/L		91	70 - 150	2	30
Perfluorononanoic acid (PFNA)	40.0	37.9		ng/L		95	70 - 150	1	30
Perfluorodecanoic acid (PFDA)	40.0	35.4		ng/L		88	70 - 140	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.3		ng/L		98	70 - 145	1	30
Perfluorododecanoic acid (PFDoA)	40.0	36.7		ng/L		92	70 - 140	0	30
Perfluorotridecanoic acid (PFTrDA)	40.0	38.8		ng/L		97	65 - 140	4	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	39.7		ng/L		99	60 - 140	1	30
Perfluorobutanesulfonic acid (PFBS)	35.5	27.8		ng/L		78	60 - 145	4	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	33.7		ng/L		90	65 - 140	0	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	29.7		ng/L		81	65 - 145	6	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.1		ng/L		97	70 - 150	0	30
Perfluorooctanesulfonic acid (PFOS)	37.2	33.5		ng/L		90	55 - 150	2	30
Perfluorononanesulfonic acid (PFNS)	38.5	33.5		ng/L		87	65 - 145	5	30
Perfluorodecanesulfonic acid (PFDS)	38.6	35.2		ng/L		91	60 - 145	3	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	33.3		ng/L		86	50 - 145	1	30
4:2 FTS	75.0	98.8		ng/L		132	70 - 145	23	30
6:2 FTS	76.2	71.0		ng/L		93	65 - 155	5	30
8:2 FTS	76.8	73.3		ng/L		95	60 - 150	5	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-841272/4-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 841272

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonamide (PFOSA)	40.0	41.6		ng/L		104	70 - 145	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	37.0		ng/L		93	60 - 150	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	37.3		ng/L		93	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	36.4		ng/L		91	50 - 140	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.6		ng/L		91	70 - 145	1	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	172		ng/L		86	70 - 145	5	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	185		ng/L		93	70 - 135	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	27.6		ng/L		92	70 - 140	7	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	31.6		ng/L		84	65 - 145	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	30.3		ng/L		76	55 - 140	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	35.5		ng/L		89	60 - 150	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	27.7		ng/L		69	50 - 150	14	30
9Cl-PF3ONS	37.4	34.2		ng/L		91	70 - 155	8	30
11Cl-PF3OUdS	37.8	30.5		ng/L		81	55 - 160	10	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	31.5		ng/L		88	70 - 140	4	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	62.6		ng/L		78	65 - 130	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	175		ng/L		87	70 - 135	8	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	178		ng/L		89	50 - 145	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	97.4		5 - 130
13C5 PFPeA	127		40 - 130
13C5 PFHxA	117		40 - 130
13C4 PFHpA	128		40 - 130
13C8 PFOA	107		40 - 130
13C9 PFNA	93.5		40 - 130
13C6 PFDA	112		40 - 130
13C7 PFUnA	104		30 - 130
13C2 PFDoA	103		10 - 130
13C2 PFTeDA	88.7		10 - 130
13C3 PFBS	85.4		40 - 135
13C3 PFHxS	89.6		40 - 130
13C8 PFOS	98.3		40 - 130
13C8 FOSA	92.4		40 - 130
D3-NMeFOSAA	91.1		40 - 170
D5-NEtFOSAA	82.5		25 - 135
13C2 4:2 FTS	62.8		40 - 200

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-841272/4-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 841272

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C2 6:2 FTS	87.7		40 - 200
13C2 8:2 FTS	85.8		40 - 300
13C3 HFPO-DA	124		40 - 130
D7-NMeFOSE	91.6		10 - 130
D9-NEtFOSE	80.7		10 - 130
D5-NEtFOSA	65.9		10 - 130
D3-NMeFOSA	67.6		10 - 130

Lab Sample ID: LLCS 320-841272/2-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841272

<i>Analyte</i>	<i>Spike Added</i>	<i>LLCS Result</i>	<i>LLCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluorobutanoic acid (PFBA)	8.00	7.11		ng/L		89	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.29		ng/L		82	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	3.64		ng/L		91	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.48		ng/L		87	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	3.65		ng/L		91	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.34		ng/L		83	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	3.47		ng/L		87	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	3.67		ng/L		92	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.40		ng/L		85	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.42		ng/L		85	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.40		ng/L		85	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	2.50		ng/L		70	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.30		ng/L		88	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.33		ng/L		91	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.48		ng/L		91	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.66		ng/L		99	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.32		ng/L		86	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	2.90		ng/L		75	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.95		ng/L		76	50 - 145
4:2 FTS	7.50	6.95		ng/L		93	70 - 145
6:2 FTS	7.62	7.02		ng/L		92	65 - 155
8:2 FTS	7.68	6.97		ng/L		91	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.88		ng/L		97	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.26		ng/L		82	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	2.96		ng/L		74	65 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-841272/2-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841272

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.36		ng/L		109	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.25		ng/L		81	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	16.4		ng/L		82	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	17.7		ng/L		89	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.84		ng/L		95	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.11		ng/L		82	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.12		ng/L		78	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.49		ng/L		87	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	2.73		ng/L		68	50 - 150
9CI-PF3ONS	3.74	2.96		ng/L		79	70 - 155
11CI-PF3OUdS	3.78	2.56		ng/L		68	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	2.84		ng/L		80	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	6.57		ng/L		82	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	16.7		ng/L		83	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	13.8		ng/L		69	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	96.9		5 - 130
13C5 PFPeA	118		40 - 130
13C5 PFHxA	112		40 - 130
13C4 PFHpA	118		40 - 130
13C8 PFOA	107		40 - 130
13C9 PFNA	102		40 - 130
13C6 PFDA	109		40 - 130
13C7 PFUnA	99.3		30 - 130
13C2 PFDoA	98.3		10 - 130
13C2 PFTeDA	83.8		10 - 130
13C3 PFBS	95.6		40 - 135
13C3 PFHxS	91.1		40 - 130
13C8 PFOS	99.1		40 - 130
13C8 FOSA	93.8		40 - 130
D3-NMeFOSAA	91.4		40 - 170
D5-NEtFOSAA	80.5		25 - 135
13C2 4:2 FTS	92.6		40 - 200
13C2 6:2 FTS	101		40 - 200
13C2 8:2 FTS	107		40 - 300
13C3 HFPO-DA	127		40 - 130
D7-NMeFOSE	100		10 - 130
D9-NEtFOSE	79.5		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-841272/2-A

Matrix: Water

Analysis Batch: 841630

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841272

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
D5-NMeFOSA	78.5		10 - 130
D3-NMeFOSA	77.0		10 - 130

Lab Sample ID: MB 320-841388/1-A

Matrix: Solid

Analysis Batch: 841540

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 841388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.20	0.016	ug/Kg		03/21/25 04:32	03/22/25 07:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.40	0.075	ug/Kg		03/21/25 04:32	03/22/25 07:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		03/21/25 04:32	03/22/25 07:54	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	107		35 - 130				03/21/25 04:32	03/22/25 07:54	1
13C5 PFHxA	100		40 - 130				03/21/25 04:32	03/22/25 07:54	1
D3-NMeFOSAA	89.2		40 - 135				03/21/25 04:32	03/22/25 07:54	1

Lab Sample ID: LCS 320-841388/3-A

Matrix: Solid

Analysis Batch: 841540

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.28		ug/Kg		91	65 - 155
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.15		ug/Kg		83	45 - 130
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	12.5		ug/Kg		100	60 - 150
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C5 PFPeA	114		35 - 130				
13C5 PFHxA	99.0		40 - 130				
D3-NMeFOSAA	90.6		40 - 135				

Lab Sample ID: LCSD 320-841388/4-A

Matrix: Solid

Analysis Batch: 841540

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 841388

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.29		ug/Kg		92	65 - 155	1	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	3.92		ug/Kg		78	45 - 130	6	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	12.6		ug/Kg		101	60 - 150	1	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C5 PFPeA	107		35 - 130						
13C5 PFHxA	92.6		40 - 130						

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-841388/4-A

Matrix: Solid

Analysis Batch: 841540

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 841388

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
D3-NMeFOSAA	87.6		40 - 135

Lab Sample ID: LLCS 320-841388/2-A

Matrix: Solid

Analysis Batch: 841540

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 841388

				LLCS				LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS		LLCS			
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Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: LCS 320-840259/3-A

Matrix: Water

Analysis Batch: 840661

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Table 1: PFOS Data: 6-16-2017									
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanoic acid (PFDA) - RA			40.0	37.4		ng/L		94	70 - 140
Perfluoroundecanoic acid (PFUnA) - RA			40.0	42.2		ng/L		105	70 - 145
Perfluorododecanoic acid (PFDoA) - RA			40.0	38.5		ng/L		96	70 - 140
Perfluorotridecanoic acid (PFTTrDA) - RA			40.0	35.4		ng/L		88	65 - 140
Perfluorotetradecanoic acid (PFTeDA) - RA			40.0	35.1		ng/L		88	60 - 140
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA) - RA			40.0	35.1		ng/L		88	50 - 140
		LCS	LCS						
Isotope Dilution	%Recovery	Qualifier	Limits						
13C6 PFDA - RA	114		40 - 130						
13C7 PFUnA - RA	129		30 - 130						
13C2 PFDoA - RA	123		10 - 130						
13C2 PFTeDA - RA	108		10 - 130						
D3-NMeFOSAA - RA	78.0		40 - 170						

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCSD 320-840259/4-A

Matrix: Water

Analysis Batch: 840661

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorodecanoic acid (PFDA) - RA	40.0	38.3		ng/L		96	70 - 140	2	30
Perfluoroundecanoic acid (PFUnA) - RA	40.0	39.5		ng/L		99	70 - 145	6	30
Perfluorododecanoic acid (PFDoA) - RA	40.0	35.6		ng/L		89	70 - 140	8	30
Perfluorotridecanoic acid (PFTrDA) - RA	40.0	43.6		ng/L		109	65 - 140	21	30
Perfluorotetradecanoic acid (PFTeDA) - RA	40.0	45.2		ng/L		113	60 - 140	25	30
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA) - RA	40.0	36.5		ng/L		91	50 - 140	4	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C6 PFDA - RA	109		40 - 130						
13C7 PFUnA - RA	126		30 - 130						
13C2 PFDoA - RA	118		10 - 130						
13C2 PFTeDA - RA	89.7		10 - 130						
D3-NMeFOSAA - RA	78.4		40 - 170						

Lab Sample ID: LLCS 320-840259/2-A

Matrix: Water

Analysis Batch: 840661

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840259

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorodecanoic acid (PFDA) - RA	4.00	4.59		ng/L		115	70 - 140		
Perfluoroundecanoic acid (PFUnA) - RA	4.00	3.73		ng/L		93	70 - 145		
Perfluorododecanoic acid (PFDoA) - RA	4.00	3.81		ng/L		95	70 - 140		
Perfluorotridecanoic acid (PFTrDA) - RA	4.00	3.96		ng/L		99	65 - 140		
Perfluorotetradecanoic acid (PFTeDA) - RA	4.00	4.13		ng/L		103	60 - 140		
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA) - RA	4.00	3.39		ng/L		85	50 - 140		
Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits						
13C6 PFDA - RA	109	*3	40 - 130						
13C7 PFUnA - RA	159	*3 *5+	30 - 130						
13C2 PFDoA - RA	127	*3	10 - 130						
13C2 PFTeDA - RA	114	*3	10 - 130						
D3-NMeFOSAA - RA	77.9		40 - 170						

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: MB 320-840552/1-A

Matrix: Solid

Analysis Batch: 841178

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 840552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	ND		0.40	0.065	ug/Kg		03/18/25 04:19	03/20/25 08:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	ND		0.20	0.016	ug/Kg		03/18/25 04:19	03/20/25 08:17	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
D3-NMeFOSAA - RA	83.6		40 - 135				03/18/25 04:19	03/20/25 08:17	1
13C2 4:2 FTS - RA	72.9		40 - 165				03/18/25 04:19	03/20/25 08:17	1

Lab Sample ID: LCS 320-840552/3-A

Matrix: Solid

Analysis Batch: 841178

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	4.69	4.68		ug/Kg		100	60 - 150	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	2.50	2.48		ug/Kg		99	65 - 155	
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits					
D3-NMeFOSAA - RA	82.7		40 - 135					
13C2 4:2 FTS - RA	74.0		40 - 165					

Lab Sample ID: LCSD 320-840552/4-A

Matrix: Solid

Analysis Batch: 841178

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	4.69	4.48		ug/Kg		96	60 - 150	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	2.50	2.36		ug/Kg		95	65 - 155	5	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
D3-NMeFOSAA - RA	72.2		40 - 135						
13C2 4:2 FTS - RA	77.4		40 - 165						

Lab Sample ID: LLCS 320-840552/2-A

Matrix: Solid

Analysis Batch: 841178

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) - RA	0.750	0.780		ug/Kg		104	60 - 150	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	0.400	0.368		ug/Kg		92	65 - 155	
Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits					
D3-NMeFOSAA - RA	64.0		40 - 135					

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LLCS 320-840552/2-A

Matrix: Solid

Analysis Batch: 841178

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 840552

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C2 4:2 FTS - RA	72.9		40 - 165

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 320-840397/1

Matrix: Water

Analysis Batch: 840397

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.0	5.0	mg/L			03/17/25 13:47	1

Lab Sample ID: LCS 320-840397/2

Matrix: Water

Analysis Batch: 840397

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	97.6		mg/L		98	85 - 115

Lab Sample ID: 320-119687-1 DU

Matrix: Water

Analysis Batch: 840397

Client Sample ID: INF-02-202503

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	210		207		mg/L		2	20

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

LCMS

Prep Batch: 840259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-1	INF-02-202503	Total/NA	Water	1633	
320-119687-1 - RA	INF-02-202503	Total/NA	Water	1633	
320-119687-2	INF-07-202503	Total/NA	Water	1633	
320-119687-2 - RA	INF-07-202503	Total/NA	Water	1633	
320-119687-3	INF-08-202503	Total/NA	Water	1633	
320-119687-4	INF-11-202503	Total/NA	Water	1633	
320-119687-4 - RA	INF-11-202503	Total/NA	Water	1633	
320-119687-5	INF-18-202503	Total/NA	Water	1633	
320-119687-5 - RA	INF-18-202503	Total/NA	Water	1633	
320-119687-6	INF-COMP-202503	Total/NA	Water	1633	
320-119687-6 - RA	INF-COMP-202503	Total/NA	Water	1633	
320-119687-7	EFF-G-202503	Total/NA	Water	1633	
320-119687-7 - RA	EFF-G-202503	Total/NA	Water	1633	
320-119687-11	EB01-202503	Total/NA	Water	1633	
320-119687-11 - RA	EB01-202503	Total/NA	Water	1633	
MB 320-840259/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-840259/3-A	Lab Control Sample	Total/NA	Water	1633	
LCS 320-840259/3-A - RA	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-840259/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LCSD 320-840259/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-840259/2-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-840259/2-A - RA	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 840477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-1	INF-02-202503	Total/NA	Water	1633A	840259
320-119687-2	INF-07-202503	Total/NA	Water	1633A	840259
320-119687-3	INF-08-202503	Total/NA	Water	1633A	840259
320-119687-4	INF-11-202503	Total/NA	Water	1633A	840259
320-119687-5	INF-18-202503	Total/NA	Water	1633A	840259
320-119687-6	INF-COMP-202503	Total/NA	Water	1633A	840259
320-119687-7	EFF-G-202503	Total/NA	Water	1633A	840259
320-119687-11	EB01-202503	Total/NA	Water	1633A	840259
LCS 320-840259/3-A	Lab Control Sample	Total/NA	Water	1633A	840259
LCSD 320-840259/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	840259
LLCS 320-840259/2-A	Lab Control Sample	Total/NA	Water	1633A	840259

Prep Batch: 840552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8	BIO-B-202503	Total/NA	Solid	1633 Shake	
320-119687-8 - RA	BIO-B-202503	Total/NA	Solid	1633 Shake	
320-119687-9	BIO-A-23-202503	Total/NA	Solid	1633 Shake	
320-119687-9 - RA	BIO-A-23-202503	Total/NA	Solid	1633 Shake	
320-119687-9 - DL	BIO-A-23-202503	Total/NA	Solid	1633 Shake	
320-119687-10	BIO-A-24-202503	Total/NA	Solid	1633 Shake	
320-119687-10 - DL	BIO-A-24-202503	Total/NA	Solid	1633 Shake	
320-119687-10 - RA	BIO-A-24-202503	Total/NA	Solid	1633 Shake	
MB 320-840552/1-A	Method Blank	Total/NA	Solid	1633 Shake	
MB 320-840552/1-A - RA	Method Blank	Total/NA	Solid	1633 Shake	
LCS 320-840552/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LCS 320-840552/3-A - RA	Lab Control Sample	Total/NA	Solid	1633 Shake	

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

LCMS (Continued)

Prep Batch: 840552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 320-840552/4-A	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LCSD 320-840552/4-A - RA	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LLCS 320-840552/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 320-840552/2-A - RA	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 840661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-1 - RA	INF-02-202503	Total/NA	Water	1633A	840259
320-119687-2 - RA	INF-07-202503	Total/NA	Water	1633A	840259
320-119687-4 - RA	INF-11-202503	Total/NA	Water	1633A	840259
320-119687-5 - RA	INF-18-202503	Total/NA	Water	1633A	840259
320-119687-6 - RA	INF-COMP-202503	Total/NA	Water	1633A	840259
320-119687-7 - RA	EFF-G-202503	Total/NA	Water	1633A	840259
320-119687-11 - RA	EB01-202503	Total/NA	Water	1633A	840259
LCS 320-840259/3-A - RA	Lab Control Sample	Total/NA	Water	1633A	840259
LCSD 320-840259/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633A	840259
LLCS 320-840259/2-A - RA	Lab Control Sample	Total/NA	Water	1633A	840259

Analysis Batch: 840938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-840259/1-A	Method Blank	Total/NA	Water	1633A	840259

Analysis Batch: 840998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8	BIO-B-202503	Total/NA	Solid	1633A	840552
320-119687-9	BIO-A-23-202503	Total/NA	Solid	1633A	840552
320-119687-10	BIO-A-24-202503	Total/NA	Solid	1633A	840552
MB 320-840552/1-A	Method Blank	Total/NA	Solid	1633A	840552
LCS 320-840552/3-A	Lab Control Sample	Total/NA	Solid	1633A	840552
LCSD 320-840552/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	840552
LLCS 320-840552/2-A	Lab Control Sample	Total/NA	Solid	1633A	840552

Analysis Batch: 841178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8 - RA	BIO-B-202503	Total/NA	Solid	1633A	840552
320-119687-9 - RA	BIO-A-23-202503	Total/NA	Solid	1633A	840552
320-119687-10 - RA	BIO-A-24-202503	Total/NA	Solid	1633A	840552
MB 320-840552/1-A - RA	Method Blank	Total/NA	Solid	1633A	840552
LCS 320-840552/3-A - RA	Lab Control Sample	Total/NA	Solid	1633A	840552
LCSD 320-840552/4-A - RA	Lab Control Sample Dup	Total/NA	Solid	1633A	840552
LLCS 320-840552/2-A - RA	Lab Control Sample	Total/NA	Solid	1633A	840552

Analysis Batch: 841210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-10 - DL	BIO-A-24-202503	Total/NA	Solid	1633A	840552

Prep Batch: 841272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-3 - RE	INF-08-202503	Total/NA	Water	1633	
MB 320-841272/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-841272/3-A	Lab Control Sample	Total/NA	Water	1633	

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

LCMS (Continued)

Prep Batch: 841272 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 320-841272/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-841272/2-A	Lab Control Sample	Total/NA	Water	1633	

Prep Batch: 841388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8 - RE	BIO-B-202503	Total/NA	Solid	1633 Shake	
320-119687-9 - RE	BIO-A-23-202503	Total/NA	Solid	1633 Shake	
320-119687-10 - RE	BIO-A-24-202503	Total/NA	Solid	1633 Shake	
MB 320-841388/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 320-841388/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LCSD 320-841388/4-A	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LLCS 320-841388/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 841514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-9 - DL	BIO-A-23-202503	Total/NA	Solid	1633A	840552

Analysis Batch: 841540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-841388/1-A	Method Blank	Total/NA	Solid	1633A	841388
LCS 320-841388/3-A	Lab Control Sample	Total/NA	Solid	1633A	841388
LCSD 320-841388/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	841388
LLCS 320-841388/2-A	Lab Control Sample	Total/NA	Solid	1633A	841388

Analysis Batch: 841630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-3 - RE	INF-08-202503	Total/NA	Water	1633A	841272
MB 320-841272/1-A	Method Blank	Total/NA	Water	1633A	841272
LCS 320-841272/3-A	Lab Control Sample	Total/NA	Water	1633A	841272
LCSD 320-841272/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	841272
LLCS 320-841272/2-A	Lab Control Sample	Total/NA	Water	1633A	841272

Analysis Batch: 841759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8 - RE	BIO-B-202503	Total/NA	Solid	1633A	841388
320-119687-9 - RE	BIO-A-23-202503	Total/NA	Solid	1633A	841388
320-119687-10 - RE	BIO-A-24-202503	Total/NA	Solid	1633A	841388

General Chemistry

Analysis Batch: 839716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8	BIO-B-202503	Total/NA	Solid	1633	
320-119687-9	BIO-A-23-202503	Total/NA	Solid	1633	
320-119687-10	BIO-A-24-202503	Total/NA	Solid	1633	

Analysis Batch: 840397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-1	INF-02-202503	Total/NA	Water	SM 2540D	
320-119687-2	INF-07-202503	Total/NA	Water	SM 2540D	
320-119687-3	INF-08-202503	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

General Chemistry (Continued)

Analysis Batch: 840397 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-4	INF-11-202503	Total/NA	Water	SM 2540D	
320-119687-5	INF-18-202503	Total/NA	Water	SM 2540D	
320-119687-6	INF-COMP-202503	Total/NA	Water	SM 2540D	
320-119687-7	EFF-G-202503	Total/NA	Water	SM 2540D	
MB 320-840397/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 320-840397/2	Lab Control Sample	Total/NA	Water	SM 2540D	
320-119687-1 DU	INF-02-202503	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-02-202503

Lab Sample ID: 320-119687-1

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			164.4 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 21:28	N1K	EET SAC
Total/NA	Prep	1633	RA		164.4 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 12:50	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			163.2 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 21:44	N1K	EET SAC
Total/NA	Prep	1633	RA		163.2 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 13:04	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			145.2 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 22:00	N1K	EET SAC
Total/NA	Prep	1633	RE		12.5 mL	5.0 mL	841272	03/20/25 13:29	ERR	EET SAC
Total/NA	Analysis	1633A	RE	1			841630	03/22/25 15:00	K1S	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			158.8 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 22:17	N1K	EET SAC
Total/NA	Prep	1633	RA		158.8 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 13:32	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			151.5 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 22:33	N1K	EET SAC
Total/NA	Prep	1633	RA		151.5 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 13:46	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			149.4 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 22:49	N1K	EET SAC
Total/NA	Prep	1633	RA		149.4 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 14:00	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	80 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			164.2 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 23:38	N1K	EET SAC
Total/NA	Prep	1633	RA		164.2 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 14:41	N1K	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	840397	03/17/25 13:47	JCB	EET SAC

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			839716	03/13/25 15:02	JCB	EET SAC

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			4.09 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A		1			840998	03/19/25 22:28	RS1	EET SAC
Total/NA	Prep	1633 Shake	RA		4.09 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A	RA	1			841178	03/20/25 09:27	K1S	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake	RE		4.08 g	5.0 mL	841388	03/21/25 04:32	RMF	EET SAC
Total/NA	Analysis	1633A	RE	1			841759	03/23/25 22:49	P1P	EET SAC

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			839716	03/13/25 15:02	JCB	EET SAC

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			4.09 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A		1			840998	03/19/25 22:44	RS1	EET SAC
Total/NA	Prep	1633 Shake	RA		4.09 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A	RA	1			841178	03/20/25 09:41	K1S	EET SAC
Total/NA	Prep	1633 Shake	DL		4.09 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A	DL	5			841514	03/21/25 19:02	S1M	EET SAC
Total/NA	Prep	1633 Shake	RE		4.06 g	5.0 mL	841388	03/21/25 04:32	RMF	EET SAC
Total/NA	Analysis	1633A	RE	1			841759	03/23/25 23:05	P1P	EET SAC

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			839716	03/13/25 15:02	JCB	EET SAC

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			4.03 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A		1			840998	03/19/25 23:01	RS1	EET SAC
Total/NA	Prep	1633 Shake	DL		4.03 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A	DL	5			841210	03/20/25 16:10	C1P	EET SAC
Total/NA	Prep	1633 Shake	RA		4.03 g	5.0 mL	840552	03/18/25 04:19	RMF	EET SAC
Total/NA	Analysis	1633A	RA	1			841178	03/20/25 09:55	K1S	EET SAC
Total/NA	Prep	1633 Shake	RE		4.04 g	5.0 mL	841388	03/21/25 04:32	RMF	EET SAC
Total/NA	Analysis	1633A	RE	1			841759	03/23/25 23:21	P1P	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EB01-202503
Date Collected: 03/10/25 13:17
Date Received: 03/12/25 09:30

Lab Sample ID: 320-119687-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			153.1 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A		1			840477	03/17/25 23:55	N1K	EET SAC
Total/NA	Prep	1633	RA		153.1 mL	5.0 mL	840259	03/17/25 04:50	GAT	EET SAC
Total/NA	Analysis	1633A	RA	1			840661	03/18/25 14:55	N1K	EET SAC

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids
1633A	1633	Water	11CI-PF3OUdS
1633A	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633	Water	4:2 FTS
1633A	1633	Water	6:2 FTS
1633A	1633	Water	8:2 FTS
1633A	1633	Water	9CI-PF3ONS
1633A	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)
1633A	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633A	1633	Water	Perfluorobutanoic acid (PFBA)
1633A	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633A	1633	Water	Perfluorodecanoic acid (PFDA)
1633A	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633	Water	Perfluorododecanoic acid (PFDoA)
1633A	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633A	1633	Water	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633	Water	Perfluorohexanoic acid (PFHxA)
1633A	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633A	1633	Water	Perfluorononanoic acid (PFNA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633A	1633	Water	Perfluorooctanesulfonic acid (PFOS)
1633A	1633	Water	Perfluorooctanoic acid (PFOA)
1633A	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633	Water	Perfluoropentanoic acid (PFPeA)
1633A	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633	Water	Perfluorotridecanoic acid (PFTrDA)
1633A	1633	Water	Perfluoroundecanoic acid (PFUnA)
1633A	1633 Shake	Solid	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
1633A	1633 Shake	Solid	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
1633A	1633 Shake	Solid	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
1633A	1633 Shake	Solid	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
1633A	1633 Shake	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633 Shake	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633 Shake	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633 Shake	Solid	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633 Shake	Solid	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)
1633A	1633 Shake	Solid	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
1633A	1633 Shake	Solid	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633 Shake	Solid	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633 Shake	Solid	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633 Shake	Solid	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633 Shake	Solid	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633 Shake	Solid	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633 Shake	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633 Shake	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
1633A	1633 Shake	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633 Shake	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633 Shake	Solid	Perfluorobutanesulfonic acid (PFBS)
1633A	1633 Shake	Solid	Perfluorobutanoic acid (PFBA)
1633A	1633 Shake	Solid	Perfluorodecanesulfonic acid (PFDS)
1633A	1633 Shake	Solid	Perfluorodecanoic acid (PFDA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633 Shake	Solid	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633 Shake	Solid	Perfluorododecanoic acid (PFDoA)
1633A	1633 Shake	Solid	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633 Shake	Solid	Perfluoroheptanoic acid (PFHpA)
1633A	1633 Shake	Solid	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633 Shake	Solid	Perfluorohexanoic acid (PFHxA)
1633A	1633 Shake	Solid	Perfluorononanesulfonic acid (PFNS)
1633A	1633 Shake	Solid	Perfluorononanoic acid (PFNA)
1633A	1633 Shake	Solid	Perfluorooctanesulfonamide (PFOSA)
1633A	1633 Shake	Solid	Perfluorooctanesulfonic acid (PFOS)
1633A	1633 Shake	Solid	Perfluorooctanoic acid (PFOA)
1633A	1633 Shake	Solid	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633 Shake	Solid	Perfluoropentanoic acid (PFPeA)
1633A	1633 Shake	Solid	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633 Shake	Solid	Perfluorotridecanoic acid (PFTTrDA)
1633A	1633 Shake	Solid	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids
SM 2540D		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633	Percent Moisture	EPA	EET SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC
1633 Shake	Shake Extraction with SPE	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-119687-1	INF-02-202503	Water	03/10/25 23:59	03/12/25 09:30
320-119687-2	INF-07-202503	Water	03/10/25 23:59	03/12/25 09:30
320-119687-3	INF-08-202503	Water	03/10/25 23:59	03/12/25 09:30
320-119687-4	INF-11-202503	Water	03/10/25 23:59	03/12/25 09:30
320-119687-5	INF-18-202503	Water	03/10/25 23:59	03/12/25 09:30
320-119687-6	INF-COMP-202503	Water	03/10/25 23:59	03/12/25 09:30
320-119687-7	EFF-G-202503	Water	03/11/25 07:11	03/12/25 09:30
320-119687-8	BIO-B-202503	Solid	03/10/25 13:28	03/12/25 09:30
320-119687-9	BIO-A-23-202503	Solid	03/10/25 14:04	03/12/25 09:30
320-119687-10	BIO-A-24-202503	Solid	03/10/25 14:38	03/12/25 09:30
320-119687-11	EB01-202503	Water	03/10/25 13:17	03/12/25 09:30

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environment Testing

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4/17/2025 (Rev. 1)

Client Information Client Contact: <u>Allen Mike Ursin</u> TRC 999 Fourier Dr Suite 101 ^{S3717} Madison, WI		Sampler: <u>Jennifer Faust</u> Phone: _____		Lab PM: <u>Jessica McLaumman</u> E-Mail: <u>jessicame@madisonwi.com</u>		Carrier Tracking No(s): _____		COC No: _____	
Company: <u>Madison Metro Sewerage Dist</u> Address: <u>1610 Moorland Rd</u> City: <u>Madison</u> State, Zip: <u>WI 53713</u> Phone: <u>608 222-1201</u> Email: <u>mursin@trccompanies.com</u> Project Name: <u>PFAS Study</u> Site: <u>MMSD</u>				PWSID: _____		Analysis Requested			
Due Date Requested: _____		TAT Requested (days): <u>20 business days</u>		Compliance Project: ☐ Yes ☒ No		PO #: <u>2400419</u>		WO #: _____	
Project #:		SSOW#:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, G=waste/oil, BT=tissue, A=air)	
Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers		Special Instructions/Note:	
INF-02-202503		3/10/25		23:54		C		W	
INF-07-202503		3/10/25		23:59		C		W	
INF-08-202503		3/10/25		23:59		C		W	
INF-11-202503		3/10/25		23:59		C		W	
INF-18-202503		3/10/25		23:59		C		W	
INF-COMP-202503		3/10/25		23:59		C		W	
EFF-G-202503		3/11/25		-11		G		W	
B10-B-202503		3/10/25		13:28		G		S	
B10-A-23-202503		3/10/25		14:04		G		S	
B10-A-24-202503		3/10/25		14:38		G		S	
EB01-202503		3/10/25		13:17		G		W	
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months			
Deliverable Requested I, II, III, IV, Other (specify)						Special Instructions/QC Requirements			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>3/11/25 0730</u>		Company: <u>MMSD</u>		Received by: <u>[Signature]</u>		Date/Time: <u>3/12/25 930</u>	
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____	
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____	
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: <u>29</u>					

Ver 01/16/2019



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 4/17/2025 1:13:14 PM Revision 2

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-119687-2

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-119687-2

Job ID: 320-119687-2

Eurofins Sacramento

Job Narrative 320-119687-2

Revision

The report being provided is a revision of the original report sent on 3/31/2025. The report (revision 2) is being revised to include the QC samples that were missing in the original report.

Report revision history

Revision 1 - 4/9/2025 - Reason - The report (revision 1) is being revised to report the 40 analyte list for the TOPs method.

Receipt

The samples were received on 3/12/2025 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9° C.

LCMS

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9), BIO-A-24-202503 (320-119687-10) and (MB 320-842038/1-A).

Method 537 (modified): Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NEtFOSAA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes. The following samples are associated with this narration: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9), BIO-A-24-202503 (320-119687-10), (LCS 320-842039/2-A), (LCSD 320-842039/3-A) and (MB 320-842039/1-A).

Method 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-842039 and analytical batch 320-843055 recovered outside control limits for PFTrDA. Re-analysis confirms the recoveries outside control limits. The LCS and LCSD control limits are in the process of being updated to more accurately reflect the method performance. The following samples are associated with this narration: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9), BIO-A-24-202503 (320-119687-10), (LCS 320-842039/2-A) and (LCSD 320-842039/3-A).

Method 537 (modified): The labeled analyte M2-4:2 FTS is converted to PFBA during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors. The following samples are associated with this narration: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9), BIO-A-24-202503 (320-119687-10) and (MB 320-842039/1-A).

Method 537 (modified): The continuing calibration verification (CCV) associated with batch 320-843055 recovered above the upper control limit for 4:2 FTS. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9), BIO-A-24-202503 (320-119687-10) and (CCV 320-843055/10).

Method 537 (modified): The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-842039 and analytical batch 320-843178 recovered outside control limits for FOSA due to small but acceptable positive results for analytes that are oxidized during the "POST" sample extraction method.

Method 537 (modified): The continuing calibration verification (CCV) associated with batch 320-843177 recovered above the upper control limit for 4:2 FTS. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 537 (modified): The labeled analyte M2-4:2 FTS is converted to PFBA during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors.

Method 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-842591 and analytical batch 320-843177 recovered outside control limits for the following analyte: Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX). This analyte was also detected in the associated sample. The associated samples were re-analyzed with concurring results; therefore, the data have been reported.

Method 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-842591 and analytical batch 320-843177 recovered outside control limits for Perfluorotridecanoic acid (PFTrDA). Re-analysis confirms the recoveries outside control limits. The LCS and LCSD control limits are in the process of being updated to more

Eurofins Sacramento

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-119687-2

Job ID: 320-119687-2 (Continued)

Eurofins Sacramento

accurately reflect the method performance. The following samples are associated with this narration: EFF-G-202503 (320-119687-7), (LCS 320-842591/2-A) and (LCSD 320-842591/3-A).

Method 537 (modified): The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-842591 and analytical batch 320-843177 recovered outside control limits for Perfluorooctanesulfonamide (FOSA), 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) and 8:2 FTS due to small but acceptable positive results for analytes that are oxidized during the "POST" sample extraction method.

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: EFF-G-202503 (320-119687-7), (LCS 320-842591/2-A), (LCSD 320-842591/3-A) and (MB 320-842591/1-A).

Method 537 (modified): Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NEtFOSAA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes. The following samples are associated with this narration: EFF-G-202503 (320-119687-7), (LCS 320-842591/2-A), (LCSD 320-842591/3-A) and (MB 320-842591/1-A).

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: BIO-B-202503 (320-119687-8), BIO-A-23-202503 (320-119687-9) and BIO-A-24-202503 (320-119687-10). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The labeled analyte M2-4:2FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: (LCS 320-842038/2-A), (LCS 320-842039/2-A), (LCSD 320-842038/3-A), (LCSD 320-842039/3-A) and (MB 320-842039/1-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	23	B	13	3.1	ng/L	1		537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	12		5.0	1.3	ng/L	1		537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	18		5.0	1.5	ng/L	1		537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	1.3	ng/L	1		537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	8.4		5.0	1.3	ng/L	1		537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.4	J	5.0	1.3	ng/L	1		537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	5.9		5.0	1.4	ng/L	1		537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	2.8	J	5.0	1.3	ng/L	1		537 (modified)	Post-Treatment

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.7	J	19	2.9	ug/Kg	1	✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	9.0	J	19	4.0	ug/Kg	1	✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11	J	19	2.2	ug/Kg	1	✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	J	19	4.5	ug/Kg	1	✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.3	J	19	3.9	ug/Kg	1	✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	93		19	3.6	ug/Kg	1	✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	140	B	18	4.2	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	90		18	3.8	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	43	*+	18	2.8	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	29		18	3.5	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	37		18	4.9	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	16	J	18	2.0	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	8.8	J	18	4.4	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	5.9	J	18	3.9	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	4.3	J	18	2.8	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	6.6	J	18	4.0	ug/Kg	1	✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.6		2.6	0.61	ug/Kg	1	✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503 (Continued)

Lab Sample ID: 320-119687-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	14		2.6	0.54	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	45		2.6	0.41	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	4.0		2.6	0.50	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	38		2.6	0.70	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.9	J	2.6	0.29	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	15		2.6	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroundecanoic acid (PFUnA)	1.1	J	2.6	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	2.8		2.6	0.40	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorotetradecanoic acid (PFTeDA)	0.79	J	2.6	0.49	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.3		2.6	0.50	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	11		2.6	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanesulfonic acid (PFDS)	0.99	J	2.6	0.69	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	1.3	J	2.6	0.44	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20		2.6	0.30	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.2		2.6	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.2		2.6	0.62	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.7		2.6	0.37	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS	3.4		2.6	0.36	ug/Kg	1		✱	537 (modified)	Pre-Treatment
8:2 FTS	1.1	J	2.6	0.46	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	5.1		2.6	0.54	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	6.6		2.6	0.50	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	190	B	2.6	0.60	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	82		2.6	0.53	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	89	*+	2.6	0.40	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	34		2.6	0.49	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	77		2.6	0.69	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	14		2.6	0.28	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	21		2.6	0.62	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	4.7		2.6	0.54	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503 (Continued)

Lab Sample ID: 320-119687-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorododecanoic acid (PFDoA)	5.3		2.6	0.39	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.3	J *	2.6	0.27	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.6	J	2.6	0.48	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	12		2.6	0.49	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	11		2.6	0.56	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanesulfonic acid (PFDS)	0.79	J	2.6	0.67	ug/Kg	1		✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.5		2.9	0.66	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	17		2.9	0.59	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	28		2.9	0.45	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	2.8	J	2.9	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	22		2.9	0.76	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.5	J	2.9	0.32	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	8.8		2.9	0.69	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroundecanoic acid (PFUnA)	0.85	J	2.9	0.60	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	2.0	J	2.9	0.43	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.6		2.9	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	2.9	0.42	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	8.6		2.9	0.62	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	0.82	J	2.9	0.47	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	13		2.9	0.33	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.6		2.9	0.69	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.8	J	2.9	0.68	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.5	J	2.9	0.40	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS	1.4	J	2.9	0.39	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.5		2.9	0.59	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	5.9		2.9	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	120	B	2.8	0.65	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503 (Continued)

Lab Sample ID: 320-119687-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	83		2.8	0.58	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	76	*+	2.8	0.44	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	31		2.8	0.53	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	60		2.8	0.75	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	13		2.8	0.31	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	15		2.8	0.68	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	4.5		2.8	0.59	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	4.3		2.8	0.42	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	0.90	J *-	2.8	0.30	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.5	J	2.8	0.52	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	17		2.8	0.53	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	2.8	0.41	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	8.7		2.8	0.61	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonamide (PFOSA)	0.95	J *1	2.8	0.46	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23	B	13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoropentanoic acid (PFPeA)	12		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorohexanoic acid (PFHxA)	18		5.0	1.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorooctanoic acid (PFOA)	8.4		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorotridecanoic acid (PFTTrDA)	ND	*	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorobutanesulfonic acid (PFBS)	3.4	J	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorohexanesulfonic acid (PFHxS)	5.9		5.0	1.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorooctanesulfonic acid (PFOS)	2.8	J	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorooctanesulfonamide (PFOSA)	ND	*1	5.0	2.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
4:2 FTS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
6:2 FTS	ND		13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
8:2 FTS	ND	*1	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	+	10	2.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
9Cl-PF3ONS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
11Cl-PF3OUdS	ND		5.0	1.7	ng/L		03/27/25 03:41	03/29/25 00:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	*1	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	ND		5.0	1.6	ng/L		03/27/25 03:41	03/29/25 00:18	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	84		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFBA	96		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C5 PFPeA	90		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFHxA	88		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFHpA	97		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFOA	99		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C5 PFNA	97		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFDA	93		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFUnA	86		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFDoA	85		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFTeDA	70		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C3 PFBS	79		25 - 150				03/27/25 03:41	03/29/25 00:18	1
18O2 PFHxS	81		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFOS	77		25 - 150				03/27/25 03:41	03/29/25 00:18	1
D3-NMeFOSAA	83		25 - 150				03/27/25 03:41	03/29/25 00:18	1
d5-NEtFOSAA	81		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 4:2 FTS	0		0 - 10				03/27/25 03:41	03/29/25 00:18	1
13C2 6:2 FTS	107		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 8:2 FTS	110		25 - 150				03/27/25 03:41	03/29/25 00:18	1
d-N-MeFOSA-M	60		25 - 150				03/27/25 03:41	03/29/25 00:18	1
d-N-EtFOSA-M	53		25 - 150				03/27/25 03:41	03/29/25 00:18	1
D7-NMeFOSE	71		25 - 150				03/27/25 03:41	03/29/25 00:18	1
D9-NEtFOSE	62		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C3 HFPO-DA	79		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C-6:2 FTCA	85		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C-8:2 FTCA	79		25 - 150				03/27/25 03:41	03/29/25 00:18	1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		19	4.3	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoropentanoic acid (PFPeA)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorohexanoic acid (PFHxA)	3.7	J	19	2.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoroheptanoic acid (PFHpA)	ND		19	3.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorooctanoic acid (PFOA)	ND		19	5.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorononanoic acid (PFNA)	ND		19	2.1	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorodecanoic acid (PFDA)	ND		19	4.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoroundecanoic acid (PFUnA)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorododecanoic acid (PFDoA)	ND		19	2.8	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	ND		19	2.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		19	3.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		19	3.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		19	3.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		19	2.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		19	4.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorooctanesulfonic acid (PFOS)	9.0	J	19	4.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorononanesulfonic acid (PFNS)	ND		19	2.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		19	4.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND		19	4.4	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		19	3.1	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		19	4.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		19	4.4	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11	J	19	2.2	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	J	19	4.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		19	4.4	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		19	2.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
4:2 FTS	ND		19	4.8	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
6:2 FTS	ND		19	2.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
8:2 FTS	ND		19	3.3	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
9CI-PF3ONS	ND		19	3.3	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
11CI-PF3OUdS	ND		19	2.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		19	3.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.3	J	19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		19	3.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		19	2.2	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		19	4.2	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		19	3.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	93		19	3.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	90		25 - 150				03/25/25 05:08	03/28/25 17:31	1
13C5 PFPeA	88		25 - 150				03/25/25 05:08	03/28/25 17:31	1
13C2 PFHxA	95		25 - 150				03/25/25 05:08	03/28/25 17:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	96		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C4 PFOA	98		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C5 PFNA	96		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFDA	96		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFUnA	89		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFDoA	83		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFTeDA	43		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C3 PFBS	79		25 - 150	03/25/25 05:08	03/28/25 17:31	1
18O2 PFHxS	81		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C4 PFOS	80		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C8 FOSA	78		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 4:2 FTS	122		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 6:2 FTS	141		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 8:2 FTS	160	*5+	25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C3 HFPO-DA	76		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D3-NMeFOSAA	87		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D5-NEtFOSAA	88		25 - 150	03/25/25 05:08	03/28/25 17:31	1
d-N-MeFOSA-M	52		25 - 150	03/25/25 05:08	03/28/25 17:31	1
d-N-EtFOSA-M	55		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D7-NMeFOSE	58		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D9-NEtFOSE	72		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C-6:2 FTCA	78		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C-8:2 FTCA	80		25 - 150	03/25/25 05:08	03/28/25 17:31	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	140	B	18	4.2	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoropentanoic acid (PFPeA)	90		18	3.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorohexanoic acid (PFHxA)	43	*+	18	2.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoroheptanoic acid (PFHpA)	29		18	3.5	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorooctanoic acid (PFOA)	37		18	4.9	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorononanoic acid (PFNA)	16	J	18	2.0	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorodecanoic acid (PFDA)	8.8	J	18	4.4	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoroundecanoic acid (PFUnA)	5.9	J	18	3.9	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorododecanoic acid (PFDoA)	4.3	J	18	2.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorotridecanoic acid (PFTTrDA)	ND	*-	18	1.9	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.4	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorobutanesulfonic acid (PFBS)	ND		18	3.5	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.4	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.7	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.5	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorooctanesulfonic acid (PFOS)	6.6	J	18	4.0	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.7	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		18	4.3	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (PFOSA)	ND	*1	18	3.0	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.1	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.4	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
4:2 FTS	ND		18	4.7	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
6:2 FTS	ND		18	2.5	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
8:2 FTS	ND		18	3.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.3	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.5	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.3	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.6	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
9Cl-PF3ONS	ND		18	3.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
11Cl-PF3OUdS	ND		18	2.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.6	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		18	3.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		18	2.9	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		18	2.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*- *1	18	3.7	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		18	3.5	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	63		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFBA	82		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C5 PFPeA	76		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFHxA	73		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFHpA	92		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFOA	87		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C5 PFNA	81		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFDA	78		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFUnA	68		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFDoA	67		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFTeDA	54		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C3 PFBS	70		25 - 150	03/25/25 05:12	03/28/25 19:37	1
18O2 PFHxS	71		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFOS	65		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D3-NMeFOSAA	63		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D5-NEtFOSAA	63		25 - 150	03/25/25 05:12	03/28/25 19:37	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/28/25 19:37	1
13C2 6:2 FTS	95		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 8:2 FTS	96		25 - 150	03/25/25 05:12	03/28/25 19:37	1
d-N-MeFOSA-M	28		25 - 150	03/25/25 05:12	03/28/25 19:37	1
d-N-EtFOSA-M	25		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D7-NMeFOSE	55		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D9-NEtFOSE	49		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C3 HFPO-DA	70		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C-6:2 FTCA	74		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C-8:2 FTCA	67		25 - 150	03/25/25 05:12	03/28/25 19:37	1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.6		2.6	0.61	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoropentanoic acid (PFPeA)	14		2.6	0.54	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorohexanoic acid (PFHxA)	45		2.6	0.41	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoroheptanoic acid (PFHpA)	4.0		2.6	0.50	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorooctanoic acid (PFOA)	38		2.6	0.70	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorononanoic acid (PFNA)	1.9 J		2.6	0.29	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorodecanoic acid (PFDA)	15		2.6	0.63	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoroundecanoic acid (PFUnA)	1.1 J		2.6	0.55	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorododecanoic acid (PFDoA)	2.8		2.6	0.40	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.6	0.28	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorotetradecanoic acid (PFTeDA)	0.79 J		2.6	0.49	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorobutanesulfonic acid (PFBS)	3.3		2.6	0.50	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.6	0.49	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.6	0.65	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorooctanesulfonic acid (PFOS)	11		2.6	0.57	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorononanesulfonic acid (PFNS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorodecanesulfonic acid (PFDS)	0.99 J		2.6	0.69	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.62	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorooctanesulfonamide (PFOSA)	1.3 J		2.6	0.44	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.6	0.65	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.6	0.62	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20		2.6	0.30	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.2		2.6	0.63	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.2		2.6	0.62	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.7		2.6	0.37	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
4:2 FTS	ND		2.6	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
6:2 FTS	3.4		2.6	0.36	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
8:2 FTS	1.1 J		2.6	0.46	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.6	0.54	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
9CI-PF3ONS	ND		2.6	0.46	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
11CI-PF3OUdS	ND		2.6	0.41	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.6	0.51	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	5.1		2.6	0.54	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.6	0.42	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.6	0.32	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.6	0.60	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.6	0.53	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	6.6		2.6	0.50	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.6	0.54	ug/Kg	✱	03/25/25 05:08	03/28/25 17:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C5 PFPeA	92		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFHxA	91		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C4 PFHpA	97		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C4 PFOA	99		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C5 PFNA	95		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFDA	88		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFUnA	89		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFDoA	81		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFTeDA	53		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C3 PFBS	78		25 - 150	03/25/25 05:08	03/28/25 17:45	1
18O2 PFHxS	79		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C4 PFOS	78		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C8 FOSA	80		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 4:2 FTS	145		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 6:2 FTS	152	*5+	25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 8:2 FTS	164	*5+	25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C3 HFPO-DA	74		25 - 150	03/25/25 05:08	03/28/25 17:45	1
D3-NMeFOSAA	82		25 - 150	03/25/25 05:08	03/28/25 17:45	1
D5-NEtFOSAA	81		25 - 150	03/25/25 05:08	03/28/25 17:45	1
d-N-MeFOSA-M	73		25 - 150	03/25/25 05:08	03/28/25 17:45	1
d-N-EtFOSA-M	67		25 - 150	03/25/25 05:08	03/28/25 17:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D7-NMeFOSE	73		25 - 150	03/25/25 05:08	03/28/25 17:45	1
D9-NEtFOSE	75		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C-6:2 FTCA	77		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C-8:2 FTCA	68		25 - 150	03/25/25 05:08	03/28/25 17:45	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	190	B	2.6	0.60	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoropentanoic acid (PFPeA)	82		2.6	0.53	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorohexanoic acid (PFHxA)	89	+	2.6	0.40	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoroheptanoic acid (PFHpA)	34		2.6	0.49	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorooctanoic acid (PFOA)	77		2.6	0.69	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorononanoic acid (PFNA)	14		2.6	0.28	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorodecanoic acid (PFDA)	21		2.6	0.62	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoroundecanoic acid (PFUnA)	4.7		2.6	0.54	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorododecanoic acid (PFDoA)	5.3		2.6	0.39	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorotridecanoic acid (PFTTrDA)	1.3	J *	2.6	0.27	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorotetradecanoic acid (PFTeDA)	1.6	J	2.6	0.48	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorobutanesulfonic acid (PFBS)	12		2.6	0.49	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.6	0.48	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.6	0.64	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorooctanesulfonic acid (PFOS)	11		2.6	0.56	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorononanesulfonic acid (PFNS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorodecanesulfonic acid (PFDS)	0.79	J	2.6	0.67	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.61	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorooctanesulfonamide (PFOSA)	ND	*1	2.6	0.43	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.6	0.30	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.6	0.62	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
4:2 FTS	ND		2.6	0.66	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
6:2 FTS	ND		2.6	0.35	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
8:2 FTS	ND		2.6	0.45	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.6	0.61	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.6	0.64	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.6	0.61	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.6	0.36	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.6	0.53	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		2.6	0.45	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
11CI-PF3OUdS	ND		2.6	0.40	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.6	0.50	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		2.6	0.53	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.6	0.41	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.6	0.31	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.6	0.58	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*- *1	2.6	0.52	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		2.6	0.49	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.6	0.53	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	55		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFBA	88		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C5 PFPeA	86		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFHxA	87		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFHpA	94		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFOA	93		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C5 PFNA	87		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFDA	79		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFUnA	71		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFDoA	66		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFTeDA	65		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C3 PFBS	75		25 - 150	03/25/25 05:12	03/28/25 19:51	1
18O2 PFHxS	79		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFOS	62		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D3-NMeFOSAA	61		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D5-NEtFOSAA	56		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/28/25 19:51	1
13C2 6:2 FTS	105		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 8:2 FTS	95		25 - 150	03/25/25 05:12	03/28/25 19:51	1
d-N-MeFOSA-M	44		25 - 150	03/25/25 05:12	03/28/25 19:51	1
d-N-EtFOSA-M	41		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D7-NMeFOSE	55		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D9-NEtFOSE	50		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C3 HFPO-DA	80		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C-6:2 FTCA	84		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C-8:2 FTCA	73		25 - 150	03/25/25 05:12	03/28/25 19:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.5		2.9	0.66	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoropentanoic acid (PFPeA)	17		2.9	0.59	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorohexanoic acid (PFHxA)	28		2.9	0.45	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoroheptanoic acid (PFHpA)	2.8	J	2.9	0.55	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorooctanoic acid (PFOA)	22		2.9	0.76	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorononanoic acid (PFNA)	1.5	J	2.9	0.32	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorodecanoic acid (PFDA)	8.8		2.9	0.69	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoroundecanoic acid (PFUnA)	0.85	J	2.9	0.60	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorododecanoic acid (PFDoA)	2.0	J	2.9	0.43	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.9	0.30	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.9	0.53	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorobutanesulfonic acid (PFBS)	3.6		2.9	0.55	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.9	0.53	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	2.9	0.42	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.9	0.71	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorooctanesulfonic acid (PFOS)	8.6		2.9	0.62	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorononanesulfonic acid (PFNS)	ND		2.9	0.42	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.9	0.75	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.9	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorooctanesulfonamide (PFOSA)	0.82	J	2.9	0.47	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.9	0.71	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.9	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	13		2.9	0.33	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.6		2.9	0.69	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.8	J	2.9	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.5	J	2.9	0.40	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
4:2 FTS	ND		2.9	0.74	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
6:2 FTS	1.4	J	2.9	0.39	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
8:2 FTS	ND		2.9	0.50	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.9	0.59	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
9CI-PF3ONS	ND		2.9	0.50	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
11CI-PF3OUdS	ND		2.9	0.45	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.9	0.56	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.5		2.9	0.59	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.9	0.46	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.9	0.34	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.9	0.65	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.9	0.57	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	5.9		2.9	0.55	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.59	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	84		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C5 PFPeA	84		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 PFHxA	84		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C4 PFHpA	90		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C4 PFOA	97		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C5 PFNA	89		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 PFDA	91		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 PFUnA	78		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 PFDoA	80		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 PFTeDA	45		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C3 PFBS	72		25 - 150				03/25/25 05:08	03/28/25 17:59	1
18O2 PFHxS	75		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C4 PFOS	74		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C8 FOSA	75		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 4:2 FTS	137		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 6:2 FTS	154	*5+	25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C2 8:2 FTS	149		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C3 HFPO-DA	68		25 - 150				03/25/25 05:08	03/28/25 17:59	1
D3-NMeFOSAA	83		25 - 150				03/25/25 05:08	03/28/25 17:59	1
D5-NEtFOSAA	73		25 - 150				03/25/25 05:08	03/28/25 17:59	1
d-N-MeFOSA-M	68		25 - 150				03/25/25 05:08	03/28/25 17:59	1
d-N-EtFOSA-M	65		25 - 150				03/25/25 05:08	03/28/25 17:59	1
D7-NMeFOSE	65		25 - 150				03/25/25 05:08	03/28/25 17:59	1
D9-NEtFOSE	69		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C-6:2 FTCA	72		25 - 150				03/25/25 05:08	03/28/25 17:59	1
13C-8:2 FTCA	70		25 - 150				03/25/25 05:08	03/28/25 17:59	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	120	B	2.8	0.65	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluoropentanoic acid (PFPeA)	83		2.8	0.58	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorohexanoic acid (PFHxA)	76	*+	2.8	0.44	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluoroheptanoic acid (PFHpA)	31		2.8	0.53	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorooctanoic acid (PFOA)	60		2.8	0.75	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorononanoic acid (PFNA)	13		2.8	0.31	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorodecanoic acid (PFDA)	15		2.8	0.68	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluoroundecanoic acid (PFUnA)	4.5		2.8	0.59	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorododecanoic acid (PFDoA)	4.3		2.8	0.42	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.90	J *	2.8	0.30	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorotetradecanoic acid (PFTeDA)	1.5	J	2.8	0.52	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorobutanesulfonic acid (PFBS)	17		2.8	0.53	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.8	0.52	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	2.8	0.41	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.8	0.69	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorooctanesulfonic acid (PFOS)	8.7		2.8	0.61	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorononanesulfonic acid (PFNS)	ND		2.8	0.41	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.8	0.73	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.8	0.66	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorooctanesulfonamide (PFOSA)	0.95	J *1	2.8	0.46	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.8	0.32	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.8	0.68	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
4:2 FTS	ND		2.8	0.72	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
6:2 FTS	ND		2.8	0.38	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
8:2 FTS	ND		2.8	0.49	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.8	0.66	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.8	0.69	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.8	0.66	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.8	0.39	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.8	0.58	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
9Cl-PF3ONS	ND		2.8	0.49	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
11Cl-PF3OUdS	ND		2.8	0.44	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.8	0.55	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		2.8	0.58	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.8	0.45	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.8	0.34	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.8	0.64	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*- *1	2.8	0.56	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		2.8	0.53	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.8	0.58	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 FOSA	73		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFBA	82		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C5 PFPeA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFHxA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFHpA	84		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFOA	84		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C5 PFNA	86		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFDA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFUnA	61		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFDoA	59		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFTeDA	56		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C3 PFBS	72		25 - 150	03/25/25 05:12	03/28/25 20:05	1
18O2 PFHxS	72		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFOS	61		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D3-NMeFOSAA	59		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D5-NEtFOSAA	59		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/28/25 20:05	1
13C2 6:2 FTS	97		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 8:2 FTS	100		25 - 150	03/25/25 05:12	03/28/25 20:05	1
d-N-MeFOSA-M	64		25 - 150	03/25/25 05:12	03/28/25 20:05	1
d-N-EtFOSA-M	53		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D7-NMeFOSE	55		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D9-NEtFOSE	47		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C3 HFPO-DA	68		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C-6:2 FTCA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C-8:2 FTCA	71		25 - 150	03/25/25 05:12	03/28/25 20:05	1

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Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	ND		ug/Kg	140		ug/Kg	140	ug/Kg
Perfluoropentanoic acid (PFPeA)	ND		ug/Kg	90		ug/Kg	90	ug/Kg
Perfluorohexanoic acid (PFHxA)	3.7	J	ug/Kg	43		ug/Kg	39	ug/Kg
Perfluoroheptanoic acid (PFHpA)	ND		ug/Kg	29		ug/Kg	29	ug/Kg
Perfluorooctanoic acid (PFOA)	ND		ug/Kg	37		ug/Kg	37	ug/Kg
Perfluorononanoic acid (PFNA)	ND		ug/Kg	16	J	ug/Kg	16	ug/Kg
Total Perfluoroalkyl carboxylic acid	3.7		ug/Kg	360		ug/Kg	350	ug/Kg

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	6.6		ug/Kg	190		ug/Kg	180	ug/Kg
Perfluoropentanoic acid (PFPeA)	14		ug/Kg	82		ug/Kg	68	ug/Kg
Perfluorohexanoic acid (PFHxA)	45		ug/Kg	89		ug/Kg	44	ug/Kg
Perfluoroheptanoic acid (PFHpA)	4.0		ug/Kg	34		ug/Kg	30	ug/Kg
Perfluorooctanoic acid (PFOA)	38		ug/Kg	77		ug/Kg	39	ug/Kg
Perfluorononanoic acid (PFNA)	1.9	J	ug/Kg	14		ug/Kg	12	ug/Kg
Total Perfluoroalkyl carboxylic acid	110		ug/Kg	490		ug/Kg	380	ug/Kg

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	6.5		ug/Kg	120		ug/Kg	110	ug/Kg
Perfluoropentanoic acid (PFPeA)	17		ug/Kg	83		ug/Kg	65	ug/Kg
Perfluorohexanoic acid (PFHxA)	28		ug/Kg	76		ug/Kg	48	ug/Kg
Perfluoroheptanoic acid (PFHpA)	2.8	J	ug/Kg	31		ug/Kg	28	ug/Kg
Perfluorooctanoic acid (PFOA)	22		ug/Kg	60		ug/Kg	38	ug/Kg
Perfluorononanoic acid (PFNA)	1.5	J	ug/Kg	13		ug/Kg	12	ug/Kg
Total Perfluoroalkyl carboxylic acid	78		ug/Kg	380		ug/Kg	310	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-119687-8	BIO-B-202503	90	88	95	96	98	96	96	89
320-119687-9	BIO-A-23-202503	88	92	91	97	99	95	88	89
320-119687-10	BIO-A-24-202503	84	84	84	90	97	89	91	78
LCS 320-842038/2-A	Lab Control Sample	85	85	81	90	93	92	91	83
LCSD 320-842038/3-A	Lab Control Sample Dup	96	92	89	99	100	98	94	83
MB 320-842038/1-A	Method Blank	90	85	86	95	98	96	97	90

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	M242FTS (25-150)	M262FTS (25-150)
320-119687-8	BIO-B-202503	83	43	79	81	80	78	122	141
320-119687-9	BIO-A-23-202503	81	53	78	79	78	80	145	152 *5+
320-119687-10	BIO-A-24-202503	80	45	72	75	74	75	137	154 *5+
LCS 320-842038/2-A	Lab Control Sample	88	79	73	78	75	80	95	102
LCSD 320-842038/3-A	Lab Control Sample Dup	78	71	80	85	79	75	91	106
MB 320-842038/1-A	Method Blank	88	78	74	78	79	83	99	116

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (25-150)	HFPODA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)
320-119687-8	BIO-B-202503	160 *5+	76	87	88	52	55	58	72
320-119687-9	BIO-A-23-202503	164 *5+	74	82	81	73	67	73	75
320-119687-10	BIO-A-24-202503	149	68	83	73	68	65	65	69
LCS 320-842038/2-A	Lab Control Sample	109	73	81	78	78	75	78	73
LCSD 320-842038/3-A	Lab Control Sample Dup	108	84	83	75	59	57	78	70
MB 320-842038/1-A	Method Blank	114	76	86	81	77	77	80	76

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-119687-8	BIO-B-202503	78	80
320-119687-9	BIO-A-23-202503	77	68
320-119687-10	BIO-A-24-202503	72	70
LCS 320-842038/2-A	Lab Control Sample	85	81
LCSD 320-842038/3-A	Lab Control Sample Dup	89	82
MB 320-842038/1-A	Method Blank	84	78

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-119687-2

Project/Site: PFAS Sampling

M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
d3NMFOFOS = D3-NMeFOFOSAA
d5NEFOS = D5-NEtFOFOSAA
dMeFOFOSA = d-N-MeFOFOSA-M
dEtFOFOSA = d-N-EtFOFOSA-M
NMFM = D7-NMeFOFOS
NEFM = D9-NEtFOFOS
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-119687-8	BIO-B-202503	63	82	76	73	92	87	81	78
320-119687-9	BIO-A-23-202503	55	88	86	87	94	93	87	79
320-119687-10	BIO-A-24-202503	73	82	78	78	84	84	86	78
LCS 320-842039/2-A	Lab Control Sample	73	92	85	83	98	97	90	88
LCSD 320-842039/3-A	Lab Control Sample Dup	71	93	86	84	94	97	91	88
MB 320-842039/1-A	Method Blank	79	90	95	87	90	93	88	92

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOFOS (25-150)	d5NEFOS (25-150)
320-119687-8	BIO-B-202503	68	67	54	70	71	65	63	63
320-119687-9	BIO-A-23-202503	71	66	65	75	79	62	61	56
320-119687-10	BIO-A-24-202503	61	59	56	72	72	61	59	59
LCS 320-842039/2-A	Lab Control Sample	79	77	63	78	81	77	73	70
LCSD 320-842039/3-A	Lab Control Sample Dup	77	75	63	77	81	73	74	68
MB 320-842039/1-A	Method Blank	83	83	69	77	83	76	84	83

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOFOSA (25-150)	dEtFOFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-119687-8	BIO-B-202503	0	95	96	28	25	55	49	70
320-119687-9	BIO-A-23-202503	0	105	95	44	41	55	50	80
320-119687-10	BIO-A-24-202503	0	97	100	64	53	55	47	68
LCS 320-842039/2-A	Lab Control Sample	0	106	110	41	35	66	55	92
LCSD 320-842039/3-A	Lab Control Sample Dup	0	102	105	44	40	63	53	93
MB 320-842039/1-A	Method Blank	0	109	118	40	36	66	60	77

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-119687-8	BIO-B-202503	74	67
320-119687-9	BIO-A-23-202503	84	73
320-119687-10	BIO-A-24-202503	78	71
LCS 320-842039/2-A	Lab Control Sample	82	74
LCSD 320-842039/3-A	Lab Control Sample Dup	93	80
MB 320-842039/1-A	Method Blank	87	81

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-119687-7	EFF-G-202503	84	96	90	88	97	99	97	93
LCS 320-842591/2-A	Lab Control Sample	70	97	93	90	98	99	96	88
LCSD 320-842591/3-A	Lab Control Sample Dup	76	95	87	87	97	97	94	90
MB 320-842591/1-A	Method Blank	74	92	100	85	97	96	95	91

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-119687-7	EFF-G-202503	86	85	70	79	81	77	83	81
LCS 320-842591/2-A	Lab Control Sample	79	82	76	83	82	78	77	70
LCSD 320-842591/3-A	Lab Control Sample Dup	86	87	78	76	84	76	80	79
MB 320-842591/1-A	Method Blank	84	84	74	80	81	77	83	74

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-119687-7	EFF-G-202503	0	107	110	60	53	71	62	79
LCS 320-842591/2-A	Lab Control Sample	0	110	112	64	61	72	66	81
LCSD 320-842591/3-A	Lab Control Sample Dup	0	106	112	65	66	77	73	79
MB 320-842591/1-A	Method Blank	0	109	115	58	53	68	64	80

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-119687-7	EFF-G-202503	85	79
LCS 320-842591/2-A	Lab Control Sample	88	76
LCSD 320-842591/3-A	Lab Control Sample Dup	85	79
MB 320-842591/1-A	Method Blank	83	78

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-842038/1-A

Matrix: Solid

Analysis Batch: 843055

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.0	0.23	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
4:2 FTS	ND		1.0	0.26	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
6:2 FTS	ND		1.0	0.14	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
8:2 FTS	ND		1.0	0.18	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
11CI-PF3OUs	ND		1.0	0.16	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.0	0.16	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		03/25/25 05:08	03/28/25 16:49	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-842038/1-A

Matrix: Solid

Analysis Batch: 843055

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		03/25/25 05:08	03/28/25 16:49	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		03/25/25 05:08	03/28/25 16:49	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	90		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C5 PFPeA	85		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 PFHxA	86		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C4 PFHpA	95		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C4 PFOA	98		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C5 PFNA	96		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 PFDA	97		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 PFUnA	90		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 PFDa	88		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 PFTeDA	78		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C3 PFBS	74		25 - 150	03/25/25 05:08	03/28/25 16:49	1
18O2 PFHxS	78		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C4 PFOS	79		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C8 FOSA	83		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 4:2 FTS	99		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 6:2 FTS	116		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C2 8:2 FTS	114		25 - 150	03/25/25 05:08	03/28/25 16:49	1
D3-NMeFOSAA	86		25 - 150	03/25/25 05:08	03/28/25 16:49	1
D5-NEtFOSAA	81		25 - 150	03/25/25 05:08	03/28/25 16:49	1
d-N-MeFOSA-M	77		25 - 150	03/25/25 05:08	03/28/25 16:49	1
d-N-EtFOSA-M	77		25 - 150	03/25/25 05:08	03/28/25 16:49	1
D7-NMeFOSE	80		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C3 HFPO-DA	76		25 - 150	03/25/25 05:08	03/28/25 16:49	1
D9-NEtFOSE	76		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C-6:2 FTCA	84		25 - 150	03/25/25 05:08	03/28/25 16:49	1
13C-8:2 FTCA	78		25 - 150	03/25/25 05:08	03/28/25 16:49	1

Lab Sample ID: LCS 320-842038/2-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	4.39		ug/Kg		110	76 - 136
Perfluoropentanoic acid (PFPeA)	4.00	3.73		ug/Kg		93	69 - 129
Perfluorohexanoic acid (PFHxA)	4.00	4.50		ug/Kg		113	71 - 131
Perfluoroheptanoic acid (PFHpA)	4.00	4.23		ug/Kg		106	71 - 131
Perfluorooctanoic acid (PFOA)	4.00	3.98		ug/Kg		100	72 - 132
Perfluorononanoic acid (PFNA)	4.00	4.16		ug/Kg		104	73 - 133
Perfluorodecanoic acid (PFDA)	4.00	4.23		ug/Kg		106	72 - 132
Perfluoroundecanoic acid (PFUnA)	4.00	4.03		ug/Kg		101	66 - 126

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-842038/2-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	4.00	4.15		ug/Kg		104	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.40		ug/Kg		85	71 - 131
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.89		ug/Kg		97	67 - 127
Perfluorobutanesulfonic acid (PFBS)	3.55	3.73		ug/Kg		105	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.88		ug/Kg		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.43		ug/Kg		94	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.14		ug/Kg		108	76 - 136
Perfluorooctanesulfonic acid (PFOS)	3.72	3.92		ug/Kg		105	68 - 141
Perfluorononanesulfonic acid (PFNS)	3.85	4.01		ug/Kg		104	72 - 132
Perfluorodecanesulfonic acid (PFDS)	3.86	3.67		ug/Kg		95	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.16		ug/Kg		81	70 - 130
Perfluorooctanesulfonamide (PFOSA)	4.00	3.86		ug/Kg		97	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.58		ug/Kg		90	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.74		ug/Kg		93	72 - 132
4:2 FTS	3.75	4.73		ug/Kg		126	68 - 143
6:2 FTS	3.81	4.26		ug/Kg		112	73 - 139
8:2 FTS	3.84	4.12		ug/Kg		107	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.96		ug/Kg		99	47 - 161
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.91		ug/Kg		98	63 - 148
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	3.85		ug/Kg		96	43 - 153
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	3.99		ug/Kg		100	44 - 155
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	5.55		ug/Kg		139	53 - 158
9CI-PF3ONS	3.74	4.10		ug/Kg		110	74 - 134
11CI-PF3OUdS	3.78	4.03		ug/Kg		107	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.71		ug/Kg		124	79 - 139
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	4.25		ug/Kg		106	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.81		ug/Kg		107	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.37		ug/Kg		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.99		ug/Kg		100	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.61		ug/Kg		90	50 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-842038/2-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	4.11		ug/Kg		103	50 - 150
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	4.93		ug/Kg		123	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	85		25 - 150
13C5 PFPeA	85		25 - 150
13C2 PFHxA	81		25 - 150
13C4 PFHpA	90		25 - 150
13C4 PFOA	93		25 - 150
13C5 PFNA	92		25 - 150
13C2 PFDA	91		25 - 150
13C2 PFUnA	83		25 - 150
13C2 PFDoA	88		25 - 150
13C2 PFTeDA	79		25 - 150
13C3 PFBS	73		25 - 150
18O2 PFHxS	78		25 - 150
13C4 PFOS	75		25 - 150
13C8 FOSA	80		25 - 150
13C2 4:2 FTS	95		25 - 150
13C2 6:2 FTS	102		25 - 150
13C2 8:2 FTS	109		25 - 150
D3-NMeFOSAA	81		25 - 150
D5-NEtFOSAA	78		25 - 150
d-N-MeFOSA-M	78		25 - 150
d-N-EtFOSA-M	75		25 - 150
D7-NMeFOSE	78		25 - 150
13C3 HFPO-DA	73		25 - 150
D9-NEtFOSE	73		25 - 150
13C-6:2 FTCA	85		25 - 150
13C-8:2 FTCA	81		25 - 150

Lab Sample ID: LCSD 320-842038/3-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	4.04		ug/Kg		101	76 - 136	8	30
Perfluoropentanoic acid (PFPeA)	4.00	3.63		ug/Kg		91	69 - 129	3	30
Perfluorohexanoic acid (PFHxA)	4.00	4.32		ug/Kg		108	71 - 131	4	30
Perfluoroheptanoic acid (PFHpA)	4.00	4.21		ug/Kg		105	71 - 131	1	30
Perfluorooctanoic acid (PFOA)	4.00	3.85		ug/Kg		96	72 - 132	3	30
Perfluorononanoic acid (PFNA)	4.00	4.10		ug/Kg		103	73 - 133	2	30
Perfluorodecanoic acid (PFDA)	4.00	4.12		ug/Kg		103	72 - 132	3	30
Perfluoroundecanoic acid (PFUnA)	4.00	3.94		ug/Kg		98	66 - 126	2	30
Perfluorododecanoic acid (PFDoA)	4.00	4.21		ug/Kg		105	71 - 131	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-842038/3-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.21		ug/Kg		80	71 - 131	6	30
Perfluorotetradecanoic acid (PFTTeDA)	4.00	3.77		ug/Kg		94	67 - 127	3	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.85		ug/Kg		109	69 - 129	3	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.81		ug/Kg		101	66 - 126	2	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.36		ug/Kg		92	62 - 122	2	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.20		ug/Kg		110	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	3.72	4.00		ug/Kg		107	68 - 141	2	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.86		ug/Kg		100	72 - 132	4	30
Perfluorodecanesulfonic acid (PFDS)	3.86	3.24		ug/Kg		84	71 - 131	13	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.72		ug/Kg		70	70 - 130	15	30
Perfluorooctanesulfonamide (PFOSA)	4.00	3.92		ug/Kg		98	77 - 137	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.79		ug/Kg		95	72 - 132	6	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.09		ug/Kg		102	72 - 132	9	30
4:2 FTS	3.75	4.28		ug/Kg		114	68 - 143	10	30
6:2 FTS	3.81	3.87		ug/Kg		102	73 - 139	10	30
8:2 FTS	3.84	4.21		ug/Kg		110	75 - 135	2	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.94		ug/Kg		99	47 - 161	1	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.78		ug/Kg		95	63 - 148	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	3.82		ug/Kg		96	43 - 153	1	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.06		ug/Kg		102	44 - 155	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	5.09		ug/Kg		127	53 - 158	9	30
9CI-PF3ONS	3.74	4.02		ug/Kg		108	74 - 134	2	30
11CI-PF3OUdS	3.78	3.26		ug/Kg		86	66 - 136	21	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.76		ug/Kg		126	79 - 139	1	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	3.62		ug/Kg		91	50 - 150	16	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.77		ug/Kg		106	50 - 150	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.52		ug/Kg		113	50 - 150	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.18		ug/Kg		104	50 - 150	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.50		ug/Kg		88	50 - 150	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	3.84		ug/Kg		96	50 - 150	7	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-842038/3-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 842038

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	5.24		ug/Kg		131	50 - 150	6	30
Isotope Dilution									
	LCSD %Recovery	LCSD Qualifier	LCSD Limits						
13C4 PFBA	96		25 - 150						
13C5 PFPeA	92		25 - 150						
13C2 PFHxA	89		25 - 150						
13C4 PFHpA	99		25 - 150						
13C4 PFOA	100		25 - 150						
13C5 PFNA	98		25 - 150						
13C2 PFDA	94		25 - 150						
13C2 PFUnA	83		25 - 150						
13C2 PFDoA	78		25 - 150						
13C2 PFTeDA	71		25 - 150						
13C3 PFBS	80		25 - 150						
18O2 PFHxS	85		25 - 150						
13C4 PFOS	79		25 - 150						
13C8 FOSA	75		25 - 150						
13C2 4:2 FTS	91		25 - 150						
13C2 6:2 FTS	106		25 - 150						
13C2 8:2 FTS	108		25 - 150						
D3-NMeFOSAA	83		25 - 150						
D5-NEtFOSAA	75		25 - 150						
d-N-MeFOSA-M	59		25 - 150						
d-N-EtFOSA-M	57		25 - 150						
D7-NMeFOSE	78		25 - 150						
13C3 HFPO-DA	84		25 - 150						
D9-NEtFOSE	70		25 - 150						
13C-6:2 FTCA	89		25 - 150						
13C-8:2 FTCA	82		25 - 150						

Lab Sample ID: MB 320-842039/1-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 842039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.505	J	1.0	0.23	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		03/25/25 05:12	03/29/25 02:38	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-842039/1-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 842039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
4:2 FTS	ND		1.0	0.26	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
6:2 FTS	ND		1.0	0.14	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
8:2 FTS	ND		1.0	0.18	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		03/25/25 05:12	03/29/25 02:38	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	90		25 - 150				03/25/25 05:12	03/29/25 02:38	1
13C5 PFPeA	95		25 - 150				03/25/25 05:12	03/29/25 02:38	1
13C2 PFHxA	87		25 - 150				03/25/25 05:12	03/29/25 02:38	1
13C4 PFHpA	90		25 - 150				03/25/25 05:12	03/29/25 02:38	1
13C4 PFOA	93		25 - 150				03/25/25 05:12	03/29/25 02:38	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-842039/1-A
Matrix: Solid
Analysis Batch: 843178

Client Sample ID: Method Blank
Prep Type: Post-Treatment
Prep Batch: 842039

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	88		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C2 PFDA	92		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C2 PFUnA	83		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C2 PFDoA	83		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C2 PFTeDA	69		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C3 PFBS	77		25 - 150	03/25/25 05:12	03/29/25 02:38	1
18O2 PFHxS	83		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C4 PFOS	76		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C8 FOSA	79		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/29/25 02:38	1
13C2 6:2 FTS	109		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C2 8:2 FTS	118		25 - 150	03/25/25 05:12	03/29/25 02:38	1
D3-NMeFOSAA	84		25 - 150	03/25/25 05:12	03/29/25 02:38	1
D5-NEtFOSAA	83		25 - 150	03/25/25 05:12	03/29/25 02:38	1
d-N-MeFOSA-M	40		25 - 150	03/25/25 05:12	03/29/25 02:38	1
d-N-EtFOSA-M	36		25 - 150	03/25/25 05:12	03/29/25 02:38	1
D7-NMeFOSE	66		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C3 HFPO-DA	77		25 - 150	03/25/25 05:12	03/29/25 02:38	1
D9-NEtFOSE	60		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C-6:2 FTCA	87		25 - 150	03/25/25 05:12	03/29/25 02:38	1
13C-8:2 FTCA	81		25 - 150	03/25/25 05:12	03/29/25 02:38	1

Lab Sample ID: LCS 320-842039/2-A
Matrix: Solid
Analysis Batch: 843178

Client Sample ID: Lab Control Sample
Prep Type: Post-Treatment
Prep Batch: 842039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	9.27		ug/Kg		232	167 - 261
Perfluoropentanoic acid (PFPeA)	4.00	8.54		ug/Kg		214	159 - 221
Perfluorohexanoic acid (PFHxA)	4.00	10.8	*+	ug/Kg		271	208 - 257
Perfluoroheptanoic acid (PFHpA)	4.00	8.23		ug/Kg		206	189 - 267
Perfluorooctanoic acid (PFOA)	4.00	17.6		ug/Kg		439	372 - 496
Perfluorononanoic acid (PFNA)	4.00	7.28		ug/Kg		182	154 - 205
Perfluorodecanoic acid (PFDA)	4.00	6.05		ug/Kg		151	130 - 190
Perfluoroundecanoic acid (PFUnA)	4.00	3.91		ug/Kg		98	81 - 141
Perfluorododecanoic acid (PFDoA)	4.00	4.03		ug/Kg		101	84 - 144
Perfluorotridecanoic acid (PFTTrDA)	4.00	2.84	*-	ug/Kg		71	78 - 138
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.44		ug/Kg		86	72 - 132
Perfluorobutanesulfonic acid (PFBS)	3.55	3.80		ug/Kg		107	89 - 149
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.11		ug/Kg		109	94 - 154
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.86		ug/Kg		106	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.04		ug/Kg		106	68 - 128

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-842039/2-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 842039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	3.75		ug/Kg		101	70 - 138
Perfluorononanesulfonic acid (PFNS)	3.85	3.72		ug/Kg		97	66 - 126
Perfluorodecanesulfonic acid (PFDS)	3.86	3.14		ug/Kg		82	66 - 126
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.61		ug/Kg		67	47 - 107
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		2	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10
Hexafluoropropylene Oxide	4.00	3.81		ug/Kg		95	53 - 158
Dimer Acid (HFPO-DA/GenX)							
9CI-PF3ONS	3.74	3.42		ug/Kg		92	74 - 134
11CI-PF3OUdS	3.78	1.94		ug/Kg		51	46 - 106
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0.8	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.73		ug/Kg		104	84 - 152
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	6.28		ug/Kg		157	112 - 172
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.33		ug/Kg		108	62 - 122
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.65		ug/Kg		91	60 - 138
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	92		25 - 150
13C5 PFPeA	85		25 - 150
13C2 PFHxA	83		25 - 150
13C4 PFHpA	98		25 - 150
13C4 PFOA	97		25 - 150
13C5 PFNA	90		25 - 150
13C2 PFDA	88		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-842039/2-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 842039

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFUnA	79		25 - 150
13C2 PFDoA	77		25 - 150
13C2 PFTeDA	63		25 - 150
13C3 PFBS	78		25 - 150
18O2 PFHxS	81		25 - 150
13C4 PFOS	77		25 - 150
13C8 FOSA	73		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	106		25 - 150
13C2 8:2 FTS	110		25 - 150
D3-NMeFOSAA	73		25 - 150
D5-NEtFOSAA	70		25 - 150
d-N-MeFOSA-M	41		25 - 150
d-N-EtFOSA-M	35		25 - 150
D7-NMeFOSE	66		25 - 150
13C3 HFPO-DA	92		25 - 150
D9-NEtFOSE	55		25 - 150
13C-6:2 FTCA	82		25 - 150
13C-8:2 FTCA	74		25 - 150

Lab Sample ID: LCSD 320-842039/3-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 842039

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	9.18		ug/Kg		230	167 - 261	1	30
Perfluoropentanoic acid (PFPeA)	4.00	8.07		ug/Kg		202	159 - 221	6	30
Perfluorohexanoic acid (PFHxA)	4.00	11.3	*+	ug/Kg		281	208 - 257	4	30
Perfluoroheptanoic acid (PFHpA)	4.00	9.29		ug/Kg		232	189 - 267	12	30
Perfluorooctanoic acid (PFOA)	4.00	18.6		ug/Kg		464	372 - 496	5	30
Perfluorononanoic acid (PFNA)	4.00	7.12		ug/Kg		178	154 - 205	2	30
Perfluorodecanoic acid (PFDA)	4.00	6.22		ug/Kg		156	130 - 190	3	30
Perfluoroundecanoic acid (PFUnA)	4.00	3.95		ug/Kg		99	81 - 141	1	30
Perfluorododecanoic acid (PFDoA)	4.00	4.11		ug/Kg		103	84 - 144	2	30
Perfluorotridecanoic acid (PFTTrDA)	4.00	2.96	*-	ug/Kg		74	78 - 138	4	30
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.76		ug/Kg		94	72 - 132	9	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.94		ug/Kg		111	89 - 149	4	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.90		ug/Kg		104	94 - 154	5	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.63		ug/Kg		100	73 - 133	6	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.16		ug/Kg		109	68 - 128	3	30
Perfluorooctanesulfonic acid (PFOS)	3.72	3.96		ug/Kg		107	70 - 138	6	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-842039/3-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 842039

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorononanesulfonic acid (PFNS)	3.85	3.94		ug/Kg		102	66 - 126	6	30
Perfluorodecanesulfonic acid (PFDS)	3.86	3.43		ug/Kg		89	66 - 126	9	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.50		ug/Kg		64	47 - 107	4	30
Perfluorooctanesulfonamide (PFOSA)	4.00	ND	*1	ug/Kg		2	0 - 10	31	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10	NC	30
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10	NC	30
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.22		ug/Kg		105	53 - 158	10	30
9CI-PF3ONS	3.74	3.54		ug/Kg		95	74 - 134	3	30
11CI-PF3OUdS	3.78	2.10		ug/Kg		56	46 - 106	8	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0.8	0 - 10	8	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.82		ug/Kg		107	84 - 152	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	6.43		ug/Kg		161	112 - 172	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.73		ug/Kg		118	62 - 122	9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.56		ug/Kg		89	60 - 138	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	93		25 - 150
13C5 PFPeA	86		25 - 150
13C2 PFHxA	84		25 - 150
13C4 PFHpA	94		25 - 150
13C4 PFOA	97		25 - 150
13C5 PFNA	91		25 - 150
13C2 PFDA	88		25 - 150
13C2 PFUnA	77		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-842039/3-A

Matrix: Solid

Analysis Batch: 843178

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 842039

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C2 PFDaA	75		25 - 150
13C2 PFTeDA	63		25 - 150
13C3 PFBS	77		25 - 150
18O2 PFHxS	81		25 - 150
13C4 PFOS	73		25 - 150
13C8 FOSA	71		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	102		25 - 150
13C2 8:2 FTS	105		25 - 150
D3-NMeFOSAA	74		25 - 150
D5-NEtFOSAA	68		25 - 150
d-N-MeFOSA-M	44		25 - 150
d-N-EtFOSA-M	40		25 - 150
D7-NMeFOSE	63		25 - 150
13C3 HFPO-DA	93		25 - 150
D9-NEtFOSE	53		25 - 150
13C-6:2 FTCA	93		25 - 150
13C-8:2 FTCA	80		25 - 150

Lab Sample ID: MB 320-842591/1-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 842591

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	4.48	J	13	3.1	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		03/27/25 03:41	03/28/25 23:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		03/27/25 03:41	03/28/25 23:36	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-842591/1-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 842591

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		03/27/25 03:41	03/28/25 23:36	1
4:2 FTS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
6:2 FTS	ND		13	3.1	ng/L		03/27/25 03:41	03/28/25 23:36	1
8:2 FTS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		03/27/25 03:41	03/28/25 23:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		03/27/25 03:41	03/28/25 23:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		03/27/25 03:41	03/28/25 23:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		03/27/25 03:41	03/28/25 23:36	1
9Cl-PF3ONS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
11Cl-PF3OUdS	ND		5.0	1.7	ng/L		03/27/25 03:41	03/28/25 23:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		03/27/25 03:41	03/28/25 23:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/28/25 23:36	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	92		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C5 PFPeA	100		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 PFHxA	85		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C4 PFHpA	97		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C4 PFOA	96		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C5 PFNA	95		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 PFDA	91		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 PFUnA	84		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 PFDoA	84		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 PFTeDA	74		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C3 PFBS	80		25 - 150	03/27/25 03:41	03/28/25 23:36	1
18O2 PFHxS	81		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C4 PFOS	77		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C8 FOSA	74		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 4:2 FTS	0		0 - 10	03/27/25 03:41	03/28/25 23:36	1
13C2 6:2 FTS	109		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C2 8:2 FTS	115		25 - 150	03/27/25 03:41	03/28/25 23:36	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-842591/1-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 842591

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	83		25 - 150	03/27/25 03:41	03/28/25 23:36	1
d5-NEtFOSAA	74		25 - 150	03/27/25 03:41	03/28/25 23:36	1
d-N-MeFOSA-M	58		25 - 150	03/27/25 03:41	03/28/25 23:36	1
d-N-EtFOSA-M	53		25 - 150	03/27/25 03:41	03/28/25 23:36	1
D7-NMeFOSE	68		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C3 HFPO-DA	80		25 - 150	03/27/25 03:41	03/28/25 23:36	1
D9-NEtFOSE	64		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C-6:2 FTCA	83		25 - 150	03/27/25 03:41	03/28/25 23:36	1
13C-8:2 FTCA	78		25 - 150	03/27/25 03:41	03/28/25 23:36	1

Lab Sample ID: LCS 320-842591/2-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 842591

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	78.8		ng/L		197	157 - 278
Perfluoropentanoic acid (PFPeA)	40.0	73.1		ng/L		183	151 - 208
Perfluorohexanoic acid (PFHxA)	40.0	101		ng/L		252	194 - 269
Perfluoroheptanoic acid (PFHpA)	40.0	85.0		ng/L		213	199 - 252
Perfluorooctanoic acid (PFOA)	40.0	163		ng/L		409	351 - 490
Perfluorononanoic acid (PFNA)	40.0	73.4		ng/L		183	145 - 205
Perfluorodecanoic acid (PFDA)	40.0	66.2		ng/L		166	130 - 190
Perfluoroundecanoic acid (PFUnA)	40.0	41.7		ng/L		104	82 - 142
Perfluorododecanoic acid (PFDoA)	40.0	38.9		ng/L		97	82 - 142
Perfluorotridecanoic acid (PFTTrDA)	40.0	30.7	*-	ng/L		77	85 - 145
Perfluorotetradecanoic acid (PFTTeDA)	40.0	33.7		ng/L		84	72 - 132
Perfluorobutanesulfonic acid (PFBS)	35.5	37.1		ng/L		104	84 - 144
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.1		ng/L		101	83 - 143
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.2		ng/L		102	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	38.2	42.2		ng/L		111	80 - 140
Perfluorooctanesulfonic acid (PFOS)	37.2	37.3		ng/L		100	82 - 142
Perfluorononanesulfonic acid (PFNS)	38.5	38.6		ng/L		100	79 - 139
Perfluorodecanesulfonic acid (PFDS)	38.6	31.9		ng/L		83	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	25.8		ng/L		67	52 - 139
Perfluorooctanesulfonamide (PFOSA)	40.0	ND		ng/L		1	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10
4:2 FTS	37.5	ND		ng/L		0	0 - 10

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-842591/2-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 842591

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
6:2 FTS	38.1	ND		ng/L		0	0 - 10
8:2 FTS	38.4	ND		ng/L		2	0 - 10
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10
Hexafluoropropylene Oxide	40.0	50.7	*+	ng/L		127	52 - 112
Dimer Acid (HFPO-DA/GenX)							
9Cl-PF3ONS	37.4	32.9		ng/L		88	66 - 126
11Cl-PF3OUdS	37.8	17.7		ng/L		47	45 - 105
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	ND		ng/L		0.7	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	34.3		ng/L		96	81 - 141
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	59.0		ng/L		148	111 - 174
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	39.2		ng/L		98	60 - 120
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	34.0		ng/L		85	67 - 127
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	97		25 - 150
13C5 PFPeA	93		25 - 150
13C2 PFHxA	90		25 - 150
13C4 PFHpA	98		25 - 150
13C4 PFOA	99		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFDA	88		25 - 150
13C2 PFUnA	79		25 - 150
13C2 PFDoA	82		25 - 150
13C2 PFTeDA	76		25 - 150
13C3 PFBS	83		25 - 150
18O2 PFHxS	82		25 - 150
13C4 PFOS	78		25 - 150
13C8 FOSA	70		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	110		25 - 150
13C2 8:2 FTS	112		25 - 150
D3-NMeFOSAA	77		25 - 150
d5-NEtFOSAA	70		25 - 150
d-N-MeFOSA-M	64		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-842591/2-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 842591

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
d-N-EtFOSA-M	61		25 - 150
D7-NMeFOSE	72		25 - 150
13C3 HFPO-DA	81		25 - 150
D9-NEtFOSE	66		25 - 150
13C-6:2 FTCA	88		25 - 150
13C-8:2 FTCA	76		25 - 150

Lab Sample ID: LCSD 320-842591/3-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 842591

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits			
Perfluorobutanoic acid (PFBA)	40.0	77.5		ng/L		194	157 - 278	2	30	
Perfluoropentanoic acid (PFPeA)	40.0	73.7		ng/L		184	151 - 208	1	30	
Perfluorohexanoic acid (PFHxA)	40.0	102		ng/L		255	194 - 269	1	30	
Perfluoroheptanoic acid (PFHpA)	40.0	80.6		ng/L		201	199 - 252	5	30	
Perfluorooctanoic acid (PFOA)	40.0	156		ng/L		390	351 - 490	5	30	
Perfluorononanoic acid (PFNA)	40.0	72.0		ng/L		180	145 - 205	2	30	
Perfluorodecanoic acid (PFDA)	40.0	65.9		ng/L		165	130 - 190	0	30	
Perfluoroundecanoic acid (PFUnA)	40.0	38.1		ng/L		95	82 - 142	9	30	
Perfluorododecanoic acid (PFDoA)	40.0	39.2		ng/L		98	82 - 142	1	30	
Perfluorotridecanoic acid (PFTTrDA)	40.0	31.0	*-	ng/L		77	85 - 145	1	30	
Perfluorotetradecanoic acid (PFTeDA)	40.0	34.3		ng/L		86	72 - 132	2	30	
Perfluorobutanesulfonic acid (PFBS)	35.5	37.9		ng/L		107	84 - 144	2	30	
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.4		ng/L		102	83 - 143	1	30	
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.2		ng/L		86	73 - 133	17	30	
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.2		ng/L		103	80 - 140	7	30	
Perfluorooctanesulfonic acid (PFOS)	37.2	38.3		ng/L		103	82 - 142	3	30	
Perfluorononanesulfonic acid (PFNS)	38.5	37.6		ng/L		98	79 - 139	3	30	
Perfluorodecanesulfonic acid (PFDS)	38.6	36.7		ng/L		95	71 - 131	14	30	
Perfluorododecanesulfonic acid (PFDoS)	38.8	31.7		ng/L		82	52 - 139	20	30	
Perfluorooctanesulfonamide (PFOSA)	40.0	ND	*1	ng/L		2	0 - 10	58	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30	
4:2 FTS	37.5	ND		ng/L		0	0 - 10	NC	30	
6:2 FTS	38.1	ND		ng/L		0	0 - 10	NC	30	
8:2 FTS	38.4	ND	*1	ng/L		3	0 - 10	42	30	

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-842591/3-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 842591

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	46.0	*+	ng/L		115	52 - 112	10	30
9Cl-PF3ONS	37.4	33.9		ng/L		91	66 - 126	3	30
11Cl-PF3OUdS	37.8	21.5		ng/L		57	45 - 105	20	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	ND	*1	ng/L		2	0 - 10	91	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	37.7		ng/L		106	81 - 141	9	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	63.3		ng/L		158	111 - 174	7	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.0		ng/L		103	60 - 120	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	34.7		ng/L		87	67 - 127	2	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	95		25 - 150
13C5 PFPeA	87		25 - 150
13C2 PFHxA	87		25 - 150
13C4 PFHpA	97		25 - 150
13C4 PFOA	97		25 - 150
13C5 PFNA	94		25 - 150
13C2 PFDA	90		25 - 150
13C2 PFUnA	86		25 - 150
13C2 PFDoA	87		25 - 150
13C2 PFTeDA	78		25 - 150
13C3 PFBS	76		25 - 150
18O2 PFHxS	84		25 - 150
13C4 PFOS	76		25 - 150
13C8 FOSA	76		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	106		25 - 150
13C2 8:2 FTS	112		25 - 150
D3-NMeFOSAA	80		25 - 150
d5-NEtFOSAA	79		25 - 150
d-N-MeFOSA-M	65		25 - 150
d-N-EtFOSA-M	66		25 - 150
D7-NMeFOSE	77		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-842591/3-A

Matrix: Water

Analysis Batch: 843177

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 842591

<i>Isotope Dilution</i>	<i>LCSD LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C3 HFPO-DA	79		25 - 150
D9-NEtFOSE	73		25 - 150
13C-6:2 FTCA	85		25 - 150
13C-8:2 FTCA	79		25 - 150

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

LCMS

Prep Batch: 842038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8	BIO-B-202503	Pre-Treatment	Solid	TOP Pre-Prep	
320-119687-9	BIO-A-23-202503	Pre-Treatment	Solid	TOP Pre-Prep	
320-119687-10	BIO-A-24-202503	Pre-Treatment	Solid	TOP Pre-Prep	
MB 320-842038/1-A	Method Blank	Pre-Treatment	Solid	TOP Pre-Prep	
LCS 320-842038/2-A	Lab Control Sample	Pre-Treatment	Solid	TOP Pre-Prep	
LCSD 320-842038/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	TOP Pre-Prep	

Prep Batch: 842039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8	BIO-B-202503	Post-Treatment	Solid	TOP Post-Prep	
320-119687-9	BIO-A-23-202503	Post-Treatment	Solid	TOP Post-Prep	
320-119687-10	BIO-A-24-202503	Post-Treatment	Solid	TOP Post-Prep	
MB 320-842039/1-A	Method Blank	Post-Treatment	Solid	TOP Post-Prep	
LCS 320-842039/2-A	Lab Control Sample	Post-Treatment	Solid	TOP Post-Prep	
LCSD 320-842039/3-A	Lab Control Sample Dup	Post-Treatment	Solid	TOP Post-Prep	

Prep Batch: 842591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-7	EFF-G-202503	Post-Treatment	Water	TOP Post Prep	
MB 320-842591/1-A	Method Blank	Post-Treatment	Water	TOP Post Prep	
LCS 320-842591/2-A	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCSD 320-842591/3-A	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	

Analysis Batch: 843055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-8	BIO-B-202503	Post-Treatment	Solid	537 (modified)	842039
320-119687-8	BIO-B-202503	Pre-Treatment	Solid	537 (modified)	842038
320-119687-9	BIO-A-23-202503	Post-Treatment	Solid	537 (modified)	842039
320-119687-9	BIO-A-23-202503	Pre-Treatment	Solid	537 (modified)	842038
320-119687-10	BIO-A-24-202503	Post-Treatment	Solid	537 (modified)	842039
320-119687-10	BIO-A-24-202503	Pre-Treatment	Solid	537 (modified)	842038
MB 320-842038/1-A	Method Blank	Pre-Treatment	Solid	537 (modified)	842038

Analysis Batch: 843177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-119687-7	EFF-G-202503	Post-Treatment	Water	537 (modified)	842591
MB 320-842591/1-A	Method Blank	Post-Treatment	Water	537 (modified)	842591
LCS 320-842591/2-A	Lab Control Sample	Post-Treatment	Water	537 (modified)	842591
LCSD 320-842591/3-A	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	842591

Analysis Batch: 843178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-842039/1-A	Method Blank	Post-Treatment	Solid	537 (modified)	842039
LCS 320-842038/2-A	Lab Control Sample	Pre-Treatment	Solid	537 (modified)	842038
LCS 320-842039/2-A	Lab Control Sample	Post-Treatment	Solid	537 (modified)	842039
LCSD 320-842038/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	537 (modified)	842038
LCSD 320-842039/3-A	Lab Control Sample Dup	Post-Treatment	Solid	537 (modified)	842039

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post Prep			100 mL	10.0 mL	842591	03/27/25 03:41	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843177	03/29/25 00:18	AP1	EET SAC

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.04 g	10.0 mL	842039	03/25/25 05:12	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843055	03/28/25 19:37	AP1	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.02 g	10.0 mL	842038	03/25/25 05:08	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843055	03/28/25 17:31	AP1	EET SAC

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.03 g	10.0 mL	842039	03/25/25 05:12	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843055	03/28/25 19:51	AP1	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.01 g	10.0 mL	842038	03/25/25 05:08	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843055	03/28/25 17:45	AP1	EET SAC

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.02 g	10.0 mL	842039	03/25/25 05:12	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843055	03/28/25 20:05	AP1	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	842038	03/25/25 05:08	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	843055	03/28/25 17:59	AP1	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26
Wisconsin	State	998204680	08-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Post Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
TOP Post Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Post-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC
TOP Pre-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-119687-7	EFF-G-202503	Water	03/11/25 07:11	03/12/25 09:30
320-119687-8	BIO-B-202503	Solid	03/10/25 13:28	03/12/25 09:30
320-119687-9	BIO-A-23-202503	Solid	03/10/25 14:04	03/12/25 09:30
320-119687-10	BIO-A-24-202503	Solid	03/10/25 14:38	03/12/25 09:30

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environment Testing

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4/17/2025 (Rev. 2)

Client Information Client Contact: <u>Allen Mike Ursin</u> Phone: <u>TRC 999 Fourier Dr Surtelol 53717 Madison, WI</u>		Sampler: <u>Jennifer Faust</u> Phone: _____		Lab PM: <u>Jessica McLaMmon</u> E-Mail: <u>jessicame@madsewer.org</u>		Carrier Tracking No(s): _____		COC No: _____	
Company: <u>Madison Metro Sewerage Dist</u> Address: <u>1610 Moorland Rd</u> City: <u>Madison</u> State, Zip: <u>WI 53713</u> Phone: <u>608 222-1201</u> Email: <u>mursin@trccompanies.com</u> Project Name: <u>PFAS Study</u> Site: <u>MMSD</u>				PWSID: _____		Analysis Requested			
Due Date Requested: _____		TAT Requested (days): <u>20 business days</u>		Compliance Project: ☐ Yes ☒ No		PO #: <u>2400419</u>		WO #: _____	
Project #:		SSOW#:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, G=waste/oil, BT=Tissue, A=Air)	
Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers		Special Instructions/Note:	
INF-02-202503		3/10/25		23:54		C		W	
INF-07-202503		3/10/25		23:59		C		W	
INF-08-202503		3/10/25		23:59		C		W	
INF-11-202503		3/10/25		23:59		C		W	
INF-18-202503		3/10/25		23:59		C		W	
INF-COMP-202503		3/10/25		23:59		C		W	
EFF-G-202503		3/11/25		-11		G		W	
B10-B-202503		3/10/25		13:28		G		S	
B10-A-23-202503		3/10/25		14:04		G		S	
B10-A-24-202503		3/10/25		14:38		G		S	
EB01-202503		3/10/25		13:17		G		W	
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months			
Deliverable Requested I, II, III, IV, Other (specify)						Special Instructions/QC Requirements			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>3/11/25 0730</u>		Company: <u>MMSD</u>		Received by: <u>[Signature]</u>		Date/Time: <u>3/12/25 930</u>	
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____	
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____	
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: <u>29</u>					

Ver 01/16/2019





Environment Testing

Lab 320

119687

Sacramento Sample
Receiving Notes (SSRN)

Tracking #

7407 9456 1295

Job _____

SO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COCTherm ID U10 Corr Factor (+/-) _____ °CIce — Wet _____ Gel _____ Other _____Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 2.9 °C Corrected: 2.9 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials JF Date 3/12/25**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☐ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☒ ☐ ☐Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials JF Date 3/12/25

Notes: _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login Completion

Receipt Temperature on COC? Yes No NA

NCM Filed? ☐ ☒ ☐Samples received within hold time? ☒ ☐ ☐Log Release checked in TALS? ☐ ☐ ☐Initials JF Date 3/12/25

April 2025



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 4/29/2025 11:09:00 AM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-120622-1

Eurofins Sacramento

Job Notes

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Authorization



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4/29/2025 11:09:00 AM

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-120622-1

Job ID: 320-120622-1

Eurofins Sacramento

Job Narrative 320-120622-1

Receipt

The samples were received on 4/16/2025 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5° C.

LCMS

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF COMP-202504 (320-120622-1).

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: INF COMP-202504 (320-120622-1). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633: Results for sample INF COMP-202504 (320-120622-1) were reported from the analysis of a diluted extract due to matrix interference of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 1633: The following sample exhibited matrix interferences for Perfluoropentanoic acid (PFPeA) causing elevation of the reporting limit (RL): INF COMP-202504 (320-120622-1). The reporting limit (RL) for the affected analytes has been raised to be equal to the matrix and a "G" qualifier applied.

Method 1633: The following sample has chromatographic interferences that could adversely impact the identification and quantitation of target analyte Perfluorobutanoic acid (PFBA): INF COMP-202504 (320-120622-1). These interferences could cause false positive results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: Due to the nature of the sample matrix (turbid and heavy non-homogenous sediment), a sample volume less than 1L was utilized for this procedure for the following samples in analytical batch 320-846971: INF COMP-202504 (320-120622-1), (380-145681-A-1) and (380-145681-A-1 DU). Reporting limits (RL) have been adjusted.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633: Due to the excess amount of sediment and particulates, the following sample was fortified with Isotope Dilution Analyte (IDA) then centrifuged and decanted into a new container: INF COMP-202504 (320-120622-1). The sediment/particulates in the centrifuge tubes were rinsed with methanol and the methanol was combined with the original aqueous fraction to generate a combined extract to be used for the analysis.

Method 1633: The following samples in preparation batch 320-847509 were discolored prior to extraction: INF COMP-202504 (320-120622-1) and EFF-G-202504 (320-120622-2).

Method 1633: The following samples in preparation batch 320-847509 were discolored following extraction: INF COMP-202504 (320-120622-1) and EFF-G-202504 (320-120622-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: INF COMP-202504

Lab Sample ID: 320-120622-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
6:2 FTS	1.2	J	3.3	0.33	ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	12	CI	3.3	0.30	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA) - RA	4.6		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA) - RA	1.7		1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA) - RA	5.3		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA) - RA	0.56	J	1.6	0.37	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RA	3.0		1.6	0.23	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RA	7.1		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA	7.9	I	1.6	0.23	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	0.47	J	1.6	0.28	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE) - RA	8.2		8.1	1.9	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RA	7.0	J	8.1	1.4	ng/L	1		1633A	Total/NA
Total Suspended Solids	230		16	16	mg/L	1		SM 2540D	Total/NA

Client Sample ID: EFF-G-202504

Lab Sample ID: 320-120622-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
6:2 FTS	0.90	J	3.3	0.33	ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	9.7		3.3	0.31	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA) - RA	10		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA) - RA	12		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA) - RA	1.8		1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA) - RA	7.0		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA) - RA	0.55	J	1.6	0.37	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA) - RA	0.65	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RA	3.3		1.6	0.23	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS) - RA	0.67	J	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RA	7.8		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA	3.6		1.6	0.23	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA) - RA	0.84	J	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	0.85	J	1.6	0.29	ng/L	1		1633A	Total/NA
Total Suspended Solids	2.3		1.3	1.3	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: INF COMP-202504

Lab Sample ID: 320-120622-1

Date Collected: 04/14/25 23:59

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.3	0.36	ng/L		04/23/25 04:32	04/25/25 07:04	1
6:2 FTS	1.2	J	3.3	0.33	ng/L		04/23/25 04:32	04/25/25 07:04	1
8:2 FTS	ND		3.3	0.73	ng/L		04/23/25 04:32	04/25/25 07:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	50.8		40 - 200				04/23/25 04:32	04/25/25 07:04	1
13C2 6:2 FTS	108		40 - 200				04/23/25 04:32	04/25/25 07:04	1
13C2 8:2 FTS	73.9		40 - 300				04/23/25 04:32	04/25/25 07:04	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		16	3.6	ng/L		04/23/25 04:32	04/26/25 03:10	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSA	6.62	*5- *3	10 - 130				04/23/25 04:32	04/26/25 03:10	10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12	CI	3.3	0.30	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoropentanoic acid (PFPeA)	ND	G	6.7	6.7	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorohexanoic acid (PFHxA)	4.6		1.6	0.22	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoroheptanoic acid (PFHpA)	1.7		1.6	0.28	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorooctanoic acid (PFOA)	5.3		1.6	0.32	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorononanoic acid (PFNA)	0.56	J	1.6	0.37	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorobutanesulfonic acid (PFBS)	3.0		1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorooctanesulfonic acid (PFOS)	7.9	I	1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47	J	1.6	0.28	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		8.1	1.9	ng/L		04/23/25 04:32	04/26/25 02:04	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: INF COMP-202504

Lab Sample ID: 320-120622-1

Date Collected: 04/14/25 23:59

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.1	2.0	ng/L		04/23/25 04:32	04/26/25 02:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		04/23/25 04:32	04/26/25 02:04	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		04/23/25 04:32	04/26/25 02:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.58	ng/L		04/23/25 04:32	04/26/25 02:04	1
9Cl-PF3ONS	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:04	1
11Cl-PF3OUdS	ND		1.6	0.24	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:04	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.58	ng/L		04/23/25 04:32	04/26/25 02:04	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.0	J	8.1	1.4	ng/L		04/23/25 04:32	04/26/25 02:04	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	1.0	ng/L		04/23/25 04:32	04/26/25 02:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	16.2		5 - 130	04/23/25 04:32	04/26/25 02:04	1
13C5 PFPeA	24.8	*5-	40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C5 PFHxA	43.0		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C4 PFHpA	47.7		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C8 PFOA	64.7		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C9 PFNA	58.1		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C6 PFDA	67.0		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C7 PFUnA	51.7		30 - 130	04/23/25 04:32	04/26/25 02:04	1
13C2 PFDoA	34.5		10 - 130	04/23/25 04:32	04/26/25 02:04	1
13C2 PFTeDA	31.3		10 - 130	04/23/25 04:32	04/26/25 02:04	1
13C3 PFBS	76.6		40 - 135	04/23/25 04:32	04/26/25 02:04	1
13C3 PFHxS	79.4		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C8 PFOS	73.8		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C8 FOSA	23.6	*5-	40 - 130	04/23/25 04:32	04/26/25 02:04	1
D3-NMeFOSAA	39.7	*5-	40 - 170	04/23/25 04:32	04/26/25 02:04	1
D5-NEtFOSAA	23.5	*5-	25 - 135	04/23/25 04:32	04/26/25 02:04	1
13C3 HFPO-DA	35.1	*5-	40 - 130	04/23/25 04:32	04/26/25 02:04	1
D7-NMeFOSE	6.82	*5-	10 - 130	04/23/25 04:32	04/26/25 02:04	1
D9-NEtFOSE	5.32	*5-	10 - 130	04/23/25 04:32	04/26/25 02:04	1
D3-NMeFOSA	7.86	*5-	10 - 130	04/23/25 04:32	04/26/25 02:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	230		16	16	mg/L			04/18/25 15:27	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: EFF-G-202504

Lab Sample ID: 320-120622-2

Date Collected: 04/15/25 06:45

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.3	0.36	ng/L		04/23/25 04:32	04/25/25 07:21	1
6:2 FTS	0.90	J	3.3	0.33	ng/L		04/23/25 04:32	04/25/25 07:21	1
8:2 FTS	ND		3.3	0.73	ng/L		04/23/25 04:32	04/25/25 07:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	192		40 - 200				04/23/25 04:32	04/25/25 07:21	1
13C2 6:2 FTS	174		40 - 200				04/23/25 04:32	04/25/25 07:21	1
13C2 8:2 FTS	132		40 - 300				04/23/25 04:32	04/25/25 07:21	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.7		3.3	0.31	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoropentanoic acid (PFPeA)	10		1.6	0.19	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorohexanoic acid (PFHxA)	12		1.6	0.22	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.28	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorooctanoic acid (PFOA)	7.0		1.6	0.32	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorononanoic acid (PFNA)	0.55	J	1.6	0.37	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorodecanoic acid (PFDA)	0.65	J	1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.19	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorobutanesulfonic acid (PFBS)	3.3		1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoropentanesulfonic acid (PFPeS)	0.67	J	1.6	0.17	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorohexanesulfonic acid (PFHxS)	7.8		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorooctanesulfonic acid (PFOS)	3.6		1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorooctanesulfonamide (PFOSA)	0.84	J	1.6	0.18	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.32	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.85	J	1.6	0.29	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.2	1.9	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		04/23/25 04:32	04/26/25 02:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		04/23/25 04:32	04/26/25 02:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		04/23/25 04:32	04/26/25 02:20	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: EFF-G-202504

Lab Sample ID: 320-120622-2

Date Collected: 04/15/25 06:45

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		04/23/25 04:32	04/26/25 02:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		04/23/25 04:32	04/26/25 02:20	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:20	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:20	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		04/23/25 04:32	04/26/25 02:20	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.2	1.4	ng/L		04/23/25 04:32	04/26/25 02:20	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		04/23/25 04:32	04/26/25 02:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	98.4		5 - 130	04/23/25 04:32	04/26/25 02:20	1
13C5 PFPeA	92.6		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C5 PFHxA	105		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C4 PFHpA	110		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C8 PFOA	107		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C9 PFNA	95.2		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C6 PFDA	104		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C7 PFUnA	91.2		30 - 130	04/23/25 04:32	04/26/25 02:20	1
13C2 PFDoA	70.3		10 - 130	04/23/25 04:32	04/26/25 02:20	1
13C2 PFTeDA	47.4		10 - 130	04/23/25 04:32	04/26/25 02:20	1
13C3 PFBS	112		40 - 135	04/23/25 04:32	04/26/25 02:20	1
13C3 PFHxS	96.9		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C8 PFOS	88.1		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C8 FOSA	95.7		40 - 130	04/23/25 04:32	04/26/25 02:20	1
D3-NMeFOSAA	80.3		40 - 170	04/23/25 04:32	04/26/25 02:20	1
D5-NEtFOSAA	71.7		25 - 135	04/23/25 04:32	04/26/25 02:20	1
13C3 HFPO-DA	98.6		40 - 130	04/23/25 04:32	04/26/25 02:20	1
D7-NMeFOSE	77.9		10 - 130	04/23/25 04:32	04/26/25 02:20	1
D9-NEtFOSE	67.7		10 - 130	04/23/25 04:32	04/26/25 02:20	1
D5-NEtFOSA	76.0		10 - 130	04/23/25 04:32	04/26/25 02:20	1
D3-NMeFOSA	66.7		10 - 130	04/23/25 04:32	04/26/25 02:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	2.3		1.3	1.3	mg/L			04/18/25 15:27	1

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)
320-120622-1	INF COMP-202504	50.8	108	73.9
320-120622-2	EFF-G-202504	192	174	132
LCS 320-847509/3-A	Lab Control Sample	132	141	120
LCSD 320-847509/4-A	Lab Control Sample Dup	122	131	113
LLCS 320-847509/2-A	Lab Control Sample	100	108	98.8
MB 320-847509/1-A	Method Blank	118	119	98.4

Surrogate Legend

M242FTS = 13C2 4:2 FTS

M262FTS = 13C2 6:2 FTS

M282FTS = 13C2 8:2 FTS

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NPFSA (10-130)
320-120622-1 - DL	INF COMP-202504	6.62 *5- *3

Surrogate Legend

d5NPFSA = D5-NEtFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-120622-1 - RA	INF COMP-202504	16.2	24.8 *5-	43.0	47.7	64.7	58.1	67.0	51.7
320-120622-2 - RA	EFF-G-202504	98.4	92.6	105	110	107	95.2	104	91.2
LCS 320-847509/3-A - RA	Lab Control Sample	97.2	104	102	110	98.8	95.5	106	109
LCSD 320-847509/4-A - RA	Lab Control Sample Dup	90.9	98.0	97.0	108	102	97.1	107	102
LLCS 320-847509/2-A - RA	Lab Control Sample	95.1	95.2	104	98.5	115	94.2	108	112
MB 320-847509/1-A - RA	Method Blank	93.9	112	96.7	114	102	88.4	107	105

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-120622-1 - RA	INF COMP-202504	34.5	31.3	76.6	79.4	73.8	23.6 *5-	39.7 *5-	23.5 *5-
320-120622-2 - RA	EFF-G-202504	70.3	47.4	112	96.9	88.1	95.7	80.3	71.7
LCS 320-847509/3-A - RA	Lab Control Sample	91.0	88.4	101	103	93.2	90.1	81.1	76.0
LCSD 320-847509/4-A - RA	Lab Control Sample Dup	80.2	87.4	97.4	91.8	98.5	93.7	86.2	82.6
LLCS 320-847509/2-A - RA	Lab Control Sample	96.5	86.5	90.6	96.8	96.0	97.3	87.8	85.6
MB 320-847509/1-A - RA	Method Blank	93.0	87.7	95.4	94.4	92.0	88.9	79.2	79.5

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-120622-1 - RA	INF COMP-202504	35.1 *5-	6.82 *5-	5.32 *5-		7.86 *5-
320-120622-2 - RA	EFF-G-202504	98.6	77.9	67.7	76.0	66.7
LCS 320-847509/3-A - RA	Lab Control Sample	95.2	86.5	83.3	63.2	57.5

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
LCSD 320-847509/4-A - RA	Lab Control Sample Dup	93.1	93.2	82.2	65.5	60.2
LLCS 320-847509/2-A - RA	Lab Control Sample	93.5	90.6	90.1	70.8	63.0
MB 320-847509/1-A - RA	Method Blank	108	84.3	78.0	62.9	56.9

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-847509/1-A

Matrix: Water

Analysis Batch: 847875

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 847509

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		4.0	0.44	ng/L		04/23/25 04:32	04/25/25 05:59	1
6:2 FTS	ND		4.0	0.41	ng/L		04/23/25 04:32	04/25/25 05:59	1
8:2 FTS	ND		4.0	0.90	ng/L		04/23/25 04:32	04/25/25 05:59	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	118		40 - 200				04/23/25 04:32	04/25/25 05:59	1
13C2 6:2 FTS	119		40 - 200				04/23/25 04:32	04/25/25 05:59	1
13C2 8:2 FTS	98.4		40 - 300				04/23/25 04:32	04/25/25 05:59	1

Lab Sample ID: LCS 320-847509/3-A

Matrix: Water

Analysis Batch: 847875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4:2 FTS	75.0	59.9		ng/L		80	70 - 145
6:2 FTS	76.2	67.7		ng/L		89	65 - 155
8:2 FTS	76.8	79.0		ng/L		103	60 - 150
Isotope Dilution	%Recovery	LCS Qualifier	Limits				
13C2 4:2 FTS	132		40 - 200				
13C2 6:2 FTS	141		40 - 200				
13C2 8:2 FTS	120		40 - 300				

Lab Sample ID: LCSD 320-847509/4-A

Matrix: Water

Analysis Batch: 847875

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4:2 FTS	75.0	54.2		ng/L		72	70 - 145	10	30
6:2 FTS	76.2	65.3		ng/L		86	65 - 155	4	30
8:2 FTS	76.8	80.0		ng/L		104	60 - 150	1	30
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
13C2 4:2 FTS	122		40 - 200						
13C2 6:2 FTS	131		40 - 200						
13C2 8:2 FTS	113		40 - 300						

Lab Sample ID: LLCS 320-847509/2-A

Matrix: Water

Analysis Batch: 847875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
4:2 FTS	7.50	6.57		ng/L		88	70 - 145
6:2 FTS	7.62	7.69		ng/L		101	65 - 155
8:2 FTS	7.68	7.87		ng/L		102	60 - 150
Isotope Dilution	%Recovery	LLCS Qualifier	Limits				
13C2 4:2 FTS	100		40 - 200				
13C2 6:2 FTS	108		40 - 200				

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-847509/2-A

Matrix: Water

Analysis Batch: 847875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C2 8:2 FTS	98.8		40 - 300

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: MB 320-847509/1-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 847509

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA) - RA	ND		4.0	0.37	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoropentanoic acid (PFPeA) - RA	ND		2.0	0.23	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorohexanoic acid (PFHxA) - RA	ND		2.0	0.27	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoroheptanoic acid (PFHpA) - RA	ND		2.0	0.35	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorooctanoic acid (PFOA) - RA	ND		2.0	0.39	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorononanoic acid (PFNA) - RA	ND		2.0	0.45	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorodecanoic acid (PFDA) - RA	ND		2.0	0.44	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoroundecanoic acid (PFUnA) - RA	ND		2.0	0.23	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorododecanoic acid (PFDoA) - RA	ND		2.0	0.55	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorotridecanoic acid (PFTTrDA) - RA	ND		2.0	0.58	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorotetradecanoic acid (PFTeDA) - RA	ND		2.0	0.81	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorobutanesulfonic acid (PFBS) - RA	ND		2.0	0.28	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoropentanesulfonic acid (PFPeS) - RA	ND		2.0	0.21	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorohexanesulfonic acid (PFHxS) - RA	ND		2.0	0.25	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoroheptanesulfonic acid (PFHpS) - RA	ND		2.0	0.18	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorooctanesulfonic acid (PFOS) - RA	ND		2.0	0.28	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorononanesulfonic acid (PFNS) - RA	ND		2.0	0.31	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorodecanesulfonic acid (PFDS) - RA	ND		2.0	0.31	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorododecanesulfonic acid (PFDoS) - RA	ND		2.0	0.53	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluorooctanesulfonamide (PFOSA) - RA	ND		2.0	0.23	ng/L		04/23/25 04:32	04/26/25 00:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA) - RA	ND		2.0	0.39	ng/L		04/23/25 04:32	04/26/25 00:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA) - RA	ND		2.0	0.45	ng/L		04/23/25 04:32	04/26/25 00:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	ND		2.0	0.35	ng/L		04/23/25 04:32	04/26/25 00:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) - RA	ND		2.0	0.44	ng/L		04/23/25 04:32	04/26/25 00:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE) - RA	ND		10	2.3	ng/L		04/23/25 04:32	04/26/25 00:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE) - RA	ND		10	2.4	ng/L		04/23/25 04:32	04/26/25 00:58	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: MB 320-847509/1-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 847509

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) - RA	ND		1.5	0.39	ng/L		04/23/25 04:32	04/26/25 00:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA) - RA	ND		2.0	0.40	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA) - RA	ND		2.0	0.19	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA) - RA	ND		2.0	0.26	ng/L		04/23/25 04:32	04/26/25 00:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) - RA	ND		2.0	0.72	ng/L		04/23/25 04:32	04/26/25 00:58	1
9Cl-PF3ONS - RA	ND		2.0	0.58	ng/L		04/23/25 04:32	04/26/25 00:58	1
11Cl-PF3OUdS - RA	ND		2.0	0.30	ng/L		04/23/25 04:32	04/26/25 00:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA) - RA	ND		2.0	0.25	ng/L		04/23/25 04:32	04/26/25 00:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA) - RA	ND		4.0	0.72	ng/L		04/23/25 04:32	04/26/25 00:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RA	ND		10	1.7	ng/L		04/23/25 04:32	04/26/25 00:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	ND		10	1.2	ng/L		04/23/25 04:32	04/26/25 00:58	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA - RA	93.9		5 - 130	04/23/25 04:32	04/26/25 00:58	1
13C5 PFPeA - RA	112		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C5 PFHxA - RA	96.7		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C4 PFHpA - RA	114		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C8 PFOA - RA	102		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C9 PFNA - RA	88.4		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C6 PFDA - RA	107		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C7 PFUnA - RA	105		30 - 130	04/23/25 04:32	04/26/25 00:58	1
13C2 PFDoA - RA	93.0		10 - 130	04/23/25 04:32	04/26/25 00:58	1
13C2 PFTeDA - RA	87.7		10 - 130	04/23/25 04:32	04/26/25 00:58	1
13C3 PFBS - RA	95.4		40 - 135	04/23/25 04:32	04/26/25 00:58	1
13C3 PFHxS - RA	94.4		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C8 PFOS - RA	92.0		40 - 130	04/23/25 04:32	04/26/25 00:58	1
13C8 FOSA - RA	88.9		40 - 130	04/23/25 04:32	04/26/25 00:58	1
D3-NMeFOSAA - RA	79.2		40 - 170	04/23/25 04:32	04/26/25 00:58	1
D5-NetFOSAA - RA	79.5		25 - 135	04/23/25 04:32	04/26/25 00:58	1
13C3 HFPO-DA - RA	108		40 - 130	04/23/25 04:32	04/26/25 00:58	1
D7-NMeFOSE - RA	84.3		10 - 130	04/23/25 04:32	04/26/25 00:58	1
D9-NetFOSE - RA	78.0		10 - 130	04/23/25 04:32	04/26/25 00:58	1
D5-NetFOSA - RA	62.9		10 - 130	04/23/25 04:32	04/26/25 00:58	1
D3-NMeFOSA - RA	56.9		10 - 130	04/23/25 04:32	04/26/25 00:58	1

Lab Sample ID: LCS 320-847509/3-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA) - RA	80.0	78.7		ng/L		98	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCS 320-847509/3-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA) - RA	40.0	43.0		ng/L		108	65 - 135
Perfluorohexanoic acid (PFHxA) - RA	40.0	37.4		ng/L		93	70 - 145
Perfluoroheptanoic acid (PFHpA) - RA	40.0	36.2		ng/L		91	70 - 150
Perfluorooctanoic acid (PFOA) - RA	40.0	40.1		ng/L		100	70 - 150
Perfluorononanoic acid (PFNA) - RA	40.0	40.1		ng/L		100	70 - 150
Perfluorodecanoic acid (PFDA) - RA	40.0	37.9		ng/L		95	70 - 140
Perfluoroundecanoic acid (PFUnA) - RA	40.0	38.7		ng/L		97	70 - 145
Perfluorododecanoic acid (PFDoA) - RA	40.0	43.0		ng/L		108	70 - 140
Perfluorotridecanoic acid (PFTrDA) - RA	40.0	45.4		ng/L		114	65 - 140
Perfluorotetradecanoic acid (PFTeDA) - RA	40.0	41.2		ng/L		103	60 - 140
Perfluorobutanesulfonic acid (PFBS) - RA	35.5	33.7		ng/L		95	60 - 145
Perfluoropentanesulfonic acid (PFPeS) - RA	37.6	31.7		ng/L		84	65 - 140
Perfluorohexanesulfonic acid (PFHxS) - RA	36.5	35.3		ng/L		97	65 - 145
Perfluoroheptanesulfonic acid (PFHpS) - RA	38.2	39.9		ng/L		105	70 - 150
Perfluorooctanesulfonic acid (PFOS) - RA	37.2	34.4		ng/L		93	55 - 150
Perfluorononanesulfonic acid (PFNS) - RA	38.5	38.4		ng/L		100	65 - 145
Perfluorodecanesulfonic acid (PFDS) - RA	38.6	36.5		ng/L		95	60 - 145
Perfluorododecanesulfonic acid (PFDoS) - RA	38.8	33.7		ng/L		87	50 - 145
Perfluorooctanesulfonamide (PFOSA) - RA	40.0	39.9		ng/L		100	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA) - RA	40.0	43.6		ng/L		109	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA) - RA	40.0	39.2		ng/L		98	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	40.0	38.0		ng/L		95	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) - RA	40.0	37.6		ng/L		94	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE) - RA	200	192		ng/L		96	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE) - RA	200	196		ng/L		98	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) - RA	30.0	30.8		ng/L		103	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCS 320-847509/3-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA) - RA	37.8	38.7		ng/L		102	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA) - RA	40.0	36.7		ng/L		92	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA) - RA	40.0	43.5		ng/L		109	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) - RA	40.0	42.4		ng/L		106	50 - 150
9CI-PF3ONS - RA	37.4	35.7		ng/L		96	70 - 155
11CI-PF3OUdS - RA	37.8	37.6		ng/L		100	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA) - RA	35.7	35.2		ng/L		99	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA) - RA	80.0	77.9		ng/L		97	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RA	200	194		ng/L		97	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	200	177		ng/L		89	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA - RA	97.2		5 - 130
13C5 PFPeA - RA	104		40 - 130
13C5 PFHxA - RA	102		40 - 130
13C4 PFHpA - RA	110		40 - 130
13C8 PFOA - RA	98.8		40 - 130
13C9 PFNA - RA	95.5		40 - 130
13C6 PFDA - RA	106		40 - 130
13C7 PFUnA - RA	109		30 - 130
13C2 PFDoA - RA	91.0		10 - 130
13C2 PFTeDA - RA	88.4		10 - 130
13C3 PFBS - RA	101		40 - 135
13C3 PFHxS - RA	103		40 - 130
13C8 PFOS - RA	93.2		40 - 130
13C8 FOSA - RA	90.1		40 - 130
D3-NMeFOSAA - RA	81.1		40 - 170
D5-NEtFOSAA - RA	76.0		25 - 135
13C3 HFPO-DA - RA	95.2		40 - 130
D7-NMeFOSE - RA	86.5		10 - 130
D9-NEtFOSE - RA	83.3		10 - 130
D5-NEtFOSA - RA	63.2		10 - 130
D3-NMeFOSA - RA	57.5		10 - 130

Lab Sample ID: LCSD 320-847509/4-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA) - RA	80.0	82.7		ng/L		103	70 - 140	5	30
Perfluoropentanoic acid (PFPeA) - RA	40.0	39.9		ng/L		100	65 - 135	8	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCSD 320-847509/4-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA) - RA	40.0	37.0		ng/L		93	70 - 145	1	30
Perfluoroheptanoic acid (PFHpA) - RA	40.0	37.3		ng/L		93	70 - 150	3	30
Perfluorooctanoic acid (PFOA) - RA	40.0	40.8		ng/L		102	70 - 150	2	30
Perfluorononanoic acid (PFNA) - RA	40.0	36.6		ng/L		91	70 - 150	9	30
Perfluorodecanoic acid (PFDA) - RA	40.0	39.1		ng/L		98	70 - 140	3	30
Perfluoroundecanoic acid (PFUnA) - RA	40.0	38.5		ng/L		96	70 - 145	1	30
Perfluorododecanoic acid (PFDoA) - RA	40.0	46.0		ng/L		115	70 - 140	7	30
Perfluorotridecanoic acid (PFTTrDA) - RA	40.0	46.7		ng/L		117	65 - 140	3	30
Perfluorotetradecanoic acid (PFTeDA) - RA	40.0	39.8		ng/L		100	60 - 140	3	30
Perfluorobutanesulfonic acid (PFBS) - RA	35.5	35.3		ng/L		99	60 - 145	5	30
Perfluoropentanesulfonic acid (PFPeS) - RA	37.6	38.8		ng/L		103	65 - 140	20	30
Perfluorohexanesulfonic acid (PFHxS) - RA	36.5	36.6		ng/L		100	65 - 145	3	30
Perfluoroheptanesulfonic acid (PFHpS) - RA	38.2	38.0		ng/L		100	70 - 150	5	30
Perfluorooctanesulfonic acid (PFOS) - RA	37.2	33.7		ng/L		91	55 - 150	2	30
Perfluorononanesulfonic acid (PFNS) - RA	38.5	37.0		ng/L		96	65 - 145	4	30
Perfluorodecanesulfonic acid (PFDS) - RA	38.6	38.4		ng/L		100	60 - 145	5	30
Perfluorododecanesulfonic acid (PFDoS) - RA	38.8	35.8		ng/L		92	50 - 145	6	30
Perfluorooctanesulfonamide (PFOSA) - RA	40.0	40.8		ng/L		102	70 - 145	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA) - RA	40.0	44.9		ng/L		112	60 - 150	3	30
N-ethylperfluorooctane sulfonamide (NEtFOSA) - RA	40.0	40.2		ng/L		101	65 - 145	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	40.0	38.7		ng/L		97	50 - 140	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) - RA	40.0	38.7		ng/L		97	70 - 145	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE) - RA	200	185		ng/L		93	70 - 145	4	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE) - RA	200	215		ng/L		107	70 - 135	9	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) - RA	30.0	30.9		ng/L		103	70 - 140	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA) - RA	37.8	38.2		ng/L		101	65 - 145	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCSD 320-847509/4-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro-3-methoxypropanoic acid (PFMPA) - RA	40.0	38.6		ng/L		97	55 - 140	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA) - RA	40.0	44.5		ng/L		111	60 - 150	2	30
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA) - RA	40.0	46.5		ng/L		116	50 - 150	9	30
9CI-PF3ONS - RA	37.4	37.9		ng/L		102	70 - 155	6	30
11CI-PF3OUdS - RA	37.8	37.3		ng/L		99	55 - 160	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA) - RA	35.7	37.9		ng/L		106	70 - 140	7	30
3-Perfluoropropylpropanoic acid (3:3 FTCA) - RA	80.0	81.3		ng/L		102	65 - 130	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RA	200	193		ng/L		96	70 - 135	1	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	200	182		ng/L		91	50 - 145	3	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA - RA	90.9		5 - 130
13C5 PFPeA - RA	98.0		40 - 130
13C5 PFHxA - RA	97.0		40 - 130
13C4 PFHpA - RA	108		40 - 130
13C8 PFOA - RA	102		40 - 130
13C9 PFNA - RA	97.1		40 - 130
13C6 PFDA - RA	107		40 - 130
13C7 PFUnA - RA	102		30 - 130
13C2 PFDoA - RA	80.2		10 - 130
13C2 PFTeDA - RA	87.4		10 - 130
13C3 PFBS - RA	97.4		40 - 135
13C3 PFHxS - RA	91.8		40 - 130
13C8 PFOS - RA	98.5		40 - 130
13C8 FOSA - RA	93.7		40 - 130
D3-NMeFOSAA - RA	86.2		40 - 170
D5-NEtFOSAA - RA	82.6		25 - 135
13C3 HFPO-DA - RA	93.1		40 - 130
D7-NMeFOSE - RA	93.2		10 - 130
D9-NEtFOSE - RA	82.2		10 - 130
D5-NEtFOSA - RA	65.5		10 - 130
D3-NMeFOSA - RA	60.2		10 - 130

Lab Sample ID: LLCS 320-847509/2-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA) - RA	8.00	8.32		ng/L		104	70 - 140
Perfluoropentanoic acid (PFPeA) - RA	4.00	4.08		ng/L		102	65 - 135
Perfluorohexanoic acid (PFHxA) - RA	4.00	3.80		ng/L		95	70 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LLCS 320-847509/2-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA) - RA	4.00	4.39		ng/L		110	70 - 150
Perfluorooctanoic acid (PFOA) - RA	4.00	3.94		ng/L		99	70 - 150
Perfluorononanoic acid (PFNA) - RA	4.00	4.17		ng/L		104	70 - 150
Perfluorodecanoic acid (PFDA) - RA	4.00	4.06		ng/L		101	70 - 140
Perfluoroundecanoic acid (PFUnA) - RA	4.00	3.86		ng/L		96	70 - 145
Perfluorododecanoic acid (PFDoA) - RA	4.00	4.21		ng/L		105	70 - 140
Perfluorotridecanoic acid (PFTrDA) - RA	4.00	4.79		ng/L		120	65 - 140
Perfluorotetradecanoic acid (PFTeDA) - RA	4.00	4.23		ng/L		106	60 - 140
Perfluorobutanesulfonic acid (PFBS) - RA	3.55	3.49		ng/L		98	60 - 145
Perfluoropentanesulfonic acid (PFPeS) - RA	3.76	3.33		ng/L		89	65 - 140
Perfluorohexanesulfonic acid (PFHxS) - RA	3.65	3.66		ng/L		100	65 - 145
Perfluoroheptanesulfonic acid (PFHpS) - RA	3.82	4.25		ng/L		111	70 - 150
Perfluorooctanesulfonic acid (PFOS) - RA	3.72	3.55		ng/L		95	55 - 150
Perfluorononanesulfonic acid (PFNS) - RA	3.85	4.19		ng/L		109	65 - 145
Perfluorodecanesulfonic acid (PFDS) - RA	3.86	4.07		ng/L		105	60 - 145
Perfluorododecanesulfonic acid (PFDoS) - RA	3.88	3.47		ng/L		89	50 - 145
Perfluorooctanesulfonamide (PFOSA) - RA	4.00	4.17		ng/L		104	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA) - RA	4.00	4.41		ng/L		110	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA) - RA	4.00	4.04		ng/L		101	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RA	4.00	4.20		ng/L		105	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) - RA	4.00	3.99		ng/L		100	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE) - RA	20.0	20.1		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE) - RA	20.0	19.6		ng/L		98	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) - RA	3.00	3.05		ng/L		102	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA) - RA	3.78	4.23		ng/L		112	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA) - RA	4.00	4.07		ng/L		102	55 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LLCS 320-847509/2-A

Matrix: Water

Analysis Batch: 848188

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 847509

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA) - RA	4.00	4.60		ng/L		115	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) - RA	4.00	4.32		ng/L		108	50 - 150
9CI-PF3ONS - RA	3.74	3.93		ng/L		105	70 - 155
11CI-PF3OUdS - RA	3.78	4.15		ng/L		110	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA) - RA	3.57	3.31		ng/L		93	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA) - RA	8.00	8.29		ng/L		104	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RA	20.0	17.9		ng/L		90	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	20.0	16.8		ng/L		84	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA - RA	95.1		5 - 130
13C5 PFPeA - RA	95.2		40 - 130
13C5 PFHxA - RA	104		40 - 130
13C4 PFHpA - RA	98.5		40 - 130
13C8 PFOA - RA	115		40 - 130
13C9 PFNA - RA	94.2		40 - 130
13C6 PFDA - RA	108		40 - 130
13C7 PFUnA - RA	112		30 - 130
13C2 PFDoA - RA	96.5		10 - 130
13C2 PFTeDA - RA	86.5		10 - 130
13C3 PFBS - RA	90.6		40 - 135
13C3 PFHxS - RA	96.8		40 - 130
13C8 PFOS - RA	96.0		40 - 130
13C8 FOSA - RA	97.3		40 - 130
D3-NMeFOSAA - RA	87.8		40 - 170
D5-NEtFOSAA - RA	85.6		25 - 135
13C3 HFPO-DA - RA	93.5		40 - 130
D7-NMeFOSE - RA	90.6		10 - 130
D9-NEtFOSE - RA	90.1		10 - 130
D5-NEtFOSA - RA	70.8		10 - 130
D3-NMeFOSA - RA	63.0		10 - 130

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 320-846971/1

Matrix: Water

Analysis Batch: 846971

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.0	5.0	mg/L			04/18/25 15:27	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 320-846971/2

Matrix: Water

Analysis Batch: 846971

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	99.2		mg/L		99	85 - 115

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

LCMS

Prep Batch: 847509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-120622-1	INF COMP-202504	Total/NA	Water	1633	
320-120622-1 - DL	INF COMP-202504	Total/NA	Water	1633	
320-120622-1 - RA	INF COMP-202504	Total/NA	Water	1633	
320-120622-2	EFF-G-202504	Total/NA	Water	1633	
320-120622-2 - RA	EFF-G-202504	Total/NA	Water	1633	
MB 320-847509/1-A	Method Blank	Total/NA	Water	1633	
MB 320-847509/1-A - RA	Method Blank	Total/NA	Water	1633	
LCS 320-847509/3-A	Lab Control Sample	Total/NA	Water	1633	
LCS 320-847509/3-A - RA	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-847509/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LCSD 320-847509/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-847509/2-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-847509/2-A - RA	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 847875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-120622-1	INF COMP-202504	Total/NA	Water	1633A	847509
320-120622-2	EFF-G-202504	Total/NA	Water	1633A	847509
MB 320-847509/1-A	Method Blank	Total/NA	Water	1633A	847509
LCS 320-847509/3-A	Lab Control Sample	Total/NA	Water	1633A	847509
LCSD 320-847509/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	847509
LLCS 320-847509/2-A	Lab Control Sample	Total/NA	Water	1633A	847509

Analysis Batch: 848188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-120622-1 - RA	INF COMP-202504	Total/NA	Water	1633A	847509
320-120622-1 - DL	INF COMP-202504	Total/NA	Water	1633A	847509
320-120622-2 - RA	EFF-G-202504	Total/NA	Water	1633A	847509
MB 320-847509/1-A - RA	Method Blank	Total/NA	Water	1633A	847509
LCS 320-847509/3-A - RA	Lab Control Sample	Total/NA	Water	1633A	847509
LCSD 320-847509/4-A - RA	Lab Control Sample Dup	Total/NA	Water	1633A	847509
LLCS 320-847509/2-A - RA	Lab Control Sample	Total/NA	Water	1633A	847509

General Chemistry

Analysis Batch: 846971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-120622-1	INF COMP-202504	Total/NA	Water	SM 2540D	
320-120622-2	EFF-G-202504	Total/NA	Water	SM 2540D	
MB 320-846971/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 320-846971/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: INF COMP-202504

Lab Sample ID: 320-120622-1

Date Collected: 04/14/25 23:59

Matrix: Water

Date Received: 04/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			153.8 mL	5.0 mL	847509	04/23/25 04:32	BMS	EET SAC
Total/NA	Analysis	1633A		1			847875	04/25/25 07:04	S1M	EET SAC
Total/NA	Prep	1633	RA		153.8 mL	5.0 mL	847509	04/23/25 04:32	BMS	EET SAC
Total/NA	Analysis	1633A	RA	1			848188	04/26/25 02:04	S1M	EET SAC
Total/NA	Prep	1633	DL		153.8 mL	5.0 mL	847509	04/23/25 04:32	BMS	EET SAC
Total/NA	Analysis	1633A	DL	10			848188	04/26/25 03:10	S1M	EET SAC
Total/NA	Analysis	SM 2540D		1	80 mL	250 mL	846971	04/18/25 15:27	JCB	EET SAC

Client Sample ID: EFF-G-202504

Lab Sample ID: 320-120622-2

Date Collected: 04/15/25 06:45

Matrix: Water

Date Received: 04/16/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			152.7 mL	5.0 mL	847509	04/23/25 04:32	BMS	EET SAC
Total/NA	Analysis	1633A		1			847875	04/25/25 07:21	S1M	EET SAC
Total/NA	Prep	1633	RA		152.7 mL	5.0 mL	847509	04/23/25 04:32	BMS	EET SAC
Total/NA	Analysis	1633A	RA	1			848188	04/26/25 02:20	S1M	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	846971	04/18/25 15:27	JCB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	11CI-PF3OUdS
1633A	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633	Water	4:2 FTS
1633A	1633	Water	6:2 FTS
1633A	1633	Water	8:2 FTS
1633A	1633	Water	9CI-PF3ONS
1633A	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
1633A	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633A	1633	Water	Perfluorobutanoic acid (PFBA)
1633A	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633A	1633	Water	Perfluorodecanoic acid (PFDA)
1633A	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633	Water	Perfluorododecanoic acid (PFDoA)
1633A	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633A	1633	Water	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633	Water	Perfluorohexanoic acid (PFHxA)
1633A	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633A	1633	Water	Perfluorononanoic acid (PFNA)
1633A	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633A	1633	Water	Perfluorooctanesulfonic acid (PFOS)

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	Perfluorooctanoic acid (PFOA)
1633A	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633	Water	Perfluoropentanoic acid (PFPeA)
1633A	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633	Water	Perfluorotridecanoic acid (PFTrDA)
1633A	1633	Water	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2540D		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-120622-1	INF COMP-202504	Water	04/14/25 23:59	04/16/25 09:30
320-120622-2	EFF-G-202504	Water	04/15/25 06:45	04/16/25 09:30

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 eurofins | Environment Testing

Results to [

Results
to →

[illegible]



Environment Testing

Loc 320
120622

Sacramento Sample Receiving Notes (SSRN)

Tracking # 7407 9457 6324

Job _____

SO (PO) / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm ID 604 Corr Factor (+/-) N/A °C

Ice ☒ Wet ☒ Gel _____ Other _____

Cooler Custody Seal 2778602/2778603

Cooler ID _____

Temp Observed 2.5 °C Corrected 2.5 °C

From Temp Blank ☐ Sandwich ☒ Sidewall ☐

Opening/Processing The Shipment Yes No NA

Cooler compromised/tampered with? ☐ ☒ ☐

Cooler Temperature is acceptable? ☒ ☐ ☐

Frozen samples show signs of thaw? ☐ ☐ ☒

Initials SO Date 4/16/25

Unpacking/Labeling The Samples Yes No NA

Containers are not broken or leaking? ☒ ☐ ☐

Samples compromised/tampered with? ☐ ☒ ☐

COC is complete w/o discrepancies ☒ ☐ ☐

Sample custody seal? ☐ ☐ ☒

Sample containers have legible labels? ☒ ☐ ☐

Sample date/times are provided? ☒ ☐ ☐

Appropriate containers are used? ☒ ☐ ☐

Sample bottles are completely filled? ☒ ☐ ☐

Sample preservatives verified? ☐ ☐ ☒

Is the Field Sampler's name on COC? ☒ ☐ ☐

Samples w/o discrepancies? ☒ ☐ ☐

Zero headspace?* ☐ ☐ ☒

Alkalinity has no headspace? ☐ ☐ ☒

Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials DM Date 04/16/25

Notes. _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login Completion

Receipt Temperature on COC? ☒ Yes ☐ No ☐ NA

NCM Filed? ☐ ☐ ☒

Samples received within hold time? ☒ ☐ ☐

Log Release checked in TALS? ☒ ☐ ☐

Initials DM Date 04/16/25

May 2025



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 5/29/2025 4:10:04 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-121571-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-121571-1

Job ID: 320-121571-1

Eurofins Sacramento

Job Narrative 320-121571-1

Receipt

The samples were received on 5/14/2025 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1° C.

LCMS

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: Influent Comp-202505 (320-121571-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: The following samples in analytical batch 320-852680 were very difficult to filter, were turbid, and had observable sediment: Influent Comp-202505 (320-121571-1) and (320-121571-A-1 DU). As a result, the initial volume used for the analysis was less than the nominal amount of 250ml. 60ml was used for these samples. The reporting limits (RLs) have been adjusted proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633: The following samples in preparation batch 320-852548 were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction: Influent Comp-202505 (320-121571-1).

Method 1633: Due to the excess amount of sediment and particulates, the following sample was fortified with Isotope Dilution Analyte (IDA) then centrifuged and decanted into a new container: Influent Comp-202505 (320-121571-1). The sediment/particulates in the centrifuge tubes were rinsed with methanol and the methanol was combined with the original aqueous fraction to generate a combined extract to be used for the analysis. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially absorb to the particulates leading to qualified QC in the final results.

Method 1633: The following samples in preparation batch 320-852548 were discolored following extraction: Influent Comp-202505 (320-121571-1) and Eff-G-202505 (320-121571-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Influent Comp-202505

Lab Sample ID: 320-121571-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	13		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	7.5		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6		1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	6.2		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.54	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.7		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.8		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.0		1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	1.2	J	3.1	0.32	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.6	0.27	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	1.8	J	7.9	1.8	ng/L	1		1633A	Total/NA
3-Perfluoropropylpropanoic acid (3:3 FTCA)	11		3.1	0.56	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20		7.9	1.4	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.7	J	7.9	0.97	ng/L	1		1633A	Total/NA
Total Suspended Solids	230		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	11		3.0	0.28	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	9.6		1.5	0.20	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.5		1.5	0.26	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	6.8		1.5	0.29	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.52	J	1.5	0.34	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.58	J	1.5	0.33	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.2		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.53	J	1.5	0.16	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.5	0.18	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	0.89	J	3.0	0.30	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.34	J	1.5	0.17	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.59	J	1.5	0.26	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.35	J	1.5	0.33	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.3	J	7.4	1.3	ng/L	1		1633A	Total/NA
Total Suspended Solids	3.7		1.3	1.3	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Influent Comp-202505

Lab Sample ID: 320-121571-1

Date Collected: 05/12/25 23:59

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	13		3.1	0.29	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorohexanoic acid (PFHxA)	7.5		1.6	0.21	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoroheptanoic acid (PFHpA)	1.6		1.6	0.27	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorooctanoic acid (PFOA)	6.2		1.6	0.31	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorononanoic acid (PFNA)	0.54	J	1.6	0.36	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorobutanesulfonic acid (PFBS)	4.7		1.6	0.22	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorohexanesulfonic acid (PFHxS)	7.8		1.6	0.19	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorooctanesulfonic acid (PFOS)	8.0		1.6	0.22	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		05/19/25 06:57	05/19/25 17:33	1
4:2 FTS	ND		3.1	0.34	ng/L		05/19/25 06:57	05/19/25 17:33	1
6:2 FTS	1.2	J	3.1	0.32	ng/L		05/19/25 06:57	05/19/25 17:33	1
8:2 FTS	ND		3.1	0.70	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.6	0.27	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.8	J	7.9	1.8	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		05/19/25 06:57	05/19/25 17:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		05/19/25 06:57	05/19/25 17:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		05/19/25 06:57	05/19/25 17:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		05/19/25 06:57	05/19/25 17:33	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		05/19/25 06:57	05/19/25 17:33	1
11CI-PF3OUs	ND		1.6	0.23	ng/L		05/19/25 06:57	05/19/25 17:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Influent Comp-202505

Lab Sample ID: 320-121571-1

Date Collected: 05/12/25 23:59

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		05/19/25 06:57	05/19/25 17:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	11		3.1	0.56	ng/L		05/19/25 06:57	05/19/25 17:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20		7.9	1.4	ng/L		05/19/25 06:57	05/19/25 17:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.7	J	7.9	0.97	ng/L		05/19/25 06:57	05/19/25 17:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	91.9		5 - 130				05/19/25 06:57	05/19/25 17:33	1
13C5 PFPeA	69.5		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C5 PFHxA	79.3		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C4 PFHpA	98.1		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C8 PFOA	106		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C9 PFNA	102		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C6 PFDA	96.3		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C7 PFUnA	71.6		30 - 130				05/19/25 06:57	05/19/25 17:33	1
13C2 PFDoA	52.3		10 - 130				05/19/25 06:57	05/19/25 17:33	1
13C2 PFTeDA	58.0		10 - 130				05/19/25 06:57	05/19/25 17:33	1
13C3 PFBS	90.3		40 - 135				05/19/25 06:57	05/19/25 17:33	1
13C3 PFHxS	98.1		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C8 PFOS	76.6		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C8 FOSA	85.2		40 - 130				05/19/25 06:57	05/19/25 17:33	1
D3-NMeFOSAA	45.3		40 - 170				05/19/25 06:57	05/19/25 17:33	1
D5-NEtFOSAA	31.4		25 - 135				05/19/25 06:57	05/19/25 17:33	1
13C2 4:2 FTS	165		40 - 200				05/19/25 06:57	05/19/25 17:33	1
13C2 6:2 FTS	202	*5+	40 - 200				05/19/25 06:57	05/19/25 17:33	1
13C2 8:2 FTS	153		40 - 300				05/19/25 06:57	05/19/25 17:33	1
13C3 HFPO-DA	81.8		40 - 130				05/19/25 06:57	05/19/25 17:33	1
D7-NMeFOSE	39.2		10 - 130				05/19/25 06:57	05/19/25 17:33	1
D9-NEtFOSE	26.9		10 - 130				05/19/25 06:57	05/19/25 17:33	1
D5-NEtFOSA	28.2		10 - 130				05/19/25 06:57	05/19/25 17:33	1
D3-NMeFOSA	46.6		10 - 130				05/19/25 06:57	05/19/25 17:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	230		21	21	mg/L			05/19/25 14:38	1

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	11		3.0	0.28	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.17	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorohexanoic acid (PFHxA)	9.6		1.5	0.20	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoroheptanoic acid (PFHpA)	1.5		1.5	0.26	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorooctanoic acid (PFOA)	6.8		1.5	0.29	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorononanoic acid (PFNA)	0.52	J	1.5	0.34	ng/L		05/19/25 06:57	05/19/25 17:50	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.58	J	1.5	0.33	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.41	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.43	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.60	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorobutanesulfonic acid (PFBS)	4.2		1.5	0.21	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoropentanesulfonic acid (PFPeS)	0.53	J	1.5	0.16	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.5	0.18	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorooctanesulfonic acid (PFOS)	3.1		1.5	0.21	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.23	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.23	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.39	ng/L		05/19/25 06:57	05/19/25 17:50	1
4:2 FTS	ND		3.0	0.32	ng/L		05/19/25 06:57	05/19/25 17:50	1
6:2 FTS	0.89	J	3.0	0.30	ng/L		05/19/25 06:57	05/19/25 17:50	1
8:2 FTS	ND		3.0	0.67	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorooctanesulfonamide (PFOSA)	0.34	J	1.5	0.17	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.33	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.59	J	1.5	0.26	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.35	J	1.5	0.33	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.4	1.7	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.4	1.8	ng/L		05/19/25 06:57	05/19/25 17:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.29	ng/L		05/19/25 06:57	05/19/25 17:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.14	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.19	ng/L		05/19/25 06:57	05/19/25 17:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.53	ng/L		05/19/25 06:57	05/19/25 17:50	1
9CI-PF3ONS	ND		1.5	0.43	ng/L		05/19/25 06:57	05/19/25 17:50	1
11CI-PF3OUdS	ND		1.5	0.22	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.18	ng/L		05/19/25 06:57	05/19/25 17:50	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.53	ng/L		05/19/25 06:57	05/19/25 17:50	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.3	J	7.4	1.3	ng/L		05/19/25 06:57	05/19/25 17:50	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.4	0.92	ng/L		05/19/25 06:57	05/19/25 17:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130				05/19/25 06:57	05/19/25 17:50	1
13C5 PFPeA	85.8		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C5 PFHxA	88.9		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C4 PFHpA	93.2		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C8 PFOA	106		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C9 PFNA	99.9		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C6 PFDA	109		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C7 PFUnA	102		30 - 130				05/19/25 06:57	05/19/25 17:50	1
13C2 PFDoA	83.8		10 - 130				05/19/25 06:57	05/19/25 17:50	1
13C2 PFTeDA	55.4		10 - 130				05/19/25 06:57	05/19/25 17:50	1
13C3 PFBS	101		40 - 135				05/19/25 06:57	05/19/25 17:50	1
13C3 PFHxS	99.0		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C8 PFOS	85.9		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C8 FOSA	89.7		40 - 130				05/19/25 06:57	05/19/25 17:50	1
D3-NMeFOSAA	79.9		40 - 170				05/19/25 06:57	05/19/25 17:50	1
D5-NEtFOSAA	73.4		25 - 135				05/19/25 06:57	05/19/25 17:50	1
13C2 4:2 FTS	161		40 - 200				05/19/25 06:57	05/19/25 17:50	1
13C2 6:2 FTS	135		40 - 200				05/19/25 06:57	05/19/25 17:50	1
13C2 8:2 FTS	120		40 - 300				05/19/25 06:57	05/19/25 17:50	1
13C3 HFPO-DA	93.0		40 - 130				05/19/25 06:57	05/19/25 17:50	1
D7-NMeFOSE	68.9		10 - 130				05/19/25 06:57	05/19/25 17:50	1
D9-NEtFOSE	62.4		10 - 130				05/19/25 06:57	05/19/25 17:50	1
D5-NEtFOSA	71.6		10 - 130				05/19/25 06:57	05/19/25 17:50	1
D3-NMeFOSA	67.6		10 - 130				05/19/25 06:57	05/19/25 17:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	3.7		1.3	1.3	mg/L			05/19/25 14:38	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-121571-1	Influent Comp-202505	91.9	69.5	79.3	98.1	106	102	96.3	71.6
320-121571-2	Eff-G-202505	101	85.8	88.9	93.2	106	99.9	109	102
LCS 320-852548/3-A	Lab Control Sample	106	96.6	87.7	94.9	103	100	108	99.8
LCSD 320-852548/4-A	Lab Control Sample Dup	108	98.7	93.7	92.6	104	94.3	109	106
LLCS 320-852548/2-A	Lab Control Sample	104	99.2	95.5	97.9	99.2	96.5	111	101
MB 320-852548/1-A	Method Blank	104	103	95.1	97.2	101	94.2	104	91.9

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-121571-1	Influent Comp-202505	52.3	58.0	90.3	98.1	76.6	85.2	45.3	31.4
320-121571-2	Eff-G-202505	83.8	55.4	101	99.0	85.9	89.7	79.9	73.4
LCS 320-852548/3-A	Lab Control Sample	85.4	67.4	96.9	95.7	79.4	87.7	77.6	72.8
LCSD 320-852548/4-A	Lab Control Sample Dup	94.5	72.9	101	94.6	84.2	85.8	75.4	74.2
LLCS 320-852548/2-A	Lab Control Sample	85.2	64.1	91.9	88.0	83.1	86.6	78.2	72.7
MB 320-852548/1-A	Method Blank	77.7	61.5	88.9	82.5	75.8	81.8	72.6	65.5

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-121571-1	Influent Comp-202505	165	202 *5+	153	81.8	39.2	26.9	28.2	46.6
320-121571-2	Eff-G-202505	161	135	120	93.0	68.9	62.4	71.6	67.6
LCS 320-852548/3-A	Lab Control Sample	89.3	87.9	89.4	95.6	69.6	61.5	68.6	64.5
LCSD 320-852548/4-A	Lab Control Sample Dup	92.6	90.2	87.2	102	69.1	65.0	68.8	64.4
LLCS 320-852548/2-A	Lab Control Sample	85.2	83.8	79.3	101	65.7	63.4	64.6	61.8
MB 320-852548/1-A	Method Blank	86.2	81.7	78.5	103	70.1	58.8	65.0	59.5

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Project/Site: PFAS Sampling

d3NMFSa = D3-NMeFOSA

Job ID: 320-121571-1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-852548/1-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 852548

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		05/19/25 06:57	05/19/25 16:27	1
4:2 FTS	ND		4.0	0.44	ng/L		05/19/25 06:57	05/19/25 16:27	1
6:2 FTS	ND		4.0	0.41	ng/L		05/19/25 06:57	05/19/25 16:27	1
8:2 FTS	ND		4.0	0.90	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		05/19/25 06:57	05/19/25 16:27	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		05/19/25 06:57	05/19/25 16:27	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		05/19/25 06:57	05/19/25 16:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		05/19/25 06:57	05/19/25 16:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		05/19/25 06:57	05/19/25 16:27	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		05/19/25 06:57	05/19/25 16:27	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		05/19/25 06:57	05/19/25 16:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		05/19/25 06:57	05/19/25 16:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		05/19/25 06:57	05/19/25 16:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		05/19/25 06:57	05/19/25 16:27	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		05/19/25 06:57	05/19/25 16:27	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		05/19/25 06:57	05/19/25 16:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		05/19/25 06:57	05/19/25 16:27	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-852548/1-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 852548

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		05/19/25 06:57	05/19/25 16:27	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		05/19/25 06:57	05/19/25 16:27	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		05/19/25 06:57	05/19/25 16:27	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	104		5 - 130	05/19/25 06:57	05/19/25 16:27	1
13C5 PFPeA	103		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C5 PFHxA	95.1		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C4 PFHpA	97.2		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C8 PFOA	101		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C9 PFNA	94.2		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C6 PFDA	104		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C7 PFUnA	91.9		30 - 130	05/19/25 06:57	05/19/25 16:27	1
13C2 PFDaA	77.7		10 - 130	05/19/25 06:57	05/19/25 16:27	1
13C2 PFTeDA	61.5		10 - 130	05/19/25 06:57	05/19/25 16:27	1
13C3 PFBS	88.9		40 - 135	05/19/25 06:57	05/19/25 16:27	1
13C3 PFHxS	82.5		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C8 PFOS	75.8		40 - 130	05/19/25 06:57	05/19/25 16:27	1
13C8 FOSA	81.8		40 - 130	05/19/25 06:57	05/19/25 16:27	1
D3-NMeFOSAA	72.6		40 - 170	05/19/25 06:57	05/19/25 16:27	1
D5-NEtFOSAA	65.5		25 - 135	05/19/25 06:57	05/19/25 16:27	1
13C2 4:2 FTS	86.2		40 - 200	05/19/25 06:57	05/19/25 16:27	1
13C2 6:2 FTS	81.7		40 - 200	05/19/25 06:57	05/19/25 16:27	1
13C2 8:2 FTS	78.5		40 - 300	05/19/25 06:57	05/19/25 16:27	1
13C3 HFPO-DA	103		40 - 130	05/19/25 06:57	05/19/25 16:27	1
D7-NMeFOSE	70.1		10 - 130	05/19/25 06:57	05/19/25 16:27	1
D9-NEtFOSE	58.8		10 - 130	05/19/25 06:57	05/19/25 16:27	1
D5-NEtFOSA	65.0		10 - 130	05/19/25 06:57	05/19/25 16:27	1
D3-NMeFOSA	59.5		10 - 130	05/19/25 06:57	05/19/25 16:27	1

Lab Sample ID: LCS 320-852548/3-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	68.6		ng/L		86	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	28.8		ng/L		72	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.7		ng/L		92	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	35.4		ng/L		88	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	34.8		ng/L		87	70 - 150
Perfluorononanoic acid (PFNA)	40.0	32.9		ng/L		82	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	33.0		ng/L		82	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	32.0		ng/L		80	70 - 145
Perfluorododecanoic acid (PFDaA)	40.0	41.8		ng/L		105	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-852548/3-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	42.1		ng/L		105	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	44.7		ng/L		112	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	31.1		ng/L		88	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	34.9		ng/L		93	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.1		ng/L		93	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	32.8		ng/L		86	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	37.9		ng/L		102	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	35.5		ng/L		92	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	37.8		ng/L		98	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	32.6		ng/L		84	50 - 145
4:2 FTS	75.0	74.0		ng/L		99	70 - 145
6:2 FTS	76.2	66.2		ng/L		87	65 - 155
8:2 FTS	76.8	65.1		ng/L		85	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	38.2		ng/L		95	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.2		ng/L		113	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	42.4		ng/L		106	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.1		ng/L		98	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.3		ng/L		101	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	210		ng/L		105	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	211		ng/L		105	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	25.8		ng/L		86	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	35.0		ng/L		92	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	35.8		ng/L		90	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	36.7		ng/L		92	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	35.4		ng/L		88	50 - 150
9Cl-PF3ONS	37.4	32.7		ng/L		87	70 - 155
11Cl-PF3OUdS	37.8	33.7		ng/L		89	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	33.9		ng/L		95	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	77.0		ng/L		96	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	198		ng/L		99	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-852548/3-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	182		ng/L		91	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	106		5 - 130
13C5 PFPeA	96.6		40 - 130
13C5 PFHxA	87.7		40 - 130
13C4 PFHpA	94.9		40 - 130
13C8 PFOA	103		40 - 130
13C9 PFNA	100		40 - 130
13C6 PFDA	108		40 - 130
13C7 PFUnA	99.8		30 - 130
13C2 PFDoA	85.4		10 - 130
13C2 PFTeDA	67.4		10 - 130
13C3 PFBS	96.9		40 - 135
13C3 PFHxS	95.7		40 - 130
13C8 PFOS	79.4		40 - 130
13C8 FOSA	87.7		40 - 130
D3-NMeFOSAA	77.6		40 - 170
D5-NEtFOSAA	72.8		25 - 135
13C2 4:2 FTS	89.3		40 - 200
13C2 6:2 FTS	87.9		40 - 200
13C2 8:2 FTS	89.4		40 - 300
13C3 HFPO-DA	95.6		40 - 130
D7-NMeFOSE	69.6		10 - 130
D9-NEtFOSE	61.5		10 - 130
D5-NEtFOSA	68.6		10 - 130
D3-NMeFOSA	64.5		10 - 130

Lab Sample ID: LCSD 320-852548/4-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	71.7		ng/L		90	70 - 140	4	30
Perfluoropentanoic acid (PFPeA)	40.0	27.1		ng/L		68	65 - 135	6	30
Perfluorohexanoic acid (PFHxA)	40.0	34.6		ng/L		86	70 - 145	6	30
Perfluoroheptanoic acid (PFHpA)	40.0	36.2		ng/L		90	70 - 150	2	30
Perfluorooctanoic acid (PFOA)	40.0	35.8		ng/L		90	70 - 150	3	30
Perfluorononanoic acid (PFNA)	40.0	33.4		ng/L		84	70 - 150	2	30
Perfluorodecanoic acid (PFDA)	40.0	33.1		ng/L		83	70 - 140	0	30
Perfluoroundecanoic acid (PFUnA)	40.0	34.0		ng/L		85	70 - 145	6	30
Perfluorododecanoic acid (PFDoA)	40.0	41.8		ng/L		104	70 - 140	0	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	43.2		ng/L		108	65 - 140	3	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	47.3		ng/L		118	60 - 140	6	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-852548/4-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	35.5	32.0		ng/L		90	60 - 145	3	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	35.5		ng/L		94	65 - 140	2	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.0		ng/L		96	65 - 145	3	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	29.7		ng/L		78	70 - 150	10	30
Perfluorooctanesulfonic acid (PFOS)	37.2	35.8		ng/L		96	55 - 150	6	30
Perfluorononanesulfonic acid (PFNS)	38.5	34.0		ng/L		88	65 - 145	4	30
Perfluorodecanesulfonic acid (PFDS)	38.6	36.5		ng/L		95	60 - 145	3	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	33.4		ng/L		86	50 - 145	2	30
4:2 FTS	75.0	71.0		ng/L		95	70 - 145	4	30
6:2 FTS	76.2	67.0		ng/L		88	65 - 155	1	30
8:2 FTS	76.8	72.1		ng/L		94	60 - 150	10	30
Perfluorooctanesulfonamide (PFOSA)	40.0	39.8		ng/L		99	70 - 145	4	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.1		ng/L		113	60 - 150	0	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.5		ng/L		101	65 - 145	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.0		ng/L		100	50 - 140	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.1		ng/L		103	70 - 145	2	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	198		ng/L		99	70 - 145	6	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	200		ng/L		100	70 - 135	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	23.6		ng/L		79	70 - 140	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	33.5		ng/L		88	65 - 145	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	35.9		ng/L		90	55 - 140	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	36.7		ng/L		92	60 - 150	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	30.6		ng/L		76	50 - 150	14	30
9Cl-PF3ONS	37.4	31.4		ng/L		84	70 - 155	4	30
11Cl-PF3OUdS	37.8	32.5		ng/L		86	55 - 160	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	31.1		ng/L		87	70 - 140	9	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	76.6		ng/L		96	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	185		ng/L		93	70 - 135	6	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	176		ng/L		88	50 - 145	3	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	108		5 - 130
13C5 PFPeA	98.7		40 - 130
13C5 PFHxA	93.7		40 - 130
13C4 PFHpA	92.6		40 - 130
13C8 PFOA	104		40 - 130
13C9 PFNA	94.3		40 - 130
13C6 PFDA	109		40 - 130
13C7 PFUnA	106		30 - 130
13C2 PFDoA	94.5		10 - 130
13C2 PFTeDA	72.9		10 - 130
13C3 PFBS	101		40 - 135
13C3 PFHxS	94.6		40 - 130
13C8 PFOS	84.2		40 - 130
13C8 FOSA	85.8		40 - 130
D3-NMeFOSAA	75.4		40 - 170
D5-NEtFOSAA	74.2		25 - 135
13C2 4:2 FTS	92.6		40 - 200
13C2 6:2 FTS	90.2		40 - 200
13C2 8:2 FTS	87.2		40 - 300
13C3 HFPO-DA	102		40 - 130
D7-NMeFOSE	69.1		10 - 130
D9-NEtFOSE	65.0		10 - 130
D5-NEtFOSA	68.8		10 - 130
D3-NMeFOSA	64.4		10 - 130

Lab Sample ID: LLCS 320-852548/2-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Perfluorobutanoic acid (PFBA)	8.00	8.56		ng/L		107	70 - 140	
Perfluoropentanoic acid (PFPeA)	4.00	3.45		ng/L		86	65 - 135	
Perfluorohexanoic acid (PFHxA)	4.00	3.60		ng/L		90	70 - 145	
Perfluoroheptanoic acid (PFHpA)	4.00	3.34		ng/L		84	70 - 150	
Perfluorooctanoic acid (PFOA)	4.00	3.49		ng/L		87	70 - 150	
Perfluorononanoic acid (PFNA)	4.00	3.46		ng/L		87	70 - 150	
Perfluorodecanoic acid (PFDA)	4.00	3.34		ng/L		84	70 - 140	
Perfluoroundecanoic acid (PFUnA)	4.00	3.34		ng/L		84	70 - 145	
Perfluorododecanoic acid (PFDoA)	4.00	4.07		ng/L		102	70 - 140	
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.24		ng/L		106	65 - 140	
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.24		ng/L		106	60 - 140	
Perfluorobutanesulfonic acid (PFBS)	3.55	2.97		ng/L		84	60 - 145	
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.30		ng/L		88	65 - 140	
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.49		ng/L		96	65 - 145	
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.23		ng/L		85	70 - 150	

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-852548/2-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 852548

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	3.91		ng/L		105	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.40		ng/L		88	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.92		ng/L		102	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.24		ng/L		84	50 - 145
4:2 FTS	7.50	7.48		ng/L		100	70 - 145
6:2 FTS	7.62	7.29		ng/L		96	65 - 155
8:2 FTS	7.68	7.05		ng/L		92	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.98		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.15		ng/L		104	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.95		ng/L		99	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.85		ng/L		96	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.19		ng/L		105	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.4		ng/L		97	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	18.9		ng/L		95	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.92		ng/L		97	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.45		ng/L		91	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.66		ng/L		91	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.70		ng/L		92	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.18		ng/L		80	50 - 150
9CI-PF3ONS	3.74	3.28		ng/L		88	70 - 155
11CI-PF3OUdS	3.78	3.23		ng/L		86	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.31		ng/L		93	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.33		ng/L		104	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	18.6		ng/L		93	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	17.7		ng/L		89	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	104		5 - 130
13C5 PFPeA	99.2		40 - 130
13C5 PFHxA	95.5		40 - 130
13C4 PFHpA	97.9		40 - 130
13C8 PFOA	99.2		40 - 130
13C9 PFNA	96.5		40 - 130
13C6 PFDA	111		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-852548/2-A

Matrix: Water

Analysis Batch: 852683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 852548

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C7 PFUnA	101		30 - 130
13C2 PFDoA	85.2		10 - 130
13C2 PFTeDA	64.1		10 - 130
13C3 PFBS	91.9		40 - 135
13C3 PFHxS	88.0		40 - 130
13C8 PFOS	83.1		40 - 130
13C8 FOSA	86.6		40 - 130
D3-NMeFOSAA	78.2		40 - 170
D5-NEtFOSAA	72.7		25 - 135
13C2 4:2 FTS	85.2		40 - 200
13C2 6:2 FTS	83.8		40 - 200
13C2 8:2 FTS	79.3		40 - 300
13C3 HFPO-DA	101		40 - 130
D7-NMeFOSE	65.7		10 - 130
D9-NEtFOSE	63.4		10 - 130
D5-NEtFOSA	64.6		10 - 130
D3-NMeFOSA	61.8		10 - 130

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 320-852680/1

Matrix: Water

Analysis Batch: 852680

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	ND		5.0	5.0	mg/L			05/19/25 14:38	1

Lab Sample ID: LCS 320-852680/2

Matrix: Water

Analysis Batch: 852680

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	99.2		mg/L		99	85 - 115

Lab Sample ID: 320-121571-1 DU

Matrix: Water

Analysis Batch: 852680

Client Sample ID: Influent Comp-202505

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	230		203		mg/L		11	20

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

LCMS

Prep Batch: 852548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-121571-1	Influent Comp-202505	Total/NA	Water	1633	
320-121571-2	Eff-G-202505	Total/NA	Water	1633	
MB 320-852548/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-852548/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-852548/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-852548/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 852683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-121571-1	Influent Comp-202505	Total/NA	Water	1633A	852548
320-121571-2	Eff-G-202505	Total/NA	Water	1633A	852548
MB 320-852548/1-A	Method Blank	Total/NA	Water	1633A	852548
LCS 320-852548/3-A	Lab Control Sample	Total/NA	Water	1633A	852548
LCSD 320-852548/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	852548
LLCS 320-852548/2-A	Lab Control Sample	Total/NA	Water	1633A	852548

General Chemistry

Analysis Batch: 852680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-121571-1	Influent Comp-202505	Total/NA	Water	SM 2540D	
320-121571-2	Eff-G-202505	Total/NA	Water	SM 2540D	
MB 320-852680/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 320-852680/2	Lab Control Sample	Total/NA	Water	SM 2540D	
320-121571-1 DU	Influent Comp-202505	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Influent Comp-202505

Lab Sample ID: 320-121571-1

Date Collected: 05/12/25 23:59

Matrix: Water

Date Received: 05/14/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			159.1 mL	5.0 mL	852548	05/19/25 06:57	CGL	EET SAC
Total/NA	Analysis	1633A		1			852683	05/19/25 17:33	RS1	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	852680	05/19/25 14:38	JCB	EET SAC

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			168.4 mL	5.0 mL	852548	05/19/25 06:57	CGL	EET SAC
Total/NA	Analysis	1633A		1			852683	05/19/25 17:50	RS1	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	852680	05/19/25 14:38	JCB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	05-22-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	11CI-PF3OUdS
1633A	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633	Water	4:2 FTS
1633A	1633	Water	6:2 FTS
1633A	1633	Water	8:2 FTS
1633A	1633	Water	9CI-PF3ONS
1633A	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
1633A	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633A	1633	Water	Perfluorobutanoic acid (PFBA)
1633A	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633A	1633	Water	Perfluorodecanoic acid (PFDA)
1633A	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633	Water	Perfluorododecanoic acid (PFDoA)
1633A	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633A	1633	Water	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633	Water	Perfluorohexanoic acid (PFHxA)
1633A	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633A	1633	Water	Perfluorononanoic acid (PFNA)
1633A	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633A	1633	Water	Perfluorooctanesulfonic acid (PFOS)

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	Perfluorooctanoic acid (PFOA)
1633A	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633	Water	Perfluoropentanoic acid (PFPeA)
1633A	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633	Water	Perfluorotridecanoic acid (PFTTrDA)
1633A	1633	Water	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2540D		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-121571-1	Influent Comp-202505	Water	05/12/25 23:59	05/14/25 09:40
320-121571-2	Eff-G-202505	Water	05/13/25 08:36	05/14/25 09:40

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Environment Testing

Sacramento Sample
Receiving Notes (SSRN)Loc 320
121571

Tracking # 4493 3564 5420

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COCTherm ID LOW Corr Factor (+/-) NA °CIce / Wet / Gel _____ Other _____Cooler Custody Seal 2697606Cooler ID -Temp Observed 1.1 °C Corrected 1.1 °CFrom Temp Blank ☐ Sandwich ☒ Sidewall ☐**Opening/Processing The Shipment**Cooler compromised/tampered with? ☐ Yes ☒ No ☐ NACooler Temperature is acceptable? ☒ Yes ☐ No ☐ NAFrozen samples show signs of thaw? ☐ Yes ☐ No ☒ NAInitials DM Date 05/14/25**Unpacking/Labeling The Samples**Containers are not broken or leaking? ☒ Yes ☐ No ☐ NASamples compromised/tampered with? ☐ Yes ☒ No ☐ NACOC is complete w/o discrepancies ☒ Yes ☐ No ☐ NASample custody seal? ☐ Yes ☐ No ☒ NASample containers have legible labels? ☒ Yes ☐ No ☐ NASample date/times are provided? ☒ Yes ☐ No ☐ NAAppropriate containers are used? ☒ Yes ☐ No ☐ NASample bottles are completely filled? ☒ Yes ☐ No ☐ NASample preservatives verified? ☐ Yes ☐ No ☒ NAIs the Field Sampler's name on COC? ☒ Yes ☐ No ☐ NASamples w/o discrepancies? SO ☒ Yes ☐ No ☐ NAZero headspace?* 5/14/25 ☐ Yes ☐ No ☒ NAAlkalinity has no headspace? ☐ Yes ☐ No ☒ NAPerchlorate has headspace? ☐ Yes ☐ No ☒ NA

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ Yes ☐ No ☐ NA

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials SO Date 5/14/25

Notes: _____

(2) 1 L poly ID ches - 2025

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login CompletionReceipt Temperature on COC? ☒ Yes ☐ No ☐ NANCM Filed? ☐ Yes ☐ No ☒ NASamples received within hold time? ☒ Yes ☐ No ☐ NALog Release checked in TALS? ☒ Yes ☐ No ☐ NAInitials SO Date 5/14/25

June 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 7/3/2025 4:15:53 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-122544-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-122544-1

Job ID: 320-122544-1

Eurofins Sacramento

Job Narrative 320-122544-1

Receipt

The samples were received on 6/18/2025 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1° C.

Comment

The requested TOPS analysis will be reported in a separate report.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): BIO-A-24-202506 (320-122544-9). The container label lists an ID of BIO-A-2024-06, however, the COC lists an ID of BIO-A-24-202506. The sample was logged in and labeled according to COC.

LCMS

Method 1633: The continuing calibration verification (CCV) associated with batch 320-859723 recovered above the upper control limit for the following isotope dilution analyte (IDA): 13C2 4:2 FTS. The associated target analytes, 4:2 FTS, was within control limits in the CCV. The client samples were in control for the affected IDA. The method blank (MB) associated with this CCV was non-detect, the low level laboratory control sample (LLCS)/ laboratory control sample (LCS)/ laboratory control sample duplicate (LCSD) recoveries were in control for the associated target analyte; therefore, the data have been reported. The associated samples are impacted: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9), BIO-B-202506 (320-122544-10), (CCV 320-859723/13), (LCS 320-859517/3-A), (LCSD 320-859517/4-A), (LLCS 320-859517/2-A) and (MB 320-859517/1-A).

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9) and BIO-B-202506 (320-122544-10). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-859517 and analytical batch 320-859723 recovered outside control limits for the following analytes: 11Cl-PF3OUdS and Perfluorodecanesulfonic acid (PFDS).

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: BIO-A-23-202506 (320-122544-8) and BIO-A-24-202506 (320-122544-9).

Method 1633: The low level continuing calibration verification (CCVL) associated with batch 320-859449 recovered above the upper control limit for Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX). The samples and method blank (MB) associated with this CCV were non-detects, the low level laboratory control sample, laboratory control sample, and laboratory control sample duplicate (LLCS/LCS/LCSD) were within control limits for the affected analyte; therefore, the data have been reported: INF-07-202506 (320-122544-2), EFF G-202506 (320-122544-7), EB-01-202506 (320-122544-11), EB-02-202506 (320-122544-12), (CCVL 320-859449/2), (LCS 320-859408/3-A), (LCSD 320-859408/4-A), (LLCS 320-859408/2-A) and (MB 320-859408/1-A).

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: INF-07-202506 (320-122544-2). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-07-202506 (320-122544-2) and EFF G-202506 (320-122544-7).

Method 1633: The following samples matrix interferences for Perfluoropentanoic acid (PFPeA) causing elevation of the reporting limit (RL): INF-07-202506 (320-122544-2). The reporting limit (RL) for the affected analyte has been raised to be equal to the matrix, and a "G" qualifier applied.

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: INF-11-202506 (320-122544-4) and INF-18-202506 (320-122544-5). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INF-11-202506 (320-122544-4) and INF-18-202506 (320-122544-5). Quantitation by isotope dilution generally precludes any

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-122544-1

Job ID: 320-122544-1 (Continued)

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adverse effect on data quality due to elevated IDA recoveries.

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-11-202506 (320-122544-4) and INF-18-202506 (320-122544-5).

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3) and INF-COMP-202506 (320-122544-6). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3) and INF-COMP-202506 (320-122544-6). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3) and INF-COMP-202506 (320-122544-6).

Method 1633: Internal standard (ISTD) response 13C3 PFBA for the following sample was outside control limits: INF-18-202506 (320-122544-5). The sample(s) was re-analyzed and ISTD response was outside control limits.

Method 1633: The following sample was re-extracted because the sample is equipment blank (EB) but has been detected more than RL: EB-01-202506 (320-122544-11) The sample was re-extracted with concurring results: therefore, the data has been reported.

Method 1633: Internal standard (ISTD) response 13C3 PFBA for the following sample was outside control limits: BIO-B-202506 (320-122544-10). The sample(s) was re-extracted and ISTD response was outside control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method SM 2540D: The following samples in analytical batch 320-859277 were extracted at reduced sample volume due to elevated TSS in the sample matrix: INF-02-202506 (320-122544-1), INF-07-202506 (320-122544-2), INF-08-202506 (320-122544-3), INF-11-202506 (320-122544-4), INF-18-202506 (320-122544-5), INF-COMP-202506 (320-122544-6) and (320-122544-A-1 DU). The samples were laden with sediment and would not filter using the nominal volume. Elevated reporting limits (RLs) are provided. Because the sample was extracted at a reduced volume, the original sample container could not be rinsed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 1633: The following sample in preparation batch 320-859408 was discolored prior to extraction: INF-07-202506 (320-122544-2).

Method 1633: The following sample in preparation batch 320-859408 was observed to have floating particulates present in the sample bottle: INF-07-202506 (320-122544-2).

Method 1633: The following samples in preparation batch 320-859408 were discolored following extraction: INF-07-202506 (320-122544-2) and EFF G-202506 (320-122544-7).

Method 1633 Shake: The following samples in preparation batch 320-859517 were discolored prior to extraction: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9) and BIO-B-202506 (320-122544-10).

Method 1633 Shake: The following samples in preparation batch 320-859517 were discolored following extraction: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9) and BIO-B-202506 (320-122544-10).

Method 1633: The following samples in preparation batch 320-860391 were discolored prior to extraction: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3), INF-11-202506 (320-122544-4), INF-18-202506 (320-122544-5) and INF-COMP-202506 (320-122544-6).

Eurofins Sacramento

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-122544-1

Job ID: 320-122544-1 (Continued)

Eurofins Sacramento

Method 1633: Per client request, the following samples with elevated total suspended solids (TSS) in the sample containers were fortified with Extracted Internal Standards (EIS), equilibrated, and centrifuged: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3), INF-11-202506 (320-122544-4), INF-18-202506 (320-122544-5) and INF-COMP-202506 (320-122544-6). The aqueous phase was separated and then extracted using Solid Phase Extraction (SPE). A rinse of the solid residue was added to the aqueous sample prior to extraction. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method 1633: The following samples in preparation batch 320-860391 were observed to have floating particulates present in the sample bottle: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3), INF-11-202506 (320-122544-4), INF-18-202506 (320-122544-5) and INF-COMP-202506 (320-122544-6).

Method 1633: The following samples in preparation batch 320-860391 were discolored following extraction: INF-02-202506 (320-122544-1), INF-08-202506 (320-122544-3), INF-11-202506 (320-122544-4), INF-18-202506 (320-122544-5) and INF-COMP-202506 (320-122544-6).

Method 1633 Shake: The following samples in preparation batch 320-860314 were discolored following extraction: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9) and BIO-B-202506 (320-122544-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-02-202506

Lab Sample ID: 320-122544-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.8		3.2	0.30	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.7	I	1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.52	J	1.6	0.37	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.56	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0		1.6	0.23	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.9		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.9		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.48	J	1.6	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	8.1	1.4	ng/L	1		1633A	Total/NA
Total Suspended Solids	320		25	25	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	27		3.0	0.28	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	11		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.5		1.5	0.26	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.2		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.84	J I	1.5	0.35	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.58	J	1.5	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	25		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.7	I	1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	1.4	J I	3.0	0.31	ng/L	1		1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.61	J	1.5	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	J	1.5	0.27	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.2	J	1.5	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.2	J	7.6	1.7	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		7.6	1.3	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.6	J	7.6	0.95	ng/L	1		1633A	Total/NA
Total Suspended Solids	200		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.1		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	4.2		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.8		1.6	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.60	J I	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3	I	1.6	0.22	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.6	0.19	ng/L	1		1633A	Total/NA
6:2 FTS	0.58	J I	3.1	0.32	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-08-202506 (Continued)

Lab Sample ID: 320-122544-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.45	J I	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.50	J	1.6	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.4	J	7.8	1.3	ng/L	1		1633A	Total/NA
Total Suspended Solids	240		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.1		3.2	0.30	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	I	1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.4		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.41	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.2	I	1.6	0.22	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	1.8	J	8.0	1.8	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	J	1.6	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.3	J	8.0	1.4	ng/L	1		1633A	Total/NA
Total Suspended Solids	200		18	18	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	15		3.2	0.29	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	6.0		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.6		1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	8.0		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.60	J I	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.6	I	1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.1	J	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11		1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	2.4	J	3.2	0.32	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.76	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.31	J	1.6	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.2	J	7.9	1.4	ng/L	1		1633A	Total/NA
Total Suspended Solids	230		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF-COMP-202506

Lab Sample ID: 320-122544-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	12		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	5.1	I	1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		1.6	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.53	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.9		1.6	0.22	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-COMP-202506 (Continued)

Lab Sample ID: 320-122544-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	6.2		1.6	0.19	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.49	J	1.6	0.27	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.9	J	7.8	1.8	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.16	J	1.6	0.15	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	19		7.8	1.3	ng/L	1		1633A	Total/NA
Total Suspended Solids	250		21	21	mg/L	1		SM 2540D	Total/NA

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.3		3.2	0.30	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	9.9		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	6.6		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.43	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.71	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.4		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.32	J	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.38	J I	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.72	J	1.6	0.28	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.49	J	1.6	0.35	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.8	J	7.9	1.4	ng/L	1		1633A	Total/NA
Total Suspended Solids	5.7		1.3	1.3	mg/L	1		SM 2540D	Total/NA

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	9.2		0.51	0.12	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	29		0.51	0.10	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		0.51	0.083	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	25		0.51	0.16	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.3		0.51	0.073	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	12		0.51	0.061	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.0		0.51	0.071	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	3.2		0.51	0.068	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.64		0.51	0.073	ug/Kg	1	✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.92		0.51	0.15	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.9		0.51	0.063	ug/Kg	1	✱	1633A	Total/NA
6:2 FTS	1.6		1.0	0.14	ug/Kg	1	✱	1633A	Total/NA
8:2 FTS	1.3		1.0	0.11	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.2		0.51	0.16	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.64	I	0.51	0.091	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-23-202506 (Continued)

Lab Sample ID: 320-122544-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.22	J	0.51	0.053	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	21		0.51	0.040	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.6		0.51	0.043	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12		2.5	0.22	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.0		2.5	0.19	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		2.5	0.62	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	19		2.5	0.54	ug/Kg	1	✱	1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	6.3		1.0	0.081	ug/Kg	1	✱	1633A	Total/NA

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	6.4		0.41	0.10	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	12		0.41	0.083	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.0		0.41	0.068	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	9.6		0.41	0.13	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.0		0.41	0.060	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	7.1		0.41	0.050	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.0		0.41	0.058	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	2.9		0.41	0.056	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.67		0.41	0.060	ug/Kg	1	✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.74		0.41	0.12	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.5		0.41	0.052	ug/Kg	1	✱	1633A	Total/NA
6:2 FTS	0.58	J I	0.83	0.11	ug/Kg	1	✱	1633A	Total/NA
8:2 FTS	0.71	J	0.83	0.091	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.90		0.41	0.13	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.62	I	0.41	0.074	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.21	J	0.41	0.043	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	18		0.41	0.033	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.8		0.41	0.035	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	10		2.1	0.18	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.4		2.1	0.16	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	53		2.1	0.51	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	22		2.1	0.44	ug/Kg	1	✱	1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	4.0		0.83	0.066	ug/Kg	1	✱	1633A	Total/NA

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.1	J	1.5	0.47	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.54	J	1.5	0.22	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-B-202506 (Continued)

Lab Sample ID: 320-122544-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorodecanoic acid (PFDA)	2.4		1.5	0.18	ug/Kg	1	✳		1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.59	J	1.5	0.21	ug/Kg	1	✳		1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	1.6		1.5	0.21	ug/Kg	1	✳		1633A	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.38	J	1.5	0.22	ug/Kg	1	✳		1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.48	J	1.5	0.44	ug/Kg	1	✳		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.7		1.5	0.19	ug/Kg	1	✳		1633A	Total/NA
8:2 FTS	0.59	J	3.0	0.33	ug/Kg	1	✳		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.96	J	1.5	0.48	ug/Kg	1	✳		1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.43	J	1.5	0.27	ug/Kg	1	✳		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		1.5	0.12	ug/Kg	1	✳		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.7		1.5	0.13	ug/Kg	1	✳		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		7.6	0.67	ug/Kg	1	✳		1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.1	J	7.6	0.59	ug/Kg	1	✳		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	120		7.6	1.9	ug/Kg	1	✳		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	16		7.6	1.6	ug/Kg	1	✳		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RE	2.1	J	3.0	0.24	ug/Kg	1	✳		1633A	Total/NA

Client Sample ID: EB-01-202506

Lab Sample ID: 320-122544-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.1	J	3.1	0.29	ng/L	1			1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.28	J	1.6	0.27	ng/L	1			1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.90	J	1.6	0.31	ng/L	1			1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.6	0.22	ng/L	1			1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.36	J	1.6	0.22	ng/L	1			1633A	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	3.4		1.5	0.21	ng/L	1			1633A	Total/NA

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-02-202506

Lab Sample ID: 320-122544-1

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.8		3.2	0.30	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorohexanoic acid (PFHxA)	3.6		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoroheptanoic acid (PFHpA)	1.7	I	1.6	0.28	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorooctanoic acid (PFOA)	4.1		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorononanoic acid (PFNA)	0.52	J	1.6	0.37	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorodecanoic acid (PFDA)	0.56	J	1.6	0.36	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.65	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorobutanesulfonic acid (PFBS)	2.0		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorooctanesulfonic acid (PFOS)	3.9		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		06/28/25 05:31	07/01/25 02:38	1
4:2 FTS	ND		3.2	0.35	ng/L		06/28/25 05:31	07/01/25 02:38	1
6:2 FTS	ND		3.2	0.33	ng/L		06/28/25 05:31	07/01/25 02:38	1
8:2 FTS	ND		3.2	0.73	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.28	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.1	1.8	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.1	2.0	ng/L		06/28/25 05:31	07/01/25 02:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		06/28/25 05:31	07/01/25 02:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.48	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 02:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.58	ng/L		06/28/25 05:31	07/01/25 02:38	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		06/28/25 05:31	07/01/25 02:38	1
11CI-PF3OUs	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 02:38	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-02-202506

Lab Sample ID: 320-122544-1

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 02:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.58	ng/L		06/28/25 05:31	07/01/25 02:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	8.1	1.4	ng/L		06/28/25 05:31	07/01/25 02:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	1.0	ng/L		06/28/25 05:31	07/01/25 02:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	61.8		5 - 130				06/28/25 05:31	07/01/25 02:38	1
13C5 PFPeA	48.1		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C5 PFHxA	58.9		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C4 PFHpA	65.4		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C8 PFOA	94.8		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C9 PFNA	75.8		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C6 PFDA	78.7		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C7 PFUnA	44.0		30 - 130				06/28/25 05:31	07/01/25 02:38	1
13C2 PFDoA	27.7		10 - 130				06/28/25 05:31	07/01/25 02:38	1
13C2 PFTeDA	24.4		10 - 130				06/28/25 05:31	07/01/25 02:38	1
13C3 PFBS	96.7		40 - 135				06/28/25 05:31	07/01/25 02:38	1
13C3 PFHxS	103		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C8 PFOS	70.9		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C8 FOSA	64.5		40 - 130				06/28/25 05:31	07/01/25 02:38	1
D3-NMeFOSAA	33.9	*5-	40 - 170				06/28/25 05:31	07/01/25 02:38	1
D5-NEtFOSAA	26.9		25 - 135				06/28/25 05:31	07/01/25 02:38	1
13C2 4:2 FTS	166		40 - 200				06/28/25 05:31	07/01/25 02:38	1
13C2 6:2 FTS	214	*5+	40 - 200				06/28/25 05:31	07/01/25 02:38	1
13C2 8:2 FTS	149		40 - 300				06/28/25 05:31	07/01/25 02:38	1
13C3 HFPO-DA	56.6		40 - 130				06/28/25 05:31	07/01/25 02:38	1
D7-NMeFOSE	26.4		10 - 130				06/28/25 05:31	07/01/25 02:38	1
D9-NEtFOSE	7.89	*5-	10 - 130				06/28/25 05:31	07/01/25 02:38	1
D5-NEtFOSA	16.4		10 - 130				06/28/25 05:31	07/01/25 02:38	1
D3-NMeFOSA	27.0		10 - 130				06/28/25 05:31	07/01/25 02:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	320		25	25	mg/L			06/23/25 11:45	1

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	27		3.0	0.28	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoropentanoic acid (PFPeA)	ND	G	250	250	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorohexanoic acid (PFHxA)	11		1.5	0.21	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoroheptanoic acid (PFHpA)	2.5		1.5	0.26	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorooctanoic acid (PFOA)	7.2		1.5	0.30	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorononanoic acid (PFNA)	0.84	J I	1.5	0.35	ng/L		06/23/25 20:11	06/24/25 09:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.58	J	1.5	0.34	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorobutanesulfonic acid (PFBS)	25		1.5	0.21	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.5	0.19	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorooctanesulfonic acid (PFOS)	6.7	I	1.5	0.21	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.40	ng/L		06/23/25 20:11	06/24/25 09:45	1
4:2 FTS	ND		3.0	0.33	ng/L		06/23/25 20:11	06/24/25 09:45	1
6:2 FTS	1.4	J I	3.0	0.31	ng/L		06/23/25 20:11	06/24/25 09:45	1
8:2 FTS	ND		3.0	0.68	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.61	J	1.5	0.34	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	J	1.5	0.27	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.2	J	1.5	0.34	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.2	J	7.6	1.7	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.6	1.9	ng/L		06/23/25 20:11	06/24/25 09:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	^+	1.1	0.30	ng/L		06/23/25 20:11	06/24/25 09:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.14	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		06/23/25 20:11	06/24/25 09:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		06/23/25 20:11	06/24/25 09:45	1
9Cl-PF3ONS	ND		1.5	0.44	ng/L		06/23/25 20:11	06/24/25 09:45	1
11Cl-PF3OUdS	ND		1.5	0.23	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		06/23/25 20:11	06/24/25 09:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.55	ng/L		06/23/25 20:11	06/24/25 09:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		7.6	1.3	ng/L		06/23/25 20:11	06/24/25 09:45	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.6	J	7.6	0.95	ng/L		06/23/25 20:11	06/24/25 09:45	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	85.1		5 - 130	06/23/25 20:11	06/24/25 09:45	1
13C5 PFPeA	58.8		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C5 PFHxA	81.5		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C4 PFHpA	89.7		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C8 PFOA	86.5		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C9 PFNA	83.7		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C6 PFDA	94.2		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C7 PFUnA	76.8		30 - 130	06/23/25 20:11	06/24/25 09:45	1
13C2 PFDoA	51.6		10 - 130	06/23/25 20:11	06/24/25 09:45	1
13C2 PFTeDA	25.7		10 - 130	06/23/25 20:11	06/24/25 09:45	1
13C3 PFBS	82.3		40 - 135	06/23/25 20:11	06/24/25 09:45	1
13C3 PFHxS	95.4		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C8 PFOS	76.9		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C8 FOSA	86.6		40 - 130	06/23/25 20:11	06/24/25 09:45	1
D3-NMeFOSAA	65.7		40 - 170	06/23/25 20:11	06/24/25 09:45	1
D5-NEtFOSAA	46.7		25 - 135	06/23/25 20:11	06/24/25 09:45	1
13C2 4:2 FTS	161		40 - 200	06/23/25 20:11	06/24/25 09:45	1
13C2 6:2 FTS	219	*5+	40 - 200	06/23/25 20:11	06/24/25 09:45	1
13C2 8:2 FTS	182		40 - 300	06/23/25 20:11	06/24/25 09:45	1
13C3 HFPO-DA	72.0		40 - 130	06/23/25 20:11	06/24/25 09:45	1
D7-NMeFOSE	39.3		10 - 130	06/23/25 20:11	06/24/25 09:45	1
D9-NEtFOSE	22.2		10 - 130	06/23/25 20:11	06/24/25 09:45	1
D5-NEtFOSA	57.0		10 - 130	06/23/25 20:11	06/24/25 09:45	1
D3-NMeFOSA	55.2		10 - 130	06/23/25 20:11	06/24/25 09:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	200		21	21	mg/L			06/23/25 11:45	1

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.1		3.1	0.29	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorohexanoic acid (PFHxA)	4.2		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.27	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorooctanoic acid (PFOA)	2.8		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorononanoic acid (PFNA)	0.60	J I	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.34	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorobutanesulfonic acid (PFBS)	2.3	I	1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 02:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		06/28/25 05:31	07/01/25 02:54	1
4:2 FTS	ND		3.1	0.34	ng/L		06/28/25 05:31	07/01/25 02:54	1
6:2 FTS	0.58	J I	3.1	0.32	ng/L		06/28/25 05:31	07/01/25 02:54	1
8:2 FTS	ND		3.1	0.70	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.45	J I	1.6	0.27	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.34	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.8	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		06/28/25 05:31	07/01/25 02:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		06/28/25 05:31	07/01/25 02:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.50	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 02:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/28/25 05:31	07/01/25 02:54	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 02:54	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 02:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/28/25 05:31	07/01/25 02:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.4	J	7.8	1.3	ng/L		06/28/25 05:31	07/01/25 02:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		06/28/25 05:31	07/01/25 02:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79.2		5 - 130	06/28/25 05:31	07/01/25 02:54	1
13C5 PFPeA	49.2		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C5 PFHxA	60.7		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C4 PFHpA	71.1		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C8 PFOA	102		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C9 PFNA	79.4		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C6 PFDA	76.6		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C7 PFUnA	47.2		30 - 130	06/28/25 05:31	07/01/25 02:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	27.7		10 - 130	06/28/25 05:31	07/01/25 02:54	1
13C2 PFTeDA	22.2		10 - 130	06/28/25 05:31	07/01/25 02:54	1
13C3 PFBS	101		40 - 135	06/28/25 05:31	07/01/25 02:54	1
13C3 PFHxS	93.2		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C8 PFOS	68.9		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C8 FOSA	67.6		40 - 130	06/28/25 05:31	07/01/25 02:54	1
D3-NMeFOSAA	31.4	*5-	40 - 170	06/28/25 05:31	07/01/25 02:54	1
D5-NEtFOSAA	23.0	*5-	25 - 135	06/28/25 05:31	07/01/25 02:54	1
13C2 4:2 FTS	134		40 - 200	06/28/25 05:31	07/01/25 02:54	1
13C2 6:2 FTS	234	*5+	40 - 200	06/28/25 05:31	07/01/25 02:54	1
13C2 8:2 FTS	136		40 - 300	06/28/25 05:31	07/01/25 02:54	1
13C3 HFPO-DA	60.5		40 - 130	06/28/25 05:31	07/01/25 02:54	1
D7-NMeFOSE	30.0		10 - 130	06/28/25 05:31	07/01/25 02:54	1
D9-NEtFOSE	9.25	*5-	10 - 130	06/28/25 05:31	07/01/25 02:54	1
D5-NEtFOSA	20.1		10 - 130	06/28/25 05:31	07/01/25 02:54	1
D3-NMeFOSA	28.7		10 - 130	06/28/25 05:31	07/01/25 02:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	240		21	21	mg/L			06/23/25 11:45	1

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.1		3.2	0.30	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoroheptanoic acid (PFHpA)	1.8	I	1.6	0.28	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorooctanoic acid (PFOA)	2.4		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorononanoic acid (PFNA)	0.41	J	1.6	0.36	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.46	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorobutanesulfonic acid (PFBS)	2.2	I	1.6	0.22	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/28/25 05:31	07/01/25 20:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.2	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
6:2 FTS	ND		3.2	0.32	ng/L		06/28/25 05:31	07/01/25 20:14	1
8:2 FTS	ND		3.2	0.71	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.28	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.8	J	8.0	1.8	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.0	1.9	ng/L		06/28/25 05:31	07/01/25 20:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		06/28/25 05:31	07/01/25 20:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 20:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		06/28/25 05:31	07/01/25 20:14	1
9Cl-PF3ONS	ND		1.6	0.46	ng/L		06/28/25 05:31	07/01/25 20:14	1
11Cl-PF3OUdS	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 20:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		06/28/25 05:31	07/01/25 20:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.3	J	8.0	1.4	ng/L		06/28/25 05:31	07/01/25 20:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.0	0.99	ng/L		06/28/25 05:31	07/01/25 20:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	80.3		5 - 130	06/28/25 05:31	07/01/25 20:14	1
13C5 PFPeA	51.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C5 PFHxA	61.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C4 PFHpA	71.0		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C8 PFOA	98.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C9 PFNA	86.8		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C6 PFDA	79.7		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C7 PFUnA	48.1		30 - 130	06/28/25 05:31	07/01/25 20:14	1
13C2 PFDoA	33.4		10 - 130	06/28/25 05:31	07/01/25 20:14	1
13C2 PFTeDA	33.0		10 - 130	06/28/25 05:31	07/01/25 20:14	1
13C3 PFBS	92.5		40 - 135	06/28/25 05:31	07/01/25 20:14	1
13C3 PFHxS	90.7		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C8 PFOS	71.0		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C8 FOSA	64.8		40 - 130	06/28/25 05:31	07/01/25 20:14	1
D3-NMeFOSAA	30.5	*5-	40 - 170	06/28/25 05:31	07/01/25 20:14	1
D5-NEtFOSAA	21.1	*5-	25 - 135	06/28/25 05:31	07/01/25 20:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	144		40 - 200	06/28/25 05:31	07/01/25 20:14	1
13C2 6:2 FTS	228	*5+	40 - 200	06/28/25 05:31	07/01/25 20:14	1
13C2 8:2 FTS	127		40 - 300	06/28/25 05:31	07/01/25 20:14	1
13C3 HFPO-DA	64.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
D7-NMeFOSE	31.7		10 - 130	06/28/25 05:31	07/01/25 20:14	1
D9-NEtFOSE	12.6		10 - 130	06/28/25 05:31	07/01/25 20:14	1
D5-NEtFOSA	20.8		10 - 130	06/28/25 05:31	07/01/25 20:14	1
D3-NMeFOSA	33.6		10 - 130	06/28/25 05:31	07/01/25 20:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	200		18	18	mg/L			06/23/25 11:45	1

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	15		3.2	0.29	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorohexanoic acid (PFHxA)	6.0		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoroheptanoic acid (PFHpA)	2.6		1.6	0.27	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorooctanoic acid (PFOA)	8.0		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorononanoic acid (PFNA)	0.60	J I	1.6	0.36	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorobutanesulfonic acid (PFBS)	3.6	I	1.6	0.22	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoropentanesulfonic acid (PFPeS)	1.1	J	1.6	0.17	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorohexanesulfonic acid (PFHxS)	14		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorooctanesulfonic acid (PFOS)	11		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/28/25 05:31	07/01/25 20:31	1
4:2 FTS	ND		3.2	0.34	ng/L		06/28/25 05:31	07/01/25 20:31	1
6:2 FTS	2.4	J	3.2	0.32	ng/L		06/28/25 05:31	07/01/25 20:31	1
8:2 FTS	ND		3.2	0.71	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 20:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.28	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.76	J	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.9	1.8	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		06/28/25 05:31	07/01/25 20:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		06/28/25 05:31	07/01/25 20:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.31	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 20:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		06/28/25 05:31	07/01/25 20:31	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		06/28/25 05:31	07/01/25 20:31	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 20:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		06/28/25 05:31	07/01/25 20:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.2	J	7.9	1.4	ng/L		06/28/25 05:31	07/01/25 20:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		06/28/25 05:31	07/01/25 20:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	83.3	*3	5 - 130	06/28/25 05:31	07/01/25 20:31	1
13C5 PFPeA	46.7		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C5 PFHxA	64.4		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C4 PFHpA	64.6		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C8 PFOA	106		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C9 PFNA	84.3		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C6 PFDA	83.8		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C7 PFUnA	53.9		30 - 130	06/28/25 05:31	07/01/25 20:31	1
13C2 PFDoA	35.5		10 - 130	06/28/25 05:31	07/01/25 20:31	1
13C2 PFTeDA	36.3		10 - 130	06/28/25 05:31	07/01/25 20:31	1
13C3 PFBS	101		40 - 135	06/28/25 05:31	07/01/25 20:31	1
13C3 PFHxS	95.3		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C8 PFOS	69.7		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C8 FOSA	61.6		40 - 130	06/28/25 05:31	07/01/25 20:31	1
D3-NMeFOSAA	31.5	*5-	40 - 170	06/28/25 05:31	07/01/25 20:31	1
D5-NEtFOSAA	23.1	*5-	25 - 135	06/28/25 05:31	07/01/25 20:31	1
13C2 4:2 FTS	175		40 - 200	06/28/25 05:31	07/01/25 20:31	1
13C2 6:2 FTS	239	*5+	40 - 200	06/28/25 05:31	07/01/25 20:31	1
13C2 8:2 FTS	148		40 - 300	06/28/25 05:31	07/01/25 20:31	1
13C3 HFPO-DA	64.5		40 - 130	06/28/25 05:31	07/01/25 20:31	1
D7-NMeFOSE	29.1		10 - 130	06/28/25 05:31	07/01/25 20:31	1
D9-NEtFOSE	11.8		10 - 130	06/28/25 05:31	07/01/25 20:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D5-NEtFOSA	19.9		10 - 130	06/28/25 05:31	07/01/25 20:31	1
D3-NMeFOSA	32.8		10 - 130	06/28/25 05:31	07/01/25 20:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	230		21	21	mg/L			06/23/25 11:45	1

Client Sample ID: INF-COMP-202506

Lab Sample ID: 320-122544-6

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		3.1	0.29	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorohexanoic acid (PFHxA)	5.1	I	1.6	0.21	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.27	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorooctanoic acid (PFOA)	5.2		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorononanoic acid (PFNA)	0.53	J	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.34	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorobutanesulfonic acid (PFBS)	4.9		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorohexanesulfonic acid (PFHxS)	6.2		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		06/28/25 05:31	07/01/25 03:44	1
4:2 FTS	ND		3.1	0.34	ng/L		06/28/25 05:31	07/01/25 03:44	1
6:2 FTS	ND		3.1	0.31	ng/L		06/28/25 05:31	07/01/25 03:44	1
8:2 FTS	ND		3.1	0.70	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.49	J	1.6	0.27	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.34	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.9	J	7.8	1.8	ng/L		06/28/25 05:31	07/01/25 03:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-COMP-202506

Lab Sample ID: 320-122544-6

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		06/28/25 05:31	07/01/25 03:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		06/28/25 05:31	07/01/25 03:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.16	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 03:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/28/25 05:31	07/01/25 03:44	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 03:44	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 03:44	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/28/25 05:31	07/01/25 03:44	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	19		7.8	1.3	ng/L		06/28/25 05:31	07/01/25 03:44	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.96	ng/L		06/28/25 05:31	07/01/25 03:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	78.1		5 - 130	06/28/25 05:31	07/01/25 03:44	1
13C5 PFPeA	45.8		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C5 PFHxA	58.8		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C4 PFHpA	67.1		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C8 PFOA	103		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C9 PFNA	77.0		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C6 PFDA	80.3		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C7 PFUnA	42.4		30 - 130	06/28/25 05:31	07/01/25 03:44	1
13C2 PFDoA	32.8		10 - 130	06/28/25 05:31	07/01/25 03:44	1
13C2 PFTeDA	33.1		10 - 130	06/28/25 05:31	07/01/25 03:44	1
13C3 PFBS	99.6		40 - 135	06/28/25 05:31	07/01/25 03:44	1
13C3 PFHxS	100		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C8 PFOS	72.4		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C8 FOSA	66.8		40 - 130	06/28/25 05:31	07/01/25 03:44	1
D3-NMeFOSAA	32.8	*5-	40 - 170	06/28/25 05:31	07/01/25 03:44	1
D5-NEtFOSAA	24.5	*5-	25 - 135	06/28/25 05:31	07/01/25 03:44	1
13C2 4:2 FTS	176		40 - 200	06/28/25 05:31	07/01/25 03:44	1
13C2 6:2 FTS	239	*5+	40 - 200	06/28/25 05:31	07/01/25 03:44	1
13C2 8:2 FTS	146		40 - 300	06/28/25 05:31	07/01/25 03:44	1
13C3 HFPO-DA	61.3		40 - 130	06/28/25 05:31	07/01/25 03:44	1
D7-NMeFOSE	34.0		10 - 130	06/28/25 05:31	07/01/25 03:44	1
D9-NEtFOSE	10.4		10 - 130	06/28/25 05:31	07/01/25 03:44	1
D5-NEtFOSA	20.2		10 - 130	06/28/25 05:31	07/01/25 03:44	1
D3-NMeFOSA	32.8		10 - 130	06/28/25 05:31	07/01/25 03:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	250		21	21	mg/L			06/23/25 11:45	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.3		3.2	0.30	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorohexanoic acid (PFHxA)	9.9		1.6	0.21	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorooctanoic acid (PFOA)	6.6		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorononanoic acid (PFNA)	0.43	J	1.6	0.36	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorodecanoic acid (PFDA)	0.71	J	1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.46	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorobutanesulfonic acid (PFBS)	4.4		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoropentanesulfonic acid (PFPeS)	0.32	J	1.6	0.17	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorooctanesulfonic acid (PFOS)	3.5		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/23/25 20:11	06/24/25 11:40	1
4:2 FTS	ND		3.2	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
6:2 FTS	ND		3.2	0.32	ng/L		06/23/25 20:11	06/24/25 11:40	1
8:2 FTS	ND		3.2	0.71	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorooctanesulfonamide (PFOSA)	0.38	J I	1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.72	J	1.6	0.28	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.49	J	1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.9	1.8	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		06/23/25 20:11	06/24/25 11:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	^+	1.2	0.31	ng/L		06/23/25 20:11	06/24/25 11:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:40	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		06/23/25 20:11	06/24/25 11:40	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		06/23/25 20:11	06/24/25 11:40	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 11:40	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:40	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		06/23/25 20:11	06/24/25 11:40	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.8	J	7.9	1.4	ng/L		06/23/25 20:11	06/24/25 11:40	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		06/23/25 20:11	06/24/25 11:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.8		5 - 130				06/23/25 20:11	06/24/25 11:40	1
13C5 PFPeA	69.6		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C5 PFHxA	93.2		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C4 PFHpA	87.8		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C8 PFOA	86.1		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C9 PFNA	84.3		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C6 PFDA	98.9		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C7 PFUnA	91.3		30 - 130				06/23/25 20:11	06/24/25 11:40	1
13C2 PFDoA	74.6		10 - 130				06/23/25 20:11	06/24/25 11:40	1
13C2 PFTeDA	57.2		10 - 130				06/23/25 20:11	06/24/25 11:40	1
13C3 PFBS	94.9		40 - 135				06/23/25 20:11	06/24/25 11:40	1
13C3 PFHxS	103		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C8 PFOS	86.0		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C8 FOSA	77.2		40 - 130				06/23/25 20:11	06/24/25 11:40	1
D3-NMeFOSAA	83.1		40 - 170				06/23/25 20:11	06/24/25 11:40	1
D5-NEtFOSAA	79.0		25 - 135				06/23/25 20:11	06/24/25 11:40	1
13C2 4:2 FTS	169		40 - 200				06/23/25 20:11	06/24/25 11:40	1
13C2 6:2 FTS	126		40 - 200				06/23/25 20:11	06/24/25 11:40	1
13C2 8:2 FTS	120		40 - 300				06/23/25 20:11	06/24/25 11:40	1
13C3 HFPO-DA	83.1		40 - 130				06/23/25 20:11	06/24/25 11:40	1
D7-NMeFOSE	73.9		10 - 130				06/23/25 20:11	06/24/25 11:40	1
D9-NEtFOSE	64.5		10 - 130				06/23/25 20:11	06/24/25 11:40	1
D5-NEtFOSA	75.1		10 - 130				06/23/25 20:11	06/24/25 11:40	1
D3-NMeFOSA	68.8		10 - 130				06/23/25 20:11	06/24/25 11:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	5.7		1.3	1.3	mg/L			06/23/25 11:45	1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	9.2		0.51	0.12	ug/Kg	☼	06/24/25 12:11	06/25/25 13:00	1
Perfluorohexanoic acid (PFHxA)	29		0.51	0.10	ug/Kg	☼	06/24/25 12:11	06/25/25 13:00	1
Perfluoroheptanoic acid (PFHpA)	1.8		0.51	0.083	ug/Kg	☼	06/24/25 12:11	06/25/25 13:00	1
Perfluorooctanoic acid (PFOA)	25		0.51	0.16	ug/Kg	☼	06/24/25 12:11	06/25/25 13:00	1
Perfluorononanoic acid (PFNA)	1.3		0.51	0.073	ug/Kg	☼	06/24/25 12:11	06/25/25 13:00	1
Perfluorodecanoic acid (PFDA)	12		0.51	0.061	ug/Kg	☼	06/24/25 12:11	06/25/25 13:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	1.0		0.51	0.071	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorododecanoic acid (PFDoA)	3.2		0.51	0.068	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorotridecanoic acid (PFTTrDA)	0.64		0.51	0.073	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorotetradecanoic acid (PFTeDA)	0.92		0.51	0.15	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.51	0.10	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.51	0.051	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.51	0.040	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorooctanesulfonic acid (PFOS)	8.9		0.51	0.063	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorononanesulfonic acid (PFNS)	ND		0.51	0.058	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorodecanesulfonic acid (PFDS)	ND	*1	0.51	0.053	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.51	0.093	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
4:2 FTS	ND		1.0	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
6:2 FTS	1.6		1.0	0.14	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
8:2 FTS	1.3		1.0	0.11	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorooctanesulfonamide (PFOSA)	1.2		0.51	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.64	I	0.51	0.091	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.22	J	0.51	0.053	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	21		0.51	0.040	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.6		0.51	0.043	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12		2.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.0		2.5	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.51	0.073	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.51	0.063	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.51	0.056	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.51	0.091	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.51	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
9CI-PF3ONS	ND		0.51	0.096	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
11CI-PF3OUdS	ND	*1	0.51	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.51	0.096	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		2.5	0.62	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	19		2.5	0.54	ug/Kg	☆	06/24/25 12:11	06/25/25 13:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	56.8		35 - 130				06/24/25 12:11	06/25/25 13:00	1
13C5 PFHxA	82.6		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C4 PFHpA	90.6		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C8 PFOA	90.4		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C9 PFNA	81.0		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C6 PFDA	89.5		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C7 PFUnA	72.5		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C2 PFDoA	77.9		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C2 PFTeDA	42.0		20 - 130				06/24/25 12:11	06/25/25 13:00	1
13C3 PFHxS	99.9		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C8 PFOS	85.4		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C8 FOSA	89.5		40 - 130				06/24/25 12:11	06/25/25 13:00	1
D3-NMeFOSAA	53.1		40 - 135				06/24/25 12:11	06/25/25 13:00	1
D5-NEtFOSAA	29.0	*5-	40 - 150				06/24/25 12:11	06/25/25 13:00	1
13C2 4:2 FTS	150		40 - 165				06/24/25 12:11	06/25/25 13:00	1
13C2 6:2 FTS	180		40 - 215				06/24/25 12:11	06/25/25 13:00	1
13C2 8:2 FTS	161		40 - 275				06/24/25 12:11	06/25/25 13:00	1
13C3 HFPO-DA	74.3		40 - 130				06/24/25 12:11	06/25/25 13:00	1
D7-NMeFOSE	79.6		20 - 130				06/24/25 12:11	06/25/25 13:00	1
D9-NEtFOSE	60.1		15 - 130				06/24/25 12:11	06/25/25 13:00	1
D5-NEtFOSA	59.6		10 - 130				06/24/25 12:11	06/25/25 13:00	1
D3-NMeFOSA	64.5		10 - 130				06/24/25 12:11	06/25/25 13:00	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.3		1.0	0.081	ug/Kg	☆	06/24/25 12:11	06/26/25 10:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	81.1		8 - 130				06/24/25 12:11	06/26/25 10:02	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		0.50	0.062	ug/Kg	☆	06/27/25 13:32	07/01/25 06:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	96.9		40 - 135				06/27/25 13:32	07/01/25 06:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	80		0.10	0.10	%			06/20/25 12:46	1
Percent Solids (EPA 1633)	20		0.10	0.10	%			06/20/25 12:46	1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	6.4		0.41	0.10	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	12		0.41	0.083	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoroheptanoic acid (PFHpA)	1.0		0.41	0.068	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorooctanoic acid (PFOA)	9.6		0.41	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorononanoic acid (PFNA)	1.0		0.41	0.060	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorodecanoic acid (PFDA)	7.1		0.41	0.050	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoroundecanoic acid (PFUnA)	1.0		0.41	0.058	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorododecanoic acid (PFDoA)	2.9		0.41	0.056	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorotridecanoic acid (PFTTrDA)	0.67		0.41	0.060	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorotetradecanoic acid (PFTTeDA)	0.74		0.41	0.12	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.41	0.083	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.41	0.041	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.41	0.033	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorooctanesulfonic acid (PFOS)	8.5		0.41	0.052	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorononanesulfonic acid (PFNS)	ND		0.41	0.047	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorodecanesulfonic acid (PFDS)	ND	*1	0.41	0.043	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.41	0.076	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
4:2 FTS	ND		0.83	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
6:2 FTS	0.58	J I	0.83	0.11	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
8:2 FTS	0.71	J	0.83	0.091	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorooctanesulfonamide (PFOSA)	0.90		0.41	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.62	I	0.41	0.074	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.21	J	0.41	0.043	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	18		0.41	0.033	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.8		0.41	0.035	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	10		2.1	0.18	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.4		2.1	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.41	0.060	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.41	0.052	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.41	0.045	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.41	0.074	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.41	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
9CI-PF3ONS	ND		0.41	0.078	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
11CI-PF3OUdS	ND	*1	0.41	0.15	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.41	0.078	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.83	0.15	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	53		2.1	0.51	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	22		2.1	0.44	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	55.7		35 - 130				06/24/25 12:11	06/25/25 13:16	1
13C5 PFHxA	80.7		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C4 PFHpA	82.0		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C8 PFOA	84.7		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C9 PFNA	79.5		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C6 PFDA	90.0		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C7 PFUnA	59.3		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C2 PFDoA	60.5		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C2 PFTeDA	61.9		20 - 130				06/24/25 12:11	06/25/25 13:16	1
13C3 PFHxS	93.4		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C8 PFOS	77.8		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C8 FOSA	84.6		40 - 130				06/24/25 12:11	06/25/25 13:16	1
D3-NMeFOSAA	45.7		40 - 135				06/24/25 12:11	06/25/25 13:16	1
D5-NEtFOSAA	24.9	*5-	40 - 150				06/24/25 12:11	06/25/25 13:16	1
13C2 4:2 FTS	143		40 - 165				06/24/25 12:11	06/25/25 13:16	1
13C2 6:2 FTS	180		40 - 215				06/24/25 12:11	06/25/25 13:16	1
13C2 8:2 FTS	143		40 - 275				06/24/25 12:11	06/25/25 13:16	1
13C3 HFPO-DA	68.0		40 - 130				06/24/25 12:11	06/25/25 13:16	1
D7-NMeFOSE	70.6		20 - 130				06/24/25 12:11	06/25/25 13:16	1
D9-NEtFOSE	58.5		15 - 130				06/24/25 12:11	06/25/25 13:16	1
D5-NEtFOSA	57.0		10 - 130				06/24/25 12:11	06/25/25 13:16	1
D3-NMeFOSA	57.9		10 - 130				06/24/25 12:11	06/25/25 13:16	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0		0.83	0.066	ug/Kg	☆	06/24/25 12:11	06/26/25 10:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	71.0		8 - 130				06/24/25 12:11	06/26/25 10:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		0.41	0.051	ug/Kg	☆	06/27/25 13:32	07/01/25 07:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	79.8		40 - 135				06/27/25 13:32	07/01/25 07:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	76		0.10	0.10	%			06/20/25 12:46	1
Percent Solids (EPA 1633)	24		0.10	0.10	%			06/20/25 12:46	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.37	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorohexanoic acid (PFHxA)	ND		1.5	0.30	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoroheptanoic acid (PFHpA)	ND		1.5	0.25	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorooctanoic acid (PFOA)	1.1	J	1.5	0.47	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorononanoic acid (PFNA)	0.54	J	1.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorodecanoic acid (PFDA)	2.4		1.5	0.18	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoroundecanoic acid (PFUnA)	0.59	J	1.5	0.21	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorododecanoic acid (PFDoA)	1.6		1.5	0.21	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorotridecanoic acid (PFTTrDA)	0.38	J	1.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorotetradecanoic acid (PFTeDA)	0.48	J	1.5	0.44	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.30	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.5	0.15	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.12	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorooctanesulfonic acid (PFOS)	7.7		1.5	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.18	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorodecanesulfonic acid (PFDS)	ND	*1	1.5	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.28	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
4:2 FTS	ND		3.0	0.49	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
6:2 FTS	ND		3.0	0.41	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
8:2 FTS	0.59	J	3.0	0.33	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorooctanesulfonamide (PFOSA)	0.96	J	1.5	0.48	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.43	J	1.5	0.27	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		1.5	0.12	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.7		1.5	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		7.6	0.67	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.1	J	7.6	0.59	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.17	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.27	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.47	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
9CI-PF3ONS	ND		1.5	0.29	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
11CI-PF3OUdS	ND	*1	1.5	0.57	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.29	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.57	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	120		7.6	1.9	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	16		7.6	1.6	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	47.1		35 - 130				06/24/25 12:11	06/25/25 13:33	1
13C5 PFHxA	78.6		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C4 PFHpA	86.1		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C8 PFOA	85.0		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C9 PFNA	81.4		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C6 PFDA	94.8		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C7 PFUnA	89.2		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C2 PFDoA	80.9		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C2 PFTeDA	69.0		20 - 130				06/24/25 12:11	06/25/25 13:33	1
13C3 PFHxS	93.5		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C8 PFOS	81.7		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C8 FOSA	89.9		40 - 130				06/24/25 12:11	06/25/25 13:33	1
D3-NMeFOSAA	66.6		40 - 135				06/24/25 12:11	06/25/25 13:33	1
D5-NEtFOSAA	35.4	*5-	40 - 150				06/24/25 12:11	06/25/25 13:33	1
13C2 4:2 FTS	138		40 - 165				06/24/25 12:11	06/25/25 13:33	1
13C2 6:2 FTS	178		40 - 215				06/24/25 12:11	06/25/25 13:33	1
13C2 8:2 FTS	182		40 - 275				06/24/25 12:11	06/25/25 13:33	1
13C3 HFPO-DA	69.2		40 - 130				06/24/25 12:11	06/25/25 13:33	1
D7-NMeFOSE	84.7		20 - 130				06/24/25 12:11	06/25/25 13:33	1
D9-NEtFOSE	101		15 - 130				06/24/25 12:11	06/25/25 13:33	1
D5-NEtFOSA	65.7		10 - 130				06/24/25 12:11	06/25/25 13:33	1
D3-NMeFOSA	73.7		10 - 130				06/24/25 12:11	06/25/25 13:33	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.1	J	3.0	0.24	ug/Kg	☆	06/27/25 13:32	07/01/25 07:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.5	0.19	ug/Kg	☆	06/27/25 13:32	07/01/25 07:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	91.0	*3	8 - 130				06/27/25 13:32	07/01/25 07:18	1
13C3 PFBS	100		40 - 135				06/27/25 13:32	07/01/25 07:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	93		0.10	0.10	%			06/20/25 12:46	1
Percent Solids (EPA 1633)	6.6		0.10	0.10	%			06/20/25 12:46	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-01-202506

Lab Sample ID: 320-122544-11

Date Collected: 06/16/25 13:35

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.1	J	3.1	0.29	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoroheptanoic acid (PFHpA)	0.28	J	1.6	0.27	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorooctanoic acid (PFOA)	0.90	J	1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorooctanesulfonic acid (PFOS)	0.36	J	1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/23/25 20:11	06/24/25 11:57	1
4:2 FTS	ND		3.1	0.34	ng/L		06/23/25 20:11	06/24/25 11:57	1
6:2 FTS	ND		3.1	0.32	ng/L		06/23/25 20:11	06/24/25 11:57	1
8:2 FTS	ND		3.1	0.70	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.9	1.8	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		06/23/25 20:11	06/24/25 11:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND ^+		1.2	0.31	ng/L		06/23/25 20:11	06/24/25 11:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/23/25 20:11	06/24/25 11:57	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 11:57	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:57	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-01-202506

Lab Sample ID: 320-122544-11

Date Collected: 06/16/25 13:35

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/23/25 20:11	06/24/25 11:57	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.9	1.4	ng/L		06/23/25 20:11	06/24/25 11:57	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.97	ng/L		06/23/25 20:11	06/24/25 11:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	95.2		5 - 130				06/23/25 20:11	06/24/25 11:57	1
13C5 PFPeA	95.8		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C5 PFHxA	107		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C4 PFHpA	98.5		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C8 PFOA	89.0		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C9 PFNA	83.9		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C6 PFDA	98.5		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C7 PFUnA	96.6		30 - 130				06/23/25 20:11	06/24/25 11:57	1
13C2 PFDoA	75.8		10 - 130				06/23/25 20:11	06/24/25 11:57	1
13C2 PFTeDA	68.5		10 - 130				06/23/25 20:11	06/24/25 11:57	1
13C3 PFBS	95.4		40 - 135				06/23/25 20:11	06/24/25 11:57	1
13C3 PFHxS	101		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C8 PFOS	87.9		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C8 FOSA	79.0		40 - 130				06/23/25 20:11	06/24/25 11:57	1
D3-NMeFOSAA	85.7		40 - 170				06/23/25 20:11	06/24/25 11:57	1
D5-NEtFOSAA	84.5		25 - 135				06/23/25 20:11	06/24/25 11:57	1
13C2 4:2 FTS	108		40 - 200				06/23/25 20:11	06/24/25 11:57	1
13C2 6:2 FTS	101		40 - 200				06/23/25 20:11	06/24/25 11:57	1
13C2 8:2 FTS	109		40 - 300				06/23/25 20:11	06/24/25 11:57	1
13C3 HFPO-DA	93.6		40 - 130				06/23/25 20:11	06/24/25 11:57	1
D7-NMeFOSE	76.9		10 - 130				06/23/25 20:11	06/24/25 11:57	1
D9-NEtFOSE	66.0		10 - 130				06/23/25 20:11	06/24/25 11:57	1
D5-NEtFOSA	70.4		10 - 130				06/23/25 20:11	06/24/25 11:57	1
D3-NMeFOSA	67.0		10 - 130				06/23/25 20:11	06/24/25 11:57	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	3.4		1.5	0.21	ng/L		06/28/25 05:31	07/01/25 04:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	95.4		40 - 130				06/28/25 05:31	07/01/25 04:00	1

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.21	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 12:13	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.6	0.34	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		06/23/25 20:11	06/24/25 12:13	1
4:2 FTS	ND		3.1	0.34	ng/L		06/23/25 20:11	06/24/25 12:13	1
6:2 FTS	ND		3.1	0.32	ng/L		06/23/25 20:11	06/24/25 12:13	1
8:2 FTS	ND		3.1	0.70	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.34	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.8	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		06/23/25 20:11	06/24/25 12:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND ^+		1.2	0.30	ng/L		06/23/25 20:11	06/24/25 12:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 12:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/23/25 20:11	06/24/25 12:13	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 12:13	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 12:13	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/23/25 20:11	06/24/25 12:13	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.8	1.3	ng/L		06/23/25 20:11	06/24/25 12:13	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		06/23/25 20:11	06/24/25 12:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	100		5 - 130				06/23/25 20:11	06/24/25 12:13	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	108		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C5 PFHxA	111		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C4 PFHpA	102		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C8 PFOA	92.0		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C9 PFNA	90.8		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C6 PFDA	105		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C7 PFUnA	102		30 - 130	06/23/25 20:11	06/24/25 12:13	1
13C2 PFDoA	88.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
13C2 PFTeDA	77.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
13C3 PFBS	94.5		40 - 135	06/23/25 20:11	06/24/25 12:13	1
13C3 PFHxS	102		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C8 PFOS	88.1		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C8 FOSA	77.4		40 - 130	06/23/25 20:11	06/24/25 12:13	1
D3-NMeFOSAA	88.2		40 - 170	06/23/25 20:11	06/24/25 12:13	1
D5-NEtFOSAA	83.2		25 - 135	06/23/25 20:11	06/24/25 12:13	1
13C2 4:2 FTS	119		40 - 200	06/23/25 20:11	06/24/25 12:13	1
13C2 6:2 FTS	110		40 - 200	06/23/25 20:11	06/24/25 12:13	1
13C2 8:2 FTS	116		40 - 300	06/23/25 20:11	06/24/25 12:13	1
13C3 HFPO-DA	103		40 - 130	06/23/25 20:11	06/24/25 12:13	1
D7-NMeFOSE	81.6		10 - 130	06/23/25 20:11	06/24/25 12:13	1
D9-NEtFOSE	75.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
D5-NEtFOSA	76.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
D3-NMeFOSA	70.5		10 - 130	06/23/25 20:11	06/24/25 12:13	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFPeA (35-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (40-130)	PFDaA (40-130)
320-122544-8	BIO-A-23-202506	56.8	82.6	90.6	90.4	81.0	89.5	72.5	77.9
320-122544-9	BIO-A-24-202506	55.7	80.7	82.0	84.7	79.5	90.0	59.3	60.5
320-122544-10	BIO-B-202506	47.1	78.6	86.1	85.0	81.4	94.8	89.2	80.9
LCS 320-859517/3-A	Lab Control Sample	98.1	106	105	86.9	82.6	89.1	85.8	64.4
LCSD 320-859517/4-A	Lab Control Sample Dup	108	126	119	98.3	82.8	87.0	74.2	52.1
LLCS 320-859517/2-A	Lab Control Sample	94.0	107	102	82.5	78.4	87.0	73.1	52.1
MB 320-859517/1-A	Method Blank	80.1	92.5	86.0	74.8	68.9	83.5	83.0	64.2

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFTDA (20-130)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-135)	d5NEFOS (40-150)	M242FTS (40-165)	M262FTS (40-215)
320-122544-8	BIO-A-23-202506	42.0	99.9	85.4	89.5	53.1	29.0 *5-	150	180
320-122544-9	BIO-A-24-202506	61.9	93.4	77.8	84.6	45.7	24.9 *5-	143	180
320-122544-10	BIO-B-202506	69.0	93.5	81.7	89.9	66.6	35.4 *5-	138	178
LCS 320-859517/3-A	Lab Control Sample	54.4	89.6	75.3	66.3	74.8	74.7	91.8	93.7
LCSD 320-859517/4-A	Lab Control Sample Dup	66.9	106	78.4	60.5	61.8	59.1	110	104
LLCS 320-859517/2-A	Lab Control Sample	51.7	85.3	70.5	44.7	61.7	56.6	86.8	90.2
MB 320-859517/1-A	Method Blank	63.3	78.2	68.5	53.9	64.9	63.8	76.9	81.4

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (40-275)	HFPODA (40-130)	NMFM (20-130)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-122544-8	BIO-A-23-202506	161	74.3	79.6	60.1	59.6	64.5
320-122544-9	BIO-A-24-202506	143	68.0	70.6	58.5	57.0	57.9
320-122544-10	BIO-B-202506	182	69.2	84.7	101	65.7	73.7
LCS 320-859517/3-A	Lab Control Sample	86.9	89.9	38.4	34.9	34.0	34.0
LCSD 320-859517/4-A	Lab Control Sample Dup	79.8	108	55.3	46.9	54.0	47.8
LLCS 320-859517/2-A	Lab Control Sample	71.5	94.5	37.6	35.3	28.2	26.8
MB 320-859517/1-A	Method Blank	73.9	76.7	54.0	53.3	30.0	29.2

Surrogate Legend

PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-122544-1

Project/Site: PFAS Sampling

d5NPFSA = D5-NEtFOSA

d3NMFSA = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (8-130)	C3PFBS (40-135)
320-122544-10 - RE	BIO-B-202506	91.0 *3	100
LCS 320-860314/3-A	Lab Control Sample	101	99.1
LCSD 320-860314/4-A	Lab Control Sample Dup	101	102
LLCS 320-860314/2-A	Lab Control Sample	97.6	97.1
MB 320-860314/1-A	Method Blank	98.4	98.1

Surrogate Legend

PFBA = 13C4 PFBA

C3PFBS = 13C3 PFBS

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (8-130)
320-122544-8 - RA	BIO-A-23-202506	81.1
320-122544-9 - RA	BIO-A-24-202506	71.0

Surrogate Legend

PFBA = 13C4 PFBA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C3PFBS (40-135)
320-122544-8 - RE	BIO-A-23-202506	96.9
320-122544-9 - RE	BIO-A-24-202506	79.8

Surrogate Legend

C3PFBS = 13C3 PFBS

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (8-130)	13C5PHA (40-130)
LCS 320-859517/3-A - RA	Lab Control Sample	81.7	106
LCSD 320-859517/4-A - RA	Lab Control Sample Dup	97.5	127
LLCS 320-859517/2-A - RA	Lab Control Sample	81.6	100
MB 320-859517/1-A - RA	Method Blank	70.1	91.0

Surrogate Legend

PFBA = 13C4 PFBA

13C5PHA = 13C5 PFHxA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-122544-1	INF-02-202506	61.8	48.1	58.9	65.4	94.8	75.8	78.7	44.0
320-122544-2	INF-07-202506	85.1	58.8	81.5	89.7	86.5	83.7	94.2	76.8
320-122544-3	INF-08-202506	79.2	49.2	60.7	71.1	102	79.4	76.6	47.2
320-122544-4	INF-11-202506	80.3	51.3	61.3	71.0	98.3	86.8	79.7	48.1
320-122544-5	INF-18-202506	83.3 *3	46.7	64.4	64.6	106	84.3	83.8	53.9
320-122544-6	INF-COMP-202506	78.1	45.8	58.8	67.1	103	77.0	80.3	42.4
320-122544-7	EFF G-202506	97.8	69.6	93.2	87.8	86.1	84.3	98.9	91.3
320-122544-11	EB-01-202506	95.2	95.8	107	98.5	89.0	83.9	98.5	96.6
320-122544-11 - RE	EB-01-202506			95.4					
320-122544-12	EB-02-202506	100	108	111	102	92.0	90.8	105	102
LCS 320-859408/3-A	Lab Control Sample	96.3	99.1	107	99.8	91.0	88.7	98.7	98.9
LCS 320-860391/3-A	Lab Control Sample	102	94.2	93.2	92.8	106	90.4	97.7	93.8
LCSD 320-859408/4-A	Lab Control Sample Dup	95.9	102	106	102	91.1	84.9	103	96.8
LCSD 320-860391/4-A	Lab Control Sample Dup	103	92.9	90.0	92.6	93.5	87.8	99.9	96.5
LLCS 320-859408/2-A	Lab Control Sample	101	101	113	108	88.5	86.6	101	93.5
LLCS 320-860391/2-A	Lab Control Sample	102	97.5	102	97.0	102	92.4	95.2	98.4
MB 320-859408/1-A	Method Blank	97.5	101	111	103	90.7	81.3	98.0	97.3
MB 320-860391/1-A	Method Blank	104	95.0	97.6	95.6	98.9	88.2	98.5	96.3

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-122544-1	INF-02-202506	27.7	24.4	96.7	103	70.9	64.5	33.9 *5-	26.9
320-122544-2	INF-07-202506	51.6	25.7	82.3	95.4	76.9	86.6	65.7	46.7
320-122544-3	INF-08-202506	27.7	22.2	101	93.2	68.9	67.6	31.4 *5-	23.0 *5-
320-122544-4	INF-11-202506	33.4	33.0	92.5	90.7	71.0	64.8	30.5 *5-	21.1 *5-
320-122544-5	INF-18-202506	35.5	36.3	101	95.3	69.7	61.6	31.5 *5-	23.1 *5-
320-122544-6	INF-COMP-202506	32.8	33.1	99.6	100	72.4	66.8	32.8 *5-	24.5 *5-
320-122544-7	EFF G-202506	74.6	57.2	94.9	103	86.0	77.2	83.1	79.0
320-122544-11	EB-01-202506	75.8	68.5	95.4	101	87.9	79.0	85.7	84.5
320-122544-11 - RE	EB-01-202506								
320-122544-12	EB-02-202506	88.9	77.9	94.5	102	88.1	77.4	88.2	83.2
LCS 320-859408/3-A	Lab Control Sample	82.8	73.3	92.1	96.3	82.2	74.0	88.2	86.1
LCS 320-860391/3-A	Lab Control Sample	86.6	75.4	94.5	91.4	84.6	72.1	89.3	77.5
LCSD 320-859408/4-A	Lab Control Sample Dup	81.7	72.3	92.1	103	84.8	74.9	91.5	84.6
LCSD 320-860391/4-A	Lab Control Sample Dup	88.4	86.0	95.6	89.8	84.6	76.1	93.6	84.9
LLCS 320-859408/2-A	Lab Control Sample	77.7	67.1	87.4	96.4	84.8	76.6	89.8	89.2
LLCS 320-860391/2-A	Lab Control Sample	86.9	74.0	96.7	91.4	87.6	76.3	96.5	83.3
MB 320-859408/1-A	Method Blank	83.2	72.2	89.4	96.6	80.5	75.3	85.6	83.3
MB 320-860391/1-A	Method Blank	80.9	69.8	99.2	91.0	82.6	70.2	85.5	75.8

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-122544-1	INF-02-202506	166	214 *5+	149	56.6	26.4	7.89 *5-	16.4	27.0
320-122544-2	INF-07-202506	161	219 *5+	182	72.0	39.3	22.2	57.0	55.2
320-122544-3	INF-08-202506	134	234 *5+	136	60.5	30.0	9.25 *5-	20.1	28.7
320-122544-4	INF-11-202506	144	228 *5+	127	64.3	31.7	12.6	20.8	33.6
320-122544-5	INF-18-202506	175	239 *5+	148	64.5	29.1	11.8	19.9	32.8
320-122544-6	INF-COMP-202506	176	239 *5+	146	61.3	34.0	10.4	20.2	32.8
320-122544-7	EFF G-202506	169	126	120	83.1	73.9	64.5	75.1	68.8

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-122544-1

Project/Site: PFAS Sampling

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSFA (10-130)
320-122544-11	EB-01-202506	108	101	109	93.6	76.9	66.0	70.4	67.0
320-122544-11 - RE	EB-01-202506								
320-122544-12	EB-02-202506	119	110	116	103	81.6	75.9	76.9	70.5
LCS 320-859408/3-A	Lab Control Sample	113	101	101	96.1	80.9	71.1	70.5	65.2
LCS 320-860391/3-A	Lab Control Sample	95.4	101	95.1	89.6	70.1	62.5	68.7	63.0
LCSD 320-859408/4-A	Lab Control Sample Dup	107	98.7	103	97.8	77.8	68.4	67.5	62.2
LCSD 320-860391/4-A	Lab Control Sample Dup	94.9	103	99.2	86.7	81.0	69.2	75.0	68.3
LLCS 320-859408/2-A	Lab Control Sample	102	93.9	97.4	107	77.0	69.0	65.9	62.1
LLCS 320-860391/2-A	Lab Control Sample	106	104	102	93.1	75.3	64.5	69.0	65.4
MB 320-859408/1-A	Method Blank	108	96.3	95.8	97.5	80.0	69.1	69.6	64.8
MB 320-860391/1-A	Method Blank	103	105	98.8	88.9	70.9	60.0	68.7	64.7

Surrogate Legend

PFBA = 13C4 PFBA
 PFPeA = 13C5 PFPeA
 13C5PHA = 13C5 PFHxA
 C4PFHA = 13C4 PFHpA
 C8PFOA = 13C8 PFOA
 C9PFNA = 13C9 PFNA
 C6PFDA = 13C6 PFDA
 13C7PUA = 13C7 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 C3PFHS = 13C3 PFHxS
 C8PFOS = 13C8 PFOS
 PFOSA = 13C8 FOSA
 d3NMFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS
 HFPODA = 13C3 HFPO-DA
 NMFM = D7-NMeFOSE
 NEFM = D9-NEtFOSE
 d5NPFSA = D5-NEtFOSA
 d3NMFSFA = D3-NMeFOSA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-859408/1-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 859408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		06/23/25 20:11	06/24/25 08:06	1
4:2 FTS	ND		4.0	0.44	ng/L		06/23/25 20:11	06/24/25 08:06	1
6:2 FTS	ND		4.0	0.41	ng/L		06/23/25 20:11	06/24/25 08:06	1
8:2 FTS	ND		4.0	0.90	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		06/23/25 20:11	06/24/25 08:06	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		06/23/25 20:11	06/24/25 08:06	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		06/23/25 20:11	06/24/25 08:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		06/23/25 20:11	06/24/25 08:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		06/23/25 20:11	06/24/25 08:06	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		06/23/25 20:11	06/24/25 08:06	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		06/23/25 20:11	06/24/25 08:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		06/23/25 20:11	06/24/25 08:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		06/23/25 20:11	06/24/25 08:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		06/23/25 20:11	06/24/25 08:06	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		06/23/25 20:11	06/24/25 08:06	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		06/23/25 20:11	06/24/25 08:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		06/23/25 20:11	06/24/25 08:06	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-859408/1-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 859408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		06/23/25 20:11	06/24/25 08:06	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		06/23/25 20:11	06/24/25 08:06	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		06/23/25 20:11	06/24/25 08:06	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	97.5		5 - 130	06/23/25 20:11	06/24/25 08:06	1
13C5 PFPeA	101		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C5 PFHxA	111		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C4 PFHpA	103		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C8 PFOA	90.7		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C9 PFNA	81.3		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C6 PFDA	98.0		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C7 PFUnA	97.3		30 - 130	06/23/25 20:11	06/24/25 08:06	1
13C2 PFDoA	83.2		10 - 130	06/23/25 20:11	06/24/25 08:06	1
13C2 PFTeDA	72.2		10 - 130	06/23/25 20:11	06/24/25 08:06	1
13C3 PFBS	89.4		40 - 135	06/23/25 20:11	06/24/25 08:06	1
13C3 PFHxS	96.6		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C8 PFOS	80.5		40 - 130	06/23/25 20:11	06/24/25 08:06	1
13C8 FOSA	75.3		40 - 130	06/23/25 20:11	06/24/25 08:06	1
D3-NMeFOSAA	85.6		40 - 170	06/23/25 20:11	06/24/25 08:06	1
D5-NEtFOSAA	83.3		25 - 135	06/23/25 20:11	06/24/25 08:06	1
13C2 4:2 FTS	108		40 - 200	06/23/25 20:11	06/24/25 08:06	1
13C2 6:2 FTS	96.3		40 - 200	06/23/25 20:11	06/24/25 08:06	1
13C2 8:2 FTS	95.8		40 - 300	06/23/25 20:11	06/24/25 08:06	1
13C3 HFPO-DA	97.5		40 - 130	06/23/25 20:11	06/24/25 08:06	1
D7-NMeFOSE	80.0		10 - 130	06/23/25 20:11	06/24/25 08:06	1
D9-NEtFOSE	69.1		10 - 130	06/23/25 20:11	06/24/25 08:06	1
D5-NEtFOSA	69.6		10 - 130	06/23/25 20:11	06/24/25 08:06	1
D3-NMeFOSA	64.8		10 - 130	06/23/25 20:11	06/24/25 08:06	1

Lab Sample ID: LCS 320-859408/3-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	80.5		ng/L		101	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	34.1		ng/L		85	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	34.0		ng/L		85	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	33.4		ng/L		83	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	39.3		ng/L		98	70 - 150
Perfluorononanoic acid (PFNA)	40.0	36.1		ng/L		90	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	38.6		ng/L		97	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	36.3		ng/L		91	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	41.4		ng/L		103	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-859408/3-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	44.3		ng/L		111	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	46.0		ng/L		115	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	34.9		ng/L		98	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	33.7		ng/L		90	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	32.0		ng/L		88	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.3		ng/L		98	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	37.1		ng/L		100	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	38.2		ng/L		99	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	38.5		ng/L		100	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	38.5		ng/L		99	50 - 145
4:2 FTS	75.0	70.9		ng/L		94	70 - 145
6:2 FTS	76.2	67.3		ng/L		88	65 - 155
8:2 FTS	76.8	69.5		ng/L		91	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	41.2		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.5		ng/L		114	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.5		ng/L		101	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.7		ng/L		94	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.0		ng/L		90	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	188		ng/L		94	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	206		ng/L		103	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	29.9		ng/L		100	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	34.1		ng/L		90	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	35.6		ng/L		89	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	39.0		ng/L		98	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	34.1		ng/L		85	50 - 150
9Cl-PF3ONS	37.4	35.3		ng/L		94	70 - 155
11Cl-PF3OUdS	37.8	33.7		ng/L		89	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	30.5		ng/L		86	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	74.5		ng/L		93	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	156		ng/L		78	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-859408/3-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	142		ng/L		71	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	96.3		5 - 130
13C5 PFPeA	99.1		40 - 130
13C5 PFHxA	107		40 - 130
13C4 PFHpA	99.8		40 - 130
13C8 PFOA	91.0		40 - 130
13C9 PFNA	88.7		40 - 130
13C6 PFDA	98.7		40 - 130
13C7 PFUnA	98.9		30 - 130
13C2 PFDoA	82.8		10 - 130
13C2 PFTeDA	73.3		10 - 130
13C3 PFBS	92.1		40 - 135
13C3 PFHxS	96.3		40 - 130
13C8 PFOS	82.2		40 - 130
13C8 FOSA	74.0		40 - 130
D3-NMeFOSAA	88.2		40 - 170
D5-NEtFOSAA	86.1		25 - 135
13C2 4:2 FTS	113		40 - 200
13C2 6:2 FTS	101		40 - 200
13C2 8:2 FTS	101		40 - 300
13C3 HFPO-DA	96.1		40 - 130
D7-NMeFOSE	80.9		10 - 130
D9-NEtFOSE	71.1		10 - 130
D5-NEtFOSA	70.5		10 - 130
D3-NMeFOSA	65.2		10 - 130

Lab Sample ID: LCSD 320-859408/4-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 859408

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	83.7		ng/L		105	70 - 140	4	30
Perfluoropentanoic acid (PFPeA)	40.0	34.9		ng/L		87	65 - 135	2	30
Perfluorohexanoic acid (PFHxA)	40.0	34.7		ng/L		87	70 - 145	2	30
Perfluoroheptanoic acid (PFHpA)	40.0	35.1		ng/L		88	70 - 150	5	30
Perfluorooctanoic acid (PFOA)	40.0	40.8		ng/L		102	70 - 150	4	30
Perfluorononanoic acid (PFNA)	40.0	38.8		ng/L		97	70 - 150	7	30
Perfluorodecanoic acid (PFDA)	40.0	39.4		ng/L		99	70 - 140	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.7		ng/L		99	70 - 145	9	30
Perfluorododecanoic acid (PFDoA)	40.0	43.2		ng/L		108	70 - 140	4	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	46.0		ng/L		115	65 - 140	4	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	45.8		ng/L		114	60 - 140	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-859408/4-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 859408

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	35.5	37.6		ng/L		106	60 - 145	7	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	33.8		ng/L		90	65 - 140	0	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.9		ng/L		87	65 - 145	0	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.3		ng/L		103	70 - 150	5	30
Perfluorooctanesulfonic acid (PFOS)	37.2	37.1		ng/L		100	55 - 150	0	30
Perfluorononanesulfonic acid (PFNS)	38.5	41.1		ng/L		107	65 - 145	7	30
Perfluorodecanesulfonic acid (PFDS)	38.6	37.9		ng/L		98	60 - 145	2	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.8		ng/L		95	50 - 145	4	30
4:2 FTS	75.0	80.3		ng/L		107	70 - 145	12	30
6:2 FTS	76.2	78.6		ng/L		103	65 - 155	15	30
8:2 FTS	76.8	71.5		ng/L		93	60 - 150	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	42.3		ng/L		106	70 - 145	3	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	49.7		ng/L		124	60 - 150	9	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	44.5		ng/L		111	65 - 145	9	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.2		ng/L		93	50 - 140	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.3		ng/L		91	70 - 145	1	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	199		ng/L		100	70 - 145	6	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	220		ng/L		110	70 - 135	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	31.4		ng/L		105	70 - 140	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.1		ng/L		98	65 - 145	9	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	35.9		ng/L		90	55 - 140	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	38.9		ng/L		97	60 - 150	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	38.0		ng/L		95	50 - 150	11	30
9Cl-PF3ONS	37.4	36.4		ng/L		97	70 - 155	3	30
11Cl-PF3OUdS	37.8	35.4		ng/L		94	55 - 160	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	32.0		ng/L		90	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	74.7		ng/L		93	65 - 130	0	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	169		ng/L		85	70 - 135	8	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	150		ng/L		75	50 - 145	5	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C4 PFBA	95.9		5 - 130
13C5 PFPeA	102		40 - 130
13C5 PFHxA	106		40 - 130
13C4 PFHpA	102		40 - 130
13C8 PFOA	91.1		40 - 130
13C9 PFNA	84.9		40 - 130
13C6 PFDA	103		40 - 130
13C7 PFUnA	96.8		30 - 130
13C2 PFDoA	81.7		10 - 130
13C2 PFTeDA	72.3		10 - 130
13C3 PFBS	92.1		40 - 135
13C3 PFHxS	103		40 - 130
13C8 PFOS	84.8		40 - 130
13C8 FOSA	74.9		40 - 130
D3-NMeFOSAA	91.5		40 - 170
D5-NEtFOSAA	84.6		25 - 135
13C2 4:2 FTS	107		40 - 200
13C2 6:2 FTS	98.7		40 - 200
13C2 8:2 FTS	103		40 - 300
13C3 HFPO-DA	97.8		40 - 130
D7-NMeFOSE	77.8		10 - 130
D9-NEtFOSE	68.4		10 - 130
D5-NEtFOSA	67.5		10 - 130
D3-NMeFOSA	62.2		10 - 130

Lab Sample ID: LLCS 320-859408/2-A
Matrix: Water
Analysis Batch: 859449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 859408

<i>Analyte</i>	<i>Spike Added</i>	<i>LLCS Result</i>	<i>LLCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluorobutanoic acid (PFBA)	8.00	7.42		ng/L		93	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.17		ng/L		79	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	3.01		ng/L		75	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.24		ng/L		81	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	3.71		ng/L		93	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.24		ng/L		81	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	3.22		ng/L		80	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	3.51		ng/L		88	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.95		ng/L		99	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.91		ng/L		98	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.05		ng/L		101	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.28		ng/L		92	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	2.94		ng/L		78	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	2.85		ng/L		78	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.28		ng/L		86	70 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-859408/2-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859408

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	3.55		ng/L		95	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.84		ng/L		100	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.42		ng/L		89	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.94		ng/L		76	50 - 145
4:2 FTS	7.50	6.64		ng/L		89	70 - 145
6:2 FTS	7.62	6.51		ng/L		85	65 - 155
8:2 FTS	7.68	6.81		ng/L		89	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.62		ng/L		90	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.75		ng/L		94	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.46		ng/L		87	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.55		ng/L		89	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.08		ng/L		77	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	16.8		ng/L		84	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	17.8		ng/L		89	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.19		ng/L		73	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.04		ng/L		80	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.57		ng/L		89	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.58		ng/L		89	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.17		ng/L		79	50 - 150
9CI-PF3ONS	3.74	3.03		ng/L		81	70 - 155
11CI-PF3OUdS	3.78	2.80		ng/L		74	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	2.66		ng/L		74	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	5.98		ng/L		75	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	14.0		ng/L		70	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	11.8		ng/L		59	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	101		5 - 130
13C5 PFPeA	101		40 - 130
13C5 PFHxA	113		40 - 130
13C4 PFHpA	108		40 - 130
13C8 PFOA	88.5		40 - 130
13C9 PFNA	86.6		40 - 130
13C6 PFDA	101		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-859408/2-A

Matrix: Water

Analysis Batch: 859449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859408

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C7 PFUnA	93.5		30 - 130
13C2 PFDoA	77.7		10 - 130
13C2 PFTeDA	67.1		10 - 130
13C3 PFBS	87.4		40 - 135
13C3 PFHxS	96.4		40 - 130
13C8 PFOS	84.8		40 - 130
13C8 FOSA	76.6		40 - 130
D3-NMeFOSAA	89.8		40 - 170
D5-NEtFOSAA	89.2		25 - 135
13C2 4:2 FTS	102		40 - 200
13C2 6:2 FTS	93.9		40 - 200
13C2 8:2 FTS	97.4		40 - 300
13C3 HFPO-DA	107		40 - 130
D7-NMeFOSE	77.0		10 - 130
D9-NEtFOSE	69.0		10 - 130
D5-NEtFOSA	65.9		10 - 130
D3-NMeFOSA	62.1		10 - 130

Lab Sample ID: MB 320-859517/1-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 859517

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.049	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.040	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.033	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.062	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.029	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.024	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.028	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.027	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.029	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.058	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.040	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.020	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.016	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.025	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.023	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.021	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.037	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
4:2 FTS	ND		0.40	0.065	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
6:2 FTS	ND		0.40	0.054	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
8:2 FTS	ND		0.40	0.044	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.063	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.20	0.036	ug/Kg		06/24/25 12:11	06/25/25 11:37	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-859517/1-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 859517

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.20	0.021	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.20	0.016	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.20	0.017	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.088	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.077	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.20	0.029	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.025	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.20	0.022	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.20	0.036	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.20	0.062	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
9Cl-PF3ONS	ND		0.20	0.038	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
11Cl-PF3OUdS	ND		0.20	0.075	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.20	0.038	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.40	0.075	ug/Kg		06/24/25 12:11	06/25/25 11:37	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.25	ug/Kg		06/24/25 12:11	06/25/25 11:37	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	80.1		35 - 130	06/24/25 12:11	06/25/25 11:37	1
13C5 PFHxA	92.5		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C4 PFHpA	86.0		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C8 PFOA	74.8		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C9 PFNA	68.9		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C6 PFDA	83.5		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C7 PFUnA	83.0		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C2 PFDoA	64.2		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C2 PFTeDA	63.3		20 - 130	06/24/25 12:11	06/25/25 11:37	1
13C3 PFHxS	78.2		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C8 PFOS	68.5		40 - 130	06/24/25 12:11	06/25/25 11:37	1
13C8 FOSA	53.9		40 - 130	06/24/25 12:11	06/25/25 11:37	1
D3-NMeFOSAA	64.9		40 - 135	06/24/25 12:11	06/25/25 11:37	1
D5-NEtFOSAA	63.8		40 - 150	06/24/25 12:11	06/25/25 11:37	1
13C2 4:2 FTS	76.9		40 - 165	06/24/25 12:11	06/25/25 11:37	1
13C2 6:2 FTS	81.4		40 - 215	06/24/25 12:11	06/25/25 11:37	1
13C2 8:2 FTS	73.9		40 - 275	06/24/25 12:11	06/25/25 11:37	1
13C3 HFPO-DA	76.7		40 - 130	06/24/25 12:11	06/25/25 11:37	1
D7-NMeFOSE	54.0		20 - 130	06/24/25 12:11	06/25/25 11:37	1
D9-NEtFOSE	53.3		15 - 130	06/24/25 12:11	06/25/25 11:37	1
D5-NEtFOSA	30.0		10 - 130	06/24/25 12:11	06/25/25 11:37	1
D3-NMeFOSA	29.2		10 - 130	06/24/25 12:11	06/25/25 11:37	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: LCS 320-859517/3-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	2.50	2.30		ug/Kg		92	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.04		ug/Kg		82	65 - 140
Perfluoroheptanoic acid (PFHpA)	2.50	2.11		ug/Kg		84	65 - 145
Perfluorooctanoic acid (PFOA)	2.50	2.45		ug/Kg		98	70 - 150
Perfluorononanoic acid (PFNA)	2.50	2.29		ug/Kg		91	70 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.57		ug/Kg		103	70 - 155
Perfluoroundecanoic acid (PFUnA)	2.50	2.39		ug/Kg		96	70 - 155
Perfluorododecanoic acid (PFDoA)	2.50	2.72		ug/Kg		109	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.43		ug/Kg		97	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.62		ug/Kg		105	65 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.08		ug/Kg		89	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	2.28	1.96		ug/Kg		86	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.42		ug/Kg		101	65 - 155
Perfluorooctanesulfonic acid (PFOS)	2.33	2.23		ug/Kg		96	65 - 160
Perfluorononanesulfonic acid (PFNS)	2.41	2.38		ug/Kg		99	55 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.24		ug/Kg		93	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	2.43	1.83		ug/Kg		75	25 - 160
4:2 FTS	4.69	4.84		ug/Kg		103	60 - 150
6:2 FTS	4.76	4.26		ug/Kg		89	55 - 200
8:2 FTS	4.80	4.72		ug/Kg		98	70 - 150
Perfluorooctanesulfonamide (PFOSA)	2.50	2.60		ug/Kg		104	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.81		ug/Kg		112	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.58		ug/Kg		103	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.56		ug/Kg		103	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.27		ug/Kg		91	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	12.5		ug/Kg		100	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	12.8		ug/Kg		102	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.88	1.98		ug/Kg		106	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.31		ug/Kg		97	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.21		ug/Kg		88	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.26		ug/Kg		90	60 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-859517/3-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	2.50	2.25		ug/Kg		90	60 - 155
9CI-PF3ONS	2.34	2.20		ug/Kg		94	70 - 150
11CI-PF3OUdS	2.36	1.83		ug/Kg		78	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	1.91		ug/Kg		86	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.58		ug/Kg		92	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	10.3		ug/Kg		82	60 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C5 PFPeA	98.1		35 - 130
13C5 PFHxA	106		40 - 130
13C4 PFHpA	105		40 - 130
13C8 PFOA	86.9		40 - 130
13C9 PFNA	82.6		40 - 130
13C6 PFDA	89.1		40 - 130
13C7 PFUnA	85.8		40 - 130
13C2 PFDoA	64.4		40 - 130
13C2 PFTeDA	54.4		20 - 130
13C3 PFHxS	89.6		40 - 130
13C8 PFOS	75.3		40 - 130
13C8 FOSA	66.3		40 - 130
D3-NMeFOSAA	74.8		40 - 135
D5-NEtFOSAA	74.7		40 - 150
13C2 4:2 FTS	91.8		40 - 165
13C2 6:2 FTS	93.7		40 - 215
13C2 8:2 FTS	86.9		40 - 275
13C3 HFPO-DA	89.9		40 - 130
D7-NMeFOSE	38.4		20 - 130
D9-NEtFOSE	34.9		15 - 130
D5-NEtFOSA	34.0		10 - 130
D3-NMeFOSA	34.0		10 - 130

Lab Sample ID: LCSD 320-859517/4-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluoropentanoic acid (PFPeA)	2.50	2.24		ug/Kg		90	60 - 150	2	30
Perfluorohexanoic acid (PFHxA)	2.50	1.79		ug/Kg		72	65 - 140	13	30
Perfluoroheptanoic acid (PFHpA)	2.50	1.86		ug/Kg		75	65 - 145	12	30
Perfluorooctanoic acid (PFOA)	2.50	2.14		ug/Kg		86	70 - 150	13	30
Perfluorononanoic acid (PFNA)	2.50	2.18		ug/Kg		87	70 - 155	5	30
Perfluorodecanoic acid (PFDA)	2.50	2.21		ug/Kg		88	70 - 155	15	30
Perfluoroundecanoic acid (PFUnA)	2.50	2.04		ug/Kg		82	70 - 155	16	30
Perfluorododecanoic acid (PFDoA)	2.50	2.49		ug/Kg		100	70 - 150	9	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-859517/4-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.31		ug/Kg		92	65 - 150	5	30
Perfluorotetradecanoic acid (PFTTeDA)	2.50	2.43		ug/Kg		97	65 - 150	7	30
Perfluoropentanesulfonic acid (PFPeS)	2.35	1.79		ug/Kg		76	55 - 160	15	30
Perfluorohexanesulfonic acid (PFHxS)	2.28	1.70		ug/Kg		74	60 - 150	15	30
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.27		ug/Kg		95	65 - 155	6	30
Perfluorooctanesulfonic acid (PFOS)	2.33	2.06		ug/Kg		89	65 - 160	8	30
Perfluorononanesulfonic acid (PFNS)	2.41	1.97		ug/Kg		82	55 - 140	19	30
Perfluorodecanesulfonic acid (PFDS)	2.41	1.55	*1	ug/Kg		64	30 - 140	37	30
Perfluorododecanesulfonic acid (PFDoS)	2.43	1.62		ug/Kg		67	25 - 160	12	30
4:2 FTS	4.69	4.32		ug/Kg		92	60 - 150	11	30
6:2 FTS	4.76	3.81		ug/Kg		80	55 - 200	11	30
8:2 FTS	4.80	4.40		ug/Kg		92	70 - 150	7	30
Perfluorooctanesulfonamide (PFOSA)	2.50	2.36		ug/Kg		95	70 - 140	9	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.33		ug/Kg		93	70 - 155	18	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.09		ug/Kg		84	70 - 140	21	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.34		ug/Kg		94	65 - 155	9	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.15		ug/Kg		86	65 - 165	6	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	11.1		ug/Kg		89	70 - 140	12	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	12.6		ug/Kg		101	70 - 135	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.88	1.93		ug/Kg		103	70 - 145	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.03		ug/Kg		86	70 - 160	13	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.17		ug/Kg		87	30 - 140	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.11		ug/Kg		84	60 - 150	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	1.81		ug/Kg		73	60 - 155	21	30
9CI-PF3ONS	2.34	1.66		ug/Kg		71	70 - 150	28	30
11CI-PF3OUdS	2.36	1.12	*1	ug/Kg		48	45 - 160	48	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.23	1.60		ug/Kg		72	70 - 140	18	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.38		ug/Kg		88	45 - 130	5	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	8.55		ug/Kg		68	60 - 130	19	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C5 PFPeA	108		35 - 130
13C5 PFHxA	126		40 - 130
13C4 PFHpA	119		40 - 130
13C8 PFOA	98.3		40 - 130
13C9 PFNA	82.8		40 - 130
13C6 PFDA	87.0		40 - 130
13C7 PFUnA	74.2		40 - 130
13C2 PFDoA	52.1		40 - 130
13C2 PFTeDA	66.9		20 - 130
13C3 PFHxS	106		40 - 130
13C8 PFOS	78.4		40 - 130
13C8 FOSA	60.5		40 - 130
D3-NMeFOSAA	61.8		40 - 135
D5-NEtFOSAA	59.1		40 - 150
13C2 4:2 FTS	110		40 - 165
13C2 6:2 FTS	104		40 - 215
13C2 8:2 FTS	79.8		40 - 275
13C3 HFPO-DA	108		40 - 130
D7-NMeFOSE	55.3		20 - 130
D9-NEtFOSE	46.9		15 - 130
D5-NEtFOSA	54.0		10 - 130
D3-NMeFOSA	47.8		10 - 130

Lab Sample ID: LLCS 320-859517/2-A
Matrix: Solid
Analysis Batch: 859723

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 859517

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	0.400	0.418		ug/Kg		104	60 - 150
Perfluorohexanoic acid (PFHxA)	0.400	0.361		ug/Kg		90	65 - 140
Perfluoroheptanoic acid (PFHpA)	0.400	0.378		ug/Kg		95	65 - 145
Perfluorooctanoic acid (PFOA)	0.400	0.436		ug/Kg		109	70 - 150
Perfluorononanoic acid (PFNA)	0.400	0.396		ug/Kg		99	70 - 155
Perfluorodecanoic acid (PFDA)	0.400	0.413		ug/Kg		103	70 - 155
Perfluoroundecanoic acid (PFUnA)	0.400	0.400		ug/Kg		100	70 - 155
Perfluorododecanoic acid (PFDoA)	0.400	0.443		ug/Kg		111	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.400	0.401		ug/Kg		100	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.400	0.467		ug/Kg		117	65 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.376	0.360		ug/Kg		96	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	0.365	0.357		ug/Kg		98	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.382	0.409		ug/Kg		107	65 - 155
Perfluorooctanesulfonic acid (PFOS)	0.372	0.391		ug/Kg		105	65 - 160
Perfluorononanesulfonic acid (PFNS)	0.385	0.381		ug/Kg		99	55 - 140
Perfluorodecanesulfonic acid (PFDS)	0.386	0.313		ug/Kg		81	30 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-859517/2-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid (PFDoS)	0.388	0.266		ug/Kg		69	25 - 160
4:2 FTS	0.750	0.786		ug/Kg		105	60 - 150
6:2 FTS	0.762	0.759		ug/Kg		100	55 - 200
8:2 FTS	0.768	0.888		ug/Kg		116	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.400	0.521		ug/Kg		130	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.400	0.401		ug/Kg		100	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.400	0.439		ug/Kg		110	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.400	0.438		ug/Kg		110	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.400	0.402		ug/Kg		101	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.00	2.18		ug/Kg		109	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.00	2.17		ug/Kg		108	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	0.300	0.276		ug/Kg		92	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.378	0.395		ug/Kg		105	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.400	0.377		ug/Kg		94	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.400	0.399		ug/Kg		100	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.400	0.341		ug/Kg		85	60 - 155
9Cl-PF3ONS	0.374	0.351		ug/Kg		94	70 - 150
11Cl-PF3OUdS	0.378	0.238		ug/Kg		63	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.357	0.297		ug/Kg		83	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.800	0.841		ug/Kg		105	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.00	1.62		ug/Kg		81	60 - 130

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C5 PFPeA	94.0		35 - 130
13C5 PFHxA	107		40 - 130
13C4 PFHpA	102		40 - 130
13C8 PFOA	82.5		40 - 130
13C9 PFNA	78.4		40 - 130
13C6 PFDA	87.0		40 - 130
13C7 PFUnA	73.1		40 - 130
13C2 PFDoA	52.1		40 - 130
13C2 PFTeDA	51.7		20 - 130
13C3 PFHxS	85.3		40 - 130
13C8 PFOS	70.5		40 - 130
13C8 FOSA	44.7		40 - 130
D3-NMeFOSAA	61.7		40 - 135
D5-NEtFOSAA	56.6		40 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-859517/2-A

Matrix: Solid

Analysis Batch: 859723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859517

	LLCS	LLCS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C2 4:2 FTS	86.8		40 - 165
13C2 6:2 FTS	90.2		40 - 215
13C2 8:2 FTS	71.5		40 - 275
13C3 HFPO-DA	94.5		40 - 130
D7-NMeFOSE	37.6		20 - 130
D9-NEtFOSE	35.3		15 - 130
D5-NEtFOSA	28.2		10 - 130
D3-NMeFOSA	26.8		10 - 130

Lab Sample ID: MB 320-860314/1-A

Matrix: Solid

Analysis Batch: 860751

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 860314

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Perfluorobutanoic acid (PFBA)	ND		0.40	0.032	ug/Kg		06/27/25 13:32	07/01/25 05:39	1	
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.025	ug/Kg		06/27/25 13:32	07/01/25 05:39	1	
	MB	MB								
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
13C4 PFBA	98.4		8 - 130				06/27/25 13:32	07/01/25 05:39	1	
13C3 PFBS	98.1		40 - 135				06/27/25 13:32	07/01/25 05:39	1	

Lab Sample ID: LCS 320-860314/3-A

Matrix: Solid

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860314

		Spike	LCS	LCS					%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits		
Perfluorobutanoic acid (PFBA)		5.00	4.72		ug/Kg		94	70 - 140		
Perfluorobutanesulfonic acid (PFBS)		2.22	1.90		ug/Kg		86	65 - 145		
	LCS	LCS								
Isotope Dilution	%Recovery	Qualifier	Limits							
13C4 PFBA	101		8 - 130							
13C3 PFBS	99.1		40 - 135							

Lab Sample ID: LCSD 320-860314/4-A

Matrix: Solid

Analysis Batch: 860751

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 860314

		Spike	LCSD	LCSD				%Rec	RPD	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)		5.00	4.86		ug/Kg		97	70 - 140	3	30
Perfluorobutanesulfonic acid (PFBS)		2.22	1.91		ug/Kg		86	65 - 145	1	30
	LCSD	LCSD								
Isotope Dilution	%Recovery	Qualifier	Limits							
13C4 PFBA	101		8 - 130							
13C3 PFBS	102		40 - 135							

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-860314/2-A

Matrix: Solid

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860314

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.800	0.775		ug/Kg		97	70 - 140
Perfluorobutanesulfonic acid (PFBS)	0.355	0.323		ug/Kg		91	65 - 145
	LLCS	LLCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C4 PFBA	97.6		8 - 130				
13C3 PFBS	97.1		40 - 135				

Lab Sample ID: MB 320-860391/1-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 860391

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		06/28/25 05:31	07/01/25 01:32	1
4:2 FTS	ND		4.0	0.44	ng/L		06/28/25 05:31	07/01/25 01:32	1
6:2 FTS	ND		4.0	0.41	ng/L		06/28/25 05:31	07/01/25 01:32	1
8:2 FTS	ND		4.0	0.90	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		06/28/25 05:31	07/01/25 01:32	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		06/28/25 05:31	07/01/25 01:32	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		06/28/25 05:31	07/01/25 01:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		06/28/25 05:31	07/01/25 01:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		06/28/25 05:31	07/01/25 01:32	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		06/28/25 05:31	07/01/25 01:32	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		06/28/25 05:31	07/01/25 01:32	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-860391/1-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 860391

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		06/28/25 05:31	07/01/25 01:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		06/28/25 05:31	07/01/25 01:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		06/28/25 05:31	07/01/25 01:32	1
9Cl-PF3ONS	ND		2.0	0.58	ng/L		06/28/25 05:31	07/01/25 01:32	1
11Cl-PF3OUdS	ND		2.0	0.30	ng/L		06/28/25 05:31	07/01/25 01:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		06/28/25 05:31	07/01/25 01:32	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		06/28/25 05:31	07/01/25 01:32	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		06/28/25 05:31	07/01/25 01:32	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		06/28/25 05:31	07/01/25 01:32	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	104		5 - 130	06/28/25 05:31	07/01/25 01:32	1
13C5 PFPeA	95.0		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C5 PFHxA	97.6		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C4 PFHpA	95.6		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C8 PFOA	98.9		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C9 PFNA	88.2		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C6 PFDA	98.5		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C7 PFUnA	96.3		30 - 130	06/28/25 05:31	07/01/25 01:32	1
13C2 PFDoA	80.9		10 - 130	06/28/25 05:31	07/01/25 01:32	1
13C2 PFTeDA	69.8		10 - 130	06/28/25 05:31	07/01/25 01:32	1
13C3 PFBS	99.2		40 - 135	06/28/25 05:31	07/01/25 01:32	1
13C3 PFHxS	91.0		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C8 PFOS	82.6		40 - 130	06/28/25 05:31	07/01/25 01:32	1
13C8 FOSA	70.2		40 - 130	06/28/25 05:31	07/01/25 01:32	1
D3-NMeFOSAA	85.5		40 - 170	06/28/25 05:31	07/01/25 01:32	1
D5-NEtFOSAA	75.8		25 - 135	06/28/25 05:31	07/01/25 01:32	1
13C2 4:2 FTS	103		40 - 200	06/28/25 05:31	07/01/25 01:32	1
13C2 6:2 FTS	105		40 - 200	06/28/25 05:31	07/01/25 01:32	1
13C2 8:2 FTS	98.8		40 - 300	06/28/25 05:31	07/01/25 01:32	1
13C3 HFPO-DA	88.9		40 - 130	06/28/25 05:31	07/01/25 01:32	1
D7-NMeFOSE	70.9		10 - 130	06/28/25 05:31	07/01/25 01:32	1
D9-NEtFOSE	60.0		10 - 130	06/28/25 05:31	07/01/25 01:32	1
D5-NEtFOSA	68.7		10 - 130	06/28/25 05:31	07/01/25 01:32	1
D3-NMeFOSA	64.7		10 - 130	06/28/25 05:31	07/01/25 01:32	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-860391/3-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	70.0		ng/L		88	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	40.0		ng/L		100	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	37.3		ng/L		93	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	37.1		ng/L		93	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	39.7		ng/L		99	70 - 150
Perfluorononanoic acid (PFNA)	40.0	43.1		ng/L		108	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	38.8		ng/L		97	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	37.9		ng/L		95	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	39.6		ng/L		99	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.2		ng/L		98	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	42.8		ng/L		107	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	32.9		ng/L		93	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.2		ng/L		99	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.2		ng/L		99	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.2		ng/L		103	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.9		ng/L		99	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	40.6		ng/L		105	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.7		ng/L		93	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.1		ng/L		90	50 - 145
4:2 FTS	75.0	74.2		ng/L		99	70 - 145
6:2 FTS	76.2	70.9		ng/L		93	65 - 155
8:2 FTS	76.8	68.7		ng/L		89	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	41.4		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	43.6		ng/L		109	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	38.5		ng/L		96	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	36.6		ng/L		91	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.4		ng/L		91	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	182		ng/L		91	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	203		ng/L		102	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	27.3		ng/L		91	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.4		ng/L		99	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	33.2		ng/L		83	55 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-860391/3-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	38.8		ng/L		97	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	40.6		ng/L		102	50 - 150
9CI-PF3ONS	37.4	38.2		ng/L		102	70 - 155
11CI-PF3OUdS	37.8	38.0		ng/L		101	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	33.5		ng/L		94	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	72.5		ng/L		91	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	183		ng/L		92	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	172		ng/L		86	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	102		5 - 130
13C5 PFPeA	94.2		40 - 130
13C5 PFHxA	93.2		40 - 130
13C4 PFHpA	92.8		40 - 130
13C8 PFOA	106		40 - 130
13C9 PFNA	90.4		40 - 130
13C6 PFDA	97.7		40 - 130
13C7 PFUnA	93.8		30 - 130
13C2 PFDoA	86.6		10 - 130
13C2 PFTeDA	75.4		10 - 130
13C3 PFBS	94.5		40 - 135
13C3 PFHxS	91.4		40 - 130
13C8 PFOS	84.6		40 - 130
13C8 FOSA	72.1		40 - 130
D3-NMeFOSAA	89.3		40 - 170
D5-NEtFOSAA	77.5		25 - 135
13C2 4:2 FTS	95.4		40 - 200
13C2 6:2 FTS	101		40 - 200
13C2 8:2 FTS	95.1		40 - 300
13C3 HFPO-DA	89.6		40 - 130
D7-NMeFOSE	70.1		10 - 130
D9-NEtFOSE	62.5		10 - 130
D5-NEtFOSA	68.7		10 - 130
D3-NMeFOSA	63.0		10 - 130

Lab Sample ID: LCSD 320-860391/4-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	73.1		ng/L		91	70 - 140	4	30
Perfluoropentanoic acid (PFPeA)	40.0	41.0		ng/L		103	65 - 135	3	30
Perfluorohexanoic acid (PFHxA)	40.0	39.6		ng/L		99	70 - 145	6	30
Perfluoroheptanoic acid (PFHpA)	40.0	39.3		ng/L		98	70 - 150	6	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-860391/4-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanoic acid (PFOA)	40.0	43.3		ng/L		108	70 - 150	9	30
Perfluorononanoic acid (PFNA)	40.0	45.2		ng/L		113	70 - 150	5	30
Perfluorodecanoic acid (PFDA)	40.0	40.1		ng/L		100	70 - 140	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	40.5		ng/L		101	70 - 145	7	30
Perfluorododecanoic acid (PFDoA)	40.0	42.5		ng/L		106	70 - 140	7	30
Perfluorotridecanoic acid (PFTrDA)	40.0	38.8		ng/L		97	65 - 140	1	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	41.0		ng/L		103	60 - 140	4	30
Perfluorobutanesulfonic acid (PFBS)	35.5	35.8		ng/L		101	60 - 145	8	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.7		ng/L		103	65 - 140	4	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.2		ng/L		102	65 - 145	3	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.9		ng/L		105	70 - 150	2	30
Perfluorooctanesulfonic acid (PFOS)	37.2	37.5		ng/L		101	55 - 150	1	30
Perfluorononanesulfonic acid (PFNS)	38.5	41.0		ng/L		106	65 - 145	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	39.3		ng/L		102	60 - 145	10	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.8		ng/L		95	50 - 145	5	30
4:2 FTS	75.0	77.9		ng/L		104	70 - 145	5	30
6:2 FTS	76.2	74.1		ng/L		97	65 - 155	4	30
8:2 FTS	76.8	71.9		ng/L		94	60 - 150	4	30
Perfluorooctanesulfonamide (PFOSA)	40.0	42.9		ng/L		107	70 - 145	4	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	46.1		ng/L		115	60 - 150	6	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	39.2		ng/L		98	65 - 145	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.9		ng/L		95	50 - 140	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.8		ng/L		100	70 - 145	9	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	189		ng/L		94	70 - 145	3	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	213		ng/L		107	70 - 135	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	26.6		ng/L		89	70 - 140	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	40.6		ng/L		107	65 - 145	8	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	35.7		ng/L		89	55 - 140	7	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	37.8		ng/L		95	60 - 150	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	39.7		ng/L		99	50 - 150	2	30
9CI-PF3ONS	37.4	38.7		ng/L		104	70 - 155	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-860391/4-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11CI-PF3OUdS	37.8	39.5		ng/L		105	55 - 160	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	35.6		ng/L		100	70 - 140	6	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	75.6		ng/L		95	65 - 130	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	190		ng/L		95	70 - 135	4	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	186		ng/L		93	50 - 145	8	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	103		5 - 130
13C5 PFPeA	92.9		40 - 130
13C5 PFHxA	90.0		40 - 130
13C4 PFHpA	92.6		40 - 130
13C8 PFOA	93.5		40 - 130
13C9 PFNA	87.8		40 - 130
13C6 PFDA	99.9		40 - 130
13C7 PFUnA	96.5		30 - 130
13C2 PFDoA	88.4		10 - 130
13C2 PFTeDA	86.0		10 - 130
13C3 PFBS	95.6		40 - 135
13C3 PFHxS	89.8		40 - 130
13C8 PFOS	84.6		40 - 130
13C8 FOSA	76.1		40 - 130
D3-NMeFOSAA	93.6		40 - 170
D5-NEtFOSAA	84.9		25 - 135
13C2 4:2 FTS	94.9		40 - 200
13C2 6:2 FTS	103		40 - 200
13C2 8:2 FTS	99.2		40 - 300
13C3 HFPO-DA	86.7		40 - 130
D7-NMeFOSE	81.0		10 - 130
D9-NEtFOSE	69.2		10 - 130
D5-NEtFOSA	75.0		10 - 130
D3-NMeFOSA	68.3		10 - 130

Lab Sample ID: LLCS 320-860391/2-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	7.92		ng/L		99	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.86		ng/L		122	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.10		ng/L		102	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.25		ng/L		106	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.49		ng/L		112	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.53		ng/L		113	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.40		ng/L		110	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.11		ng/L		103	70 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-860391/2-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	4.00	4.29		ng/L		107	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.97		ng/L		99	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.57		ng/L		114	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.82		ng/L		108	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.06		ng/L		108	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.01		ng/L		110	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.15		ng/L		109	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.75		ng/L		101	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.29		ng/L		112	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.76		ng/L		98	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.59		ng/L		93	50 - 145
4:2 FTS	7.50	8.28		ng/L		110	70 - 145
6:2 FTS	7.62	7.63		ng/L		100	65 - 155
8:2 FTS	7.68	7.90		ng/L		103	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.46		ng/L		112	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.65		ng/L		91	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.79		ng/L		95	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.97		ng/L		99	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.11		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.3		ng/L		97	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	22.0		ng/L		110	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.99		ng/L		100	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.27		ng/L		113	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.95		ng/L		99	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.22		ng/L		106	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.02		ng/L		100	50 - 150
9CI-PF3ONS	3.74	4.42		ng/L		118	70 - 155
11CI-PF3OUdS	3.78	4.16		ng/L		110	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.84		ng/L		108	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	7.84		ng/L		98	65 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-860391/2-A

Matrix: Water

Analysis Batch: 860751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 860391

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	18.8		ng/L		94	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	17.9		ng/L		89	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	102		5 - 130
13C5 PFPeA	97.5		40 - 130
13C5 PFHxA	102		40 - 130
13C4 PFHpA	97.0		40 - 130
13C8 PFOA	102		40 - 130
13C9 PFNA	92.4		40 - 130
13C6 PFDA	95.2		40 - 130
13C7 PFUnA	98.4		30 - 130
13C2 PFDoA	86.9		10 - 130
13C2 PFTeDA	74.0		10 - 130
13C3 PFBS	96.7		40 - 135
13C3 PFHxS	91.4		40 - 130
13C8 PFOS	87.6		40 - 130
13C8 FOSA	76.3		40 - 130
D3-NMeFOSAA	96.5		40 - 170
D5-NEtFOSAA	83.3		25 - 135
13C2 4:2 FTS	106		40 - 200
13C2 6:2 FTS	104		40 - 200
13C2 8:2 FTS	102		40 - 300
13C3 HFPO-DA	93.1		40 - 130
D7-NMeFOSE	75.3		10 - 130
D9-NEtFOSE	64.5		10 - 130
D5-NEtFOSA	69.0		10 - 130
D3-NMeFOSA	65.4		10 - 130

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: MB 320-859517/1-A

Matrix: Solid

Analysis Batch: 859963

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 859517

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA) - RA	ND		0.40	0.032	ug/Kg		06/24/25 12:11	06/26/25 08:40	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	ND		1.0	0.21	ug/Kg		06/24/25 12:11	06/26/25 08:40	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA - RA	70.1		8 - 130				06/24/25 12:11	06/26/25 08:40	1
13C5 PFHxA - RA	91.0		40 - 130				06/24/25 12:11	06/26/25 08:40	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Lab Sample ID: LCS 320-859517/3-A

Matrix: Solid

Analysis Batch: 859963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA) - RA	5.00	5.07		ug/Kg		101	70 - 140
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	12.5	10.5		ug/Kg		84	60 - 150
Isotope Dilution							
	%Recovery	Qualifier	Limits				
13C4 PFBA - RA	81.7		8 - 130				
13C5 PFHxA - RA	106		40 - 130				

Lab Sample ID: LCSD 320-859517/4-A

Matrix: Solid

Analysis Batch: 859963

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA) - RA	5.00	4.61		ug/Kg		92	70 - 140	10	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	12.5	7.96		ug/Kg		64	60 - 150	27	30
Isotope Dilution									
	%Recovery	Qualifier	Limits						
13C4 PFBA - RA	97.5		8 - 130						
13C5 PFHxA - RA	127		40 - 130						

Lab Sample ID: LLCS 320-859517/2-A

Matrix: Solid

Analysis Batch: 859963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 859517

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA) - RA	0.800	0.901		ug/Kg		113	70 - 140
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RA	2.00	1.61		ug/Kg		80	60 - 150
Isotope Dilution							
	%Recovery	Qualifier	Limits				
13C4 PFBA - RA	81.6		8 - 130				
13C5 PFHxA - RA	100		40 - 130				

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 320-859277/1

Matrix: Water

Analysis Batch: 859277

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.0	5.0	mg/L			06/23/25 11:45	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 320-859277/2

Matrix: Water

Analysis Batch: 859277

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	99.2		mg/L		99	85 - 115

Lab Sample ID: 320-122544-1 DU

Matrix: Water

Analysis Batch: 859277

Client Sample ID: INF-02-202506

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	320		280		mg/L		13	20

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

LCMS

Prep Batch: 859408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-2	INF-07-202506	Total/NA	Water	1633	
320-122544-7	EFF G-202506	Total/NA	Water	1633	
320-122544-11	EB-01-202506	Total/NA	Water	1633	
320-122544-12	EB-02-202506	Total/NA	Water	1633	
MB 320-859408/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-859408/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-859408/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-859408/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 859449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-2	INF-07-202506	Total/NA	Water	1633A	859408
320-122544-7	EFF G-202506	Total/NA	Water	1633A	859408
320-122544-11	EB-01-202506	Total/NA	Water	1633A	859408
320-122544-12	EB-02-202506	Total/NA	Water	1633A	859408
MB 320-859408/1-A	Method Blank	Total/NA	Water	1633A	859408
LCS 320-859408/3-A	Lab Control Sample	Total/NA	Water	1633A	859408
LCSD 320-859408/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	859408
LLCS 320-859408/2-A	Lab Control Sample	Total/NA	Water	1633A	859408

Prep Batch: 859517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8	BIO-A-23-202506	Total/NA	Solid	1633 Shake	
320-122544-8 - RA	BIO-A-23-202506	Total/NA	Solid	1633 Shake	
320-122544-9	BIO-A-24-202506	Total/NA	Solid	1633 Shake	
320-122544-9 - RA	BIO-A-24-202506	Total/NA	Solid	1633 Shake	
320-122544-10	BIO-B-202506	Total/NA	Solid	1633 Shake	
MB 320-859517/1-A	Method Blank	Total/NA	Solid	1633 Shake	
MB 320-859517/1-A - RA	Method Blank	Total/NA	Solid	1633 Shake	
LCS 320-859517/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LCS 320-859517/3-A - RA	Lab Control Sample	Total/NA	Solid	1633 Shake	
LCSD 320-859517/4-A	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LCSD 320-859517/4-A - RA	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LLCS 320-859517/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LLCS 320-859517/2-A - RA	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 859723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8	BIO-A-23-202506	Total/NA	Solid	1633A	859517
320-122544-9	BIO-A-24-202506	Total/NA	Solid	1633A	859517
320-122544-10	BIO-B-202506	Total/NA	Solid	1633A	859517
MB 320-859517/1-A	Method Blank	Total/NA	Solid	1633A	859517
LCS 320-859517/3-A	Lab Control Sample	Total/NA	Solid	1633A	859517
LCSD 320-859517/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	859517
LLCS 320-859517/2-A	Lab Control Sample	Total/NA	Solid	1633A	859517

Analysis Batch: 859963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8 - RA	BIO-A-23-202506	Total/NA	Solid	1633A	859517
320-122544-9 - RA	BIO-A-24-202506	Total/NA	Solid	1633A	859517
MB 320-859517/1-A - RA	Method Blank	Total/NA	Solid	1633A	859517

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

LCMS (Continued)

Analysis Batch: 859963 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-859517/3-A - RA	Lab Control Sample	Total/NA	Solid	1633A	859517
LCSD 320-859517/4-A - RA	Lab Control Sample Dup	Total/NA	Solid	1633A	859517
LLCS 320-859517/2-A - RA	Lab Control Sample	Total/NA	Solid	1633A	859517

Prep Batch: 860314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8 - RE	BIO-A-23-202506	Total/NA	Solid	1633 Shake	
320-122544-9 - RE	BIO-A-24-202506	Total/NA	Solid	1633 Shake	
320-122544-10 - RE	BIO-B-202506	Total/NA	Solid	1633 Shake	
MB 320-860314/1-A	Method Blank	Total/NA	Solid	1633 Shake	
LCS 320-860314/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LCSD 320-860314/4-A	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LLCS 320-860314/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Prep Batch: 860391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-1	INF-02-202506	Total/NA	Water	1633	
320-122544-3	INF-08-202506	Total/NA	Water	1633	
320-122544-4	INF-11-202506	Total/NA	Water	1633	
320-122544-5	INF-18-202506	Total/NA	Water	1633	
320-122544-6	INF-COMP-202506	Total/NA	Water	1633	
320-122544-11 - RE	EB-01-202506	Total/NA	Water	1633	
MB 320-860391/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-860391/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-860391/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-860391/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 860751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-1	INF-02-202506	Total/NA	Water	1633A	860391
320-122544-3	INF-08-202506	Total/NA	Water	1633A	860391
320-122544-6	INF-COMP-202506	Total/NA	Water	1633A	860391
320-122544-8 - RE	BIO-A-23-202506	Total/NA	Solid	1633A	860314
320-122544-9 - RE	BIO-A-24-202506	Total/NA	Solid	1633A	860314
320-122544-10 - RE	BIO-B-202506	Total/NA	Solid	1633A	860314
320-122544-11 - RE	EB-01-202506	Total/NA	Water	1633A	860391
MB 320-860314/1-A	Method Blank	Total/NA	Solid	1633A	860314
MB 320-860391/1-A	Method Blank	Total/NA	Water	1633A	860391
LCS 320-860314/3-A	Lab Control Sample	Total/NA	Solid	1633A	860314
LCS 320-860391/3-A	Lab Control Sample	Total/NA	Water	1633A	860391
LCSD 320-860314/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	860314
LCSD 320-860391/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	860391
LLCS 320-860314/2-A	Lab Control Sample	Total/NA	Solid	1633A	860314
LLCS 320-860391/2-A	Lab Control Sample	Total/NA	Water	1633A	860391

Analysis Batch: 860752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-4	INF-11-202506	Total/NA	Water	1633A	860391
320-122544-5	INF-18-202506	Total/NA	Water	1633A	860391

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

General Chemistry

Analysis Batch: 858948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8	BIO-A-23-202506	Total/NA	Solid	1633	
320-122544-9	BIO-A-24-202506	Total/NA	Solid	1633	
320-122544-10	BIO-B-202506	Total/NA	Solid	1633	

Analysis Batch: 859277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-1	INF-02-202506	Total/NA	Water	SM 2540D	
320-122544-2	INF-07-202506	Total/NA	Water	SM 2540D	
320-122544-3	INF-08-202506	Total/NA	Water	SM 2540D	
320-122544-4	INF-11-202506	Total/NA	Water	SM 2540D	
320-122544-5	INF-18-202506	Total/NA	Water	SM 2540D	
320-122544-6	INF-COMP-202506	Total/NA	Water	SM 2540D	
320-122544-7	EFF G-202506	Total/NA	Water	SM 2540D	
MB 320-859277/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 320-859277/2	Lab Control Sample	Total/NA	Water	SM 2540D	
320-122544-1 DU	INF-02-202506	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-02-202506

Lab Sample ID: 320-122544-1

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			154.4 mL	5.0 mL	860391	06/28/25 05:31	CJS	EET SAC
Total/NA	Analysis	1633A		1			860751	07/01/25 02:38	JTD	EET SAC
Total/NA	Analysis	SM 2540D		1	50 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			164 mL	5.0 mL	859408	06/23/25 20:11	CJS	EET SAC
Total/NA	Analysis	1633A		1			859449	06/24/25 09:45	S1C	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			160.4 mL	5.0 mL	860391	06/28/25 05:31	CJS	EET SAC
Total/NA	Analysis	1633A		1			860751	07/01/25 02:54	JTD	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			157.2 mL	5.0 mL	860391	06/28/25 05:31	CJS	EET SAC
Total/NA	Analysis	1633A		1			860752	07/01/25 20:14	K1S	EET SAC
Total/NA	Analysis	SM 2540D		1	70 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			158.4 mL	5.0 mL	860391	06/28/25 05:31	CJS	EET SAC
Total/NA	Analysis	1633A		1			860752	07/01/25 20:31	K1S	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-COMP-202506

Lab Sample ID: 320-122544-6

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			160.9 mL	5.0 mL	860391	06/28/25 05:31	CJS	EET SAC
Total/NA	Analysis	1633A		1			860751	07/01/25 03:44	JTD	EET SAC
Total/NA	Analysis	SM 2540D		1	60 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			157.7 mL	5.0 mL	859408	06/23/25 20:11	CJS	EET SAC
Total/NA	Analysis	1633A		1			859449	06/24/25 11:40	S1C	EET SAC
Total/NA	Analysis	SM 2540D		1	1000 mL	250 mL	859277	06/23/25 11:45	JCB	EET SAC

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			858948	06/20/25 12:46	CFR	EET SAC

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			4.03 g	5.0 mL	859517	06/24/25 12:11	ATB	EET SAC
Total/NA	Analysis	1633A		1			859723	06/25/25 13:00	C1P	EET SAC
Total/NA	Prep	1633 Shake	RE		4.09 g	5.0 mL	860314	06/27/25 13:32	CGL	EET SAC
Total/NA	Analysis	1633A	RE	1			860751	07/01/25 06:45	JTD	EET SAC
Total/NA	Prep	1633 Shake	RA		4.03 g	5.0 mL	859517	06/24/25 12:11	ATB	EET SAC
Total/NA	Analysis	1633A	RA	1			859963	06/26/25 10:02	S1M	EET SAC

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			858948	06/20/25 12:46	CFR	EET SAC

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			4.02 g	5.0 mL	859517	06/24/25 12:11	ATB	EET SAC
Total/NA	Analysis	1633A		1			859723	06/25/25 13:16	C1P	EET SAC

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake	RE		4.07 g	5.0 mL	860314	06/27/25 13:32	CGL	EET SAC
Total/NA	Analysis	1633A	RE	1			860751	07/01/25 07:02	JTD	EET SAC
Total/NA	Prep	1633 Shake	RA		4.02 g	5.0 mL	859517	06/24/25 12:11	ATB	EET SAC
Total/NA	Analysis	1633A	RA	1			859963	06/26/25 10:19	S1M	EET SAC

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			858948	06/20/25 12:46	CFR	EET SAC

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			4.00 g	5.0 mL	859517	06/24/25 12:11	ATB	EET SAC
Total/NA	Analysis	1633A		1			859723	06/25/25 13:33	C1P	EET SAC
Total/NA	Prep	1633 Shake	RE		4.00 g	5.0 mL	860314	06/27/25 13:32	CGL	EET SAC
Total/NA	Analysis	1633A	RE	1			860751	07/01/25 07:18	JTD	EET SAC

Client Sample ID: EB-01-202506

Lab Sample ID: 320-122544-11

Date Collected: 06/16/25 13:35

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			159.1 mL	5.0 mL	859408	06/23/25 20:11	CJS	EET SAC
Total/NA	Analysis	1633A		1			859449	06/24/25 11:57	S1C	EET SAC
Total/NA	Prep	1633	RE		162 mL	5.0 mL	860391	06/28/25 05:31	CJS	EET SAC
Total/NA	Analysis	1633A	RE	1			860751	07/01/25 04:00	JTD	EET SAC

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			160.1 mL	5.0 mL	859408	06/23/25 20:11	CJS	EET SAC
Total/NA	Analysis	1633A		1			859449	06/24/25 12:13	S1C	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids
1633A	1633	Water	11CI-PF3OUdS
1633A	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633	Water	4:2 FTS
1633A	1633	Water	6:2 FTS
1633A	1633	Water	8:2 FTS
1633A	1633	Water	9CI-PF3ONS
1633A	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)
1633A	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633A	1633	Water	Perfluorobutanoic acid (PFBA)
1633A	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633A	1633	Water	Perfluorodecanoic acid (PFDA)
1633A	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633	Water	Perfluorododecanoic acid (PFDoA)
1633A	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633A	1633	Water	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633	Water	Perfluorohexanoic acid (PFHxA)
1633A	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633A	1633	Water	Perfluorononanoic acid (PFNA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633A	1633	Water	Perfluorooctanesulfonic acid (PFOS)
1633A	1633	Water	Perfluorooctanoic acid (PFOA)
1633A	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633	Water	Perfluoropentanoic acid (PFPeA)
1633A	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633	Water	Perfluorotridecanoic acid (PFTrDA)
1633A	1633	Water	Perfluoroundecanoic acid (PFUnA)
1633A	1633 Shake	Solid	11CI-PF3OUdS
1633A	1633 Shake	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633 Shake	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633 Shake	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633 Shake	Solid	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633 Shake	Solid	4:2 FTS
1633A	1633 Shake	Solid	6:2 FTS
1633A	1633 Shake	Solid	8:2 FTS
1633A	1633 Shake	Solid	9CI-PF3ONS
1633A	1633 Shake	Solid	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633 Shake	Solid	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633 Shake	Solid	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633 Shake	Solid	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633 Shake	Solid	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633 Shake	Solid	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633 Shake	Solid	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633 Shake	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633 Shake	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
1633A	1633 Shake	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633 Shake	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633 Shake	Solid	Perfluorobutanesulfonic acid (PFBS)
1633A	1633 Shake	Solid	Perfluorobutanoic acid (PFBA)
1633A	1633 Shake	Solid	Perfluorodecanesulfonic acid (PFDS)
1633A	1633 Shake	Solid	Perfluorodecanoic acid (PFDA)
1633A	1633 Shake	Solid	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633 Shake	Solid	Perfluorododecanoic acid (PFDaA)
1633A	1633 Shake	Solid	Perfluoroheptanesulfonic acid (PFHpS)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633 Shake	Solid	Perfluoroheptanoic acid (PFHpA)
1633A	1633 Shake	Solid	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633 Shake	Solid	Perfluorohexanoic acid (PFHxA)
1633A	1633 Shake	Solid	Perfluorononanesulfonic acid (PFNS)
1633A	1633 Shake	Solid	Perfluorononanoic acid (PFNA)
1633A	1633 Shake	Solid	Perfluorooctanesulfonamide (PFOSA)
1633A	1633 Shake	Solid	Perfluorooctanesulfonic acid (PFOS)
1633A	1633 Shake	Solid	Perfluorooctanoic acid (PFOA)
1633A	1633 Shake	Solid	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633 Shake	Solid	Perfluoropentanoic acid (PFPeA)
1633A	1633 Shake	Solid	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633 Shake	Solid	Perfluorotridecanoic acid (PFTTrDA)
1633A	1633 Shake	Solid	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids
SM 2540D		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633	Percent Moisture	EPA	EET SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC
1633 Shake	Shake Extraction with SPE	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-122544-1	INF-02-202506	Water	06/16/25 23:59	06/18/25 09:45
320-122544-2	INF-07-202506	Water	06/16/25 23:59	06/18/25 09:45
320-122544-3	INF-08-202506	Water	06/16/25 23:59	06/18/25 09:45
320-122544-4	INF-11-202506	Water	06/16/25 23:59	06/18/25 09:45
320-122544-5	INF-18-202506	Water	06/16/25 23:59	06/18/25 09:45
320-122544-6	INF-COMP-202506	Water	06/16/25 23:59	06/18/25 09:45
320-122544-7	EFF G-202506	Water	06/17/25 07:37	06/18/25 09:45
320-122544-8	BIO-A-23-202506	Solid	06/16/25 14:15	06/18/25 09:45
320-122544-9	BIO-A-24-202506	Solid	06/16/25 14:40	06/18/25 09:45
320-122544-10	BIO-B-202506	Solid	06/16/25 15:00	06/18/25 09:45
320-122544-11	EB-01-202506	Water	06/16/25 13:35	06/18/25 09:45
320-122544-12	EB-02-202506	Water	06/16/25 14:25	06/18/25 09:45

Eurofins Sacramento

880 Riverside Parkway
West Sacramento CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environ Testing

Client Information		Sampler <i>Jennifer Faust</i>		Lab PM <i>Jessica McComman</i>		Carrier Tracking No(s) <i>4493 3565 3737</i>		COC No:															
Client Contact: <i>Mike Ursin</i>		Phone:		E-Mail: <i>jessicam@madsewer.org</i>		State of Origin: <i>WI</i>		Page Page <i>1</i> of <i>2</i>															
Company: <i>TRC 999 Fourier Dr Suite 101 Madison WI 53717</i>		PWSID:		Analysis Requested						Job #:													
Address: <i>Madison Metro Sewerage Dist</i>		Due Date Requested		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <i>TSS</i> <i>PFAS #23</i> <i>TOP</i>						Total Number of containers		Preservation Codes A HCL M - Hexane B NaOH N None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E NaHSO4 Q Na2SO3 F MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I Ice U - Acetone J - DI Water V MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify) Other:											
City: <i>1610 Moorland</i>		TAT Requested (days) <i>20 business days per contract</i>																					
State Zip: <i>Madison, WI 53713</i>		Compliance Project: ☐ Yes ☒ No																					
Phone: <i>608 222-1201</i>		PO # <i>2460419</i>																					
Email: <i>mursin@trccompanies.com</i>		WO #:																					
Project Name: <i>PFAS study</i>		Project #:																					
Site: <i>MMSD</i>		SSOW#:																					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers		Special Instructions/Note:							
<i>INF-02-202506</i>		<i>6/16/25</i>		<i>23:59</i>		<i>C</i>		<i>W</i>		<i>NN</i>		<i>XX</i>											
<i>INF-07-202506</i>		<i>6/16/25</i>		<i>23:59</i>		<i>C</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
<i>INF-08-202506</i>		<i>6/16/25</i>		<i>23:59</i>		<i>C</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
<i>INF-11-202506</i>		<i>6/16/25</i>		<i>23:59</i>		<i>C</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
<i>INF-18-202506</i>		<i>6/16/25</i>		<i>23:59</i>		<i>C</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
<i>INF-COMP 202506</i>		<i>6/16/25</i>		<i>23:59</i>		<i>C</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
<i>EFFGR 202506</i>		<i>6/17/25</i>		<i>7:37</i>		<i>G</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
<i>B10-A-23 202506</i>		<i>6/16/25</i>		<i>14:15</i>		<i>C</i>		<i>S</i>		<i>XX</i>		<i>XX</i>											
<i>B10-A-24-202506</i>		<i>6/16/25</i>		<i>14:40</i>		<i>C</i>		<i>S</i>		<i>XX</i>		<i>XX</i>											
<i>B10-B-202506</i>		<i>6/16/25</i>		<i>15:00</i>		<i>G</i>		<i>S</i>		<i>XX</i>		<i>XX</i>											
<i>EB-01-202506</i>		<i>6/16/25</i>		<i>13:35</i>		<i>G</i>		<i>W</i>		<i>XX</i>		<i>XX</i>											
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months													
Deliverable Requested I II III IV Other (specify)										Special Instructions/QC Requirements.													
Empty Kit Relinquished by:				Date:				Time:				Method of Shipment:											
Relinquished by: <i>Jennifer Faust</i>				Date/Time: <i>6/17/25 08:45</i>				Company:				Received by: <i>DSM</i>				Date/Time: <i>06/18/25 09:45</i>				Company: <i>EECS</i>			
Relinquished by:				Date/Time:				Company:				Received by:				Date/Time:				Company:			
Relinquished by:				Date/Time:				Company:				Received by:				Date/Time:				Company:			
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No <i>2712134</i>		Cooler Temperature(s) °C and Other Remarks: <i>1, 1 °C</i>																			

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eurofins | Environment Testing

[illegible]



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 7/23/2025 5:14:44 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-122544-2

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
7/23/2025 5:14:44 PM

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-122544-2

Job ID: 320-122544-2

Eurofins Sacramento

Job Narrative 320-122544-2

Receipt

The samples were received on 6/18/2025 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1° C.

Comment

This report contains the requested TOPs analysis. All the other methods were reported in the report with job number 320-122544-1.

On 7/24/25, Jessica Esser informed the lab that the TOPs analysis for sample EB-02-202506 (320-122544-12) was requested in error and should be canceled.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): BIO-A-24-202506 (320-122544-9). The container label lists an ID of BIO-A-2024-06, however, the COC lists an ID of BIO-A-24-202506. The sample was logged in and labeled according to COC.

LCMS

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: EFF G-202506 (320-122544-7), (LCS 320-859928/2-A), (LCS 320-859937/2-A), (LCSD 320-859928/3-A), (LCSD 320-859937/3-A), (MB 320-859928/1-A) and (MB 320-859937/1-A).

Method 537 (modified): Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSA, NeIFOSA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes. The following samples are associated with this report: EFF G-202506 (320-122544-7), (LCS 320-859937/2-A) and (LCSD 320-859937/3-A).

Method 537 (modified): The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-859937 and analytical batch 320-860698 recovered outside control limits for Perfluorooctanesulfonamide (PFOSA), 6:2 FTS and 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) due to small but acceptable positive results for analytes that are oxidized during the "POST" sample extraction method.

Method 537 (modified): The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 320-859937 and analytical batch 320-860698 recovered outside control limits for the following analytes: Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX). This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-859937 and analytical batch 320-860698 recovered outside control limits for 11Cl-PF3OUdS. Re-analysis confirms the recoveries outside control limits. The associated samples were non-detect (ND) for this analyte and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No such results were identified and therefore there is no adverse impact on the reported results. The following samples are associated with this narration: EFF G-202506 (320-122544-7), (LCS 320-859937/2-A) and (LCSD 320-859937/3-A).

Method 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-859928 and analytical batch 320-860698 recovered outside control limits for N-methylperfluorooctane sulfonamide (NMeFOSA). Re-analysis confirms the recoveries outside control limits. The associated samples were non-detect (ND) for this analyte and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No such results were identified and therefore there is no adverse impact on the reported results. The following samples are associated with this narration: EFF G-202506 (320-122544-7), (LCS 320-859928/2-A) and (LCSD 320-859928/3-A).

Method 537 (modified): The labeled analyte M2-4:2 FTS is converted to PFBA during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors. EFF G-202506 (320-122544-7) and (MB 320-859937/1-A).

Eurofins Sacramento

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-122544-2

Job ID: 320-122544-2 (Continued)

Eurofins Sacramento

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: BIO-B-202506 (320-122544-10).

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9) and BIO-B-202506 (320-122544-10). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: EFF G-202506 (320-122544-7), (LCS 320-862763/2-A) and (MB 320-862763/1-A).

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: EFF G-202506 (320-122544-7), (LCS 320-862764/2-A) and (MB 320-862764/1-A).

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9), BIO-B-202506 (320-122544-10), (LCS 320-863235/2-A), (LCSD 320-863235/3-A), (MB 320-863226/1-A) and (MB 320-863235/1-A).

Method 537 (modified): Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NeFOSAA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes. The following samples are associated with this narration: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9), BIO-B-202506 (320-122544-10), (LCS 320-863235/2-A) and (LCSD 320-863235/3-A).

Method 537 (modified): The labeled analyte M2-4:2 FTS is converted to PFBA during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors. The following samples are associated with this narration: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9), BIO-B-202506 (320-122544-10) and (MB 320-863235/1-A).

Method 537 (modified): The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: (LCS 320-863226/2-A) and (LCSD 320-863226/3-A).

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: BIO-A-23-202506 (320-122544-8) and BIO-B-202506 (320-122544-10). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9) and BIO-B-202506 (320-122544-10).

Method 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-863235 and analytical batch 320-864672 recovered outside control limits for Perfluorotridecanoic acid (PFTDA). Re-analysis confirms the recoveries outside control limits. The associated samples were non-detect (ND) for this analyte and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No such results were identified and therefore there is no adverse impact on the reported results. The following samples are associated with this narration: BIO-A-23-202506 (320-122544-8), BIO-A-24-202506 (320-122544-9), BIO-B-202506 (320-122544-10), (LCS 320-863235/2-A) and (LCSD 320-863235/3-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method TOP Pre - Prep: The following sample was discolored following extraction. EFF G-202506 (320-122544-7)

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-122544-2

Job ID: 320-122544-2 (Continued)

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No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.6	J	13	3.1	ng/L	1			537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	7.6		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	14		5.0	1.5	ng/L	1			537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	1.5	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	7.2		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	7.2		5.0	1.4	ng/L	1			537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	4.0	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.2	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS) - RE	6.0		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	26	B	13	3.1	ng/L	1			537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	17	*+	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	17	*+	5.0	1.5	ng/L	1			537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	2.9	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	8.9		5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	7.3		5.0	1.4	ng/L	1			537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	4.0	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
6:2 FTS	3.2	J *1	13	3.1	ng/L	1			537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS) - RE	5.6		5.0	1.3	ng/L	1			537 (modified)	Post-Treatment

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.8		5.0	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	16		5.0	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	31		5.0	0.77	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	0.95	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	23		5.0	1.3	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.6	J	5.0	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	9.1		5.0	1.2	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	2.3	J	5.0	0.75	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	16		5.0	0.95	ug/Kg	1		✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506 (Continued)

Lab Sample ID: 320-122544-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.4	J I	5.0	0.72	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	12		5.0	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	1.3	J	5.0	0.82	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.7		5.0	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.7	J	5.0	1.2	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS	1.3	J	5.0	0.67	ug/Kg	1		✱	537 (modified)	Pre-Treatment
8:2 FTS	0.93	J	5.0	0.87	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.0		5.0	1.2	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.4	J	5.0	0.70	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	36		5.0	0.95	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11		5.0	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	120	B	5.0	1.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	70		5.0	1.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	60		5.0	0.77	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	25		5.0	0.95	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	52		5.0	1.3	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	13		5.0	0.55	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	15		5.0	1.2	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	5.2		5.0	1.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	5.0		5.0	0.75	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.6	J *	5.0	0.52	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.7	J	5.0	0.92	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	12		5.0	0.95	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.5	J	5.0	0.72	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	11		5.0	1.1	ug/Kg	1		✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.6		4.1	0.94	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	11		4.1	0.84	ug/Kg	1		✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506 (Continued)

Lab Sample ID: 320-122544-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	37		4.1	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	2.2	J	4.1	0.77	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	23		4.1	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.7	J	4.1	0.45	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	8.6		4.1	0.98	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroundecanoic acid (PFUnA)	1.1	J	4.1	0.85	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	2.6	J	4.1	0.61	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	11		4.1	0.77	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	2.5	J I	4.1	0.59	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	15		4.1	0.88	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanesulfonic acid (PFDS)	1.1	J	4.1	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	1.2	J	4.1	0.67	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.0		4.1	0.47	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	4.1	0.98	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS	0.72	J	4.1	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8		4.1	0.96	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.8		4.1	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	28		4.1	0.77	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.7		4.1	0.84	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	110	B	4.1	0.94	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	63		4.1	0.84	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	64		4.1	0.63	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	26		4.1	0.77	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	48		4.1	1.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	12		4.1	0.45	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	12		4.1	0.98	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	4.1		4.1	0.85	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	3.6	J	4.1	0.61	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.1	J *	4.1	0.43	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506 (Continued)

Lab Sample ID: 320-122544-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorotetradecanoic acid (PFTeDA)	1.1	J	4.1	0.75	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	9.5		4.1	0.77	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	4.1	0.59	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	9.0		4.1	0.88	ug/Kg	1		✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.0	J	15	2.3	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	8.1	J I	15	2.2	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	16	I	15	3.2	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11	J	15	1.7	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.2	J	15	3.6	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.1	J	15	3.5	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.9	J	15	2.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		15	2.8	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.6	J	15	3.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	100	B	15	3.4	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	68		15	3.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	28		15	2.3	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	19		15	2.8	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	24		15	4.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	11	J	15	1.6	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	6.6	J	15	3.6	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	4.4	J	15	3.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	2.9	J	15	2.2	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.5	J	15	2.8	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	9.2	J	15	3.2	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.6	J	13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoropentanoic acid (PFPeA)	7.6		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorohexanoic acid (PFHxA)	14		5.0	1.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorooctanoic acid (PFOA)	7.2		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorohexanesulfonic acid (PFHxS)	7.2		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorooctanesulfonic acid (PFOS)	4.0	J	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
4:2 FTS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
6:2 FTS	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
8:2 FTS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND	*-	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		06/25/25 19:45	07/01/25 05:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.2	J	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		06/25/25 19:45	07/01/25 05:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	69		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFBA	93		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C5 PFPeA	96		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFHxA	110		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFHpA	94		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFOA	94		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C5 PFNA	91		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFDA	69		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFUnA	52		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFDoA	42		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFTeDA	40		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C3 PFBS	99		25 - 150				06/25/25 19:45	07/01/25 05:35	1
18O2 PFHxS	90		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFOS	71		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D3-NMeFOSAA	63		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D5-NEtFOSAA	65		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 4:2 FTS	111		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 6:2 FTS	98		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 8:2 FTS	70		25 - 150				06/25/25 19:45	07/01/25 05:35	1
d-N-MeFOSA-M	48		25 - 150				06/25/25 19:45	07/01/25 05:35	1
d-N-EtFOSA-M	41		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D7-NMeFOSE	39		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D9-NEtFOSE	34		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C3 HFPO-DA	87		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C-6:2 FTCA	81		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C-8:2 FTCA	86		25 - 150				06/25/25 19:45	07/01/25 05:35	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	6.0		5.0	1.3	ng/L		07/13/25 20:15	07/15/25 14:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	91		25 - 150				07/13/25 20:15	07/15/25 14:19	1
13C2 4:2 FTS	115		25 - 150				07/13/25 20:15	07/15/25 14:19	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	26	B	13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoropentanoic acid (PFPeA)	17	+	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorohexanoic acid (PFHxA)	17	+	5.0	1.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoroheptanoic acid (PFHpA)	2.9	J	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorooctanoic acid (PFOA)	8.9		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorohexanesulfonic acid (PFHxS)	7.3		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorooctanesulfonic acid (PFOS)	4.0 J		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorooctanesulfonamide (PFOSA)	ND	*1	5.0	2.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
4:2 FTS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
6:2 FTS	3.2 J *1		13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
8:2 FTS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	*+	10	2.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
11CI-PF3OUdS	ND	*-	5.0	1.7	ng/L		06/25/25 20:19	07/01/25 07:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	*1	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	60		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFBA	107		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C5 PFPeA	100		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFHxA	104		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFHpA	98		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFOA	99		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C5 PFNA	93		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFDA	73		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFUnA	66		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFDoA	66		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFTeDA	66		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C3 PFBS	97		25 - 150	06/25/25 20:19	07/01/25 07:14	1
18O2 PFHxS	96		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFOS	72		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D3-NMeFOSAA	67		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D5-NEtFOSAA	79		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 4:2 FTS	0		0 - 10	06/25/25 20:19	07/01/25 07:14	1
13C2 6:2 FTS	93		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 8:2 FTS	62		25 - 150	06/25/25 20:19	07/01/25 07:14	1
d-N-MeFOSA-M	53		25 - 150	06/25/25 20:19	07/01/25 07:14	1
d-N-EtFOSA-M	46		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D7-NMeFOSE	55		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D9-NEtFOSE	50		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C3 HFPO-DA	96		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C-6:2 FTCA	85		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C-8:2 FTCA	83		25 - 150	06/25/25 20:19	07/01/25 07:14	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	5.6		5.0	1.3	ng/L		07/13/25 20:31	07/15/25 18:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	86		25 - 150				07/13/25 20:31	07/15/25 18:17	1
13C2 4:2 FTS	0		0 - 10				07/13/25 20:31	07/15/25 18:17	1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.8		5.0	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoropentanoic acid (PFPeA)	16		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorohexanoic acid (PFHxA)	31		5.0	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoroheptanoic acid (PFHpA)	2.3 J		5.0	0.95	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorooctanoic acid (PFOA)	23		5.0	1.3	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorononanoic acid (PFNA)	1.6 J		5.0	0.55	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorodecanoic acid (PFDA)	9.1		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorododecanoic acid (PFDoA)	2.3 J		5.0	0.75	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	0.52	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	0.92	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorobutanesulfonic acid (PFBS)	16		5.0	0.95	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	0.92	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorohexanesulfonic acid (PFHxS)	2.4	J I	5.0	0.72	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorooctanesulfonic acid (PFOS)	12		5.0	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	0.72	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorooctanesulfonamide (PFOSA)	1.3	J	5.0	0.82	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.7		5.0	0.57	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.7	J	5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
4:2 FTS	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
6:2 FTS	1.3	J	5.0	0.67	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
8:2 FTS	0.93	J	5.0	0.87	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.0		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.4	J	5.0	0.70	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
9CI-PF3ONS	ND		5.0	0.87	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
11CI-PF3OUdS	ND		5.0	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	0.97	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	36		5.0	0.95	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	0.60	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	0.80	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	66		25 - 150				07/15/25 20:33	07/22/25 08:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C5 PFPeA	91		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFHxA	108		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C4 PFHpA	93		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C4 PFOA	94		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C5 PFNA	97		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFDA	90		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFUnA	84		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFDoA	73		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFTeDA	53		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C3 PFBS	89		25 - 150	07/15/25 20:33	07/22/25 08:47	1
18O2 PFHxS	88		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C4 PFOS	82		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D3-NMeFOSAA	71		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D5-NEtFOSAA	83		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 4:2 FTS	138		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 6:2 FTS	159	*5+	25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 8:2 FTS	125		25 - 150	07/15/25 20:33	07/22/25 08:47	1
d-N-MeFOSA-M	41		25 - 150	07/15/25 20:33	07/22/25 08:47	1
d-N-EtFOSA-M	49		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D7-NMeFOSE	44		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D9-NEtFOSE	56		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C3 HFPO-DA	76		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C-6:2 FTCA	70		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C-8:2 FTCA	61		25 - 150	07/15/25 20:33	07/22/25 08:47	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	120	B	5.0	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoropentanoic acid (PFPeA)	70		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorohexanoic acid (PFHxA)	60		5.0	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoroheptanoic acid (PFHpA)	25		5.0	0.95	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorooctanoic acid (PFOA)	52		5.0	1.3	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorononanoic acid (PFNA)	13		5.0	0.55	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorodecanoic acid (PFDA)	15		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoroundecanoic acid (PFUnA)	5.2		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorododecanoic acid (PFDoA)	5.0		5.0	0.75	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorotridecanoic acid (PFTTrDA)	1.6	J *	5.0	0.52	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorotetradecanoic acid (PFTeDA)	1.7	J	5.0	0.92	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorobutanesulfonic acid (PFBS)	12		5.0	0.95	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	0.92	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorohexanesulfonic acid (PFHxS)	1.5	J	5.0	0.72	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	11		5.0	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	0.72	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	0.82	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0	0.57	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
4:2 FTS	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
6:2 FTS	ND		5.0	0.67	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
8:2 FTS	ND		5.0	0.87	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	0.70	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
9CI-PF3ONS	ND		5.0	0.87	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
11CI-PF3OUdS	ND		5.0	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	0.97	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	0.95	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	0.60	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	0.80	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	63		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFBA	109		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C5 PFPeA	107		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFHxA	109		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFHpA	103		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFOA	97		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C5 PFNA	97		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFDA	82		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFUnA	76		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFDoA	67		25 - 150	07/15/25 20:40	07/22/25 04:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	68		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C3 PFBS	104		25 - 150	07/15/25 20:40	07/22/25 04:48	1
18O2 PFHxS	102		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFOS	82		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D3-NMeFOSAA	64		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D5-NEtFOSAA	69		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 4:2 FTS	0		0 - 10	07/15/25 20:40	07/22/25 04:48	1
13C2 6:2 FTS	94		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 8:2 FTS	74		25 - 150	07/15/25 20:40	07/22/25 04:48	1
d-N-MeFOSA-M	51		25 - 150	07/15/25 20:40	07/22/25 04:48	1
d-N-EtFOSA-M	41		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D7-NMeFOSE	59		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D9-NEtFOSE	53		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C3 HFPO-DA	90		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C-6:2 FTCA	86		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C-8:2 FTCA	68		25 - 150	07/15/25 20:40	07/22/25 04:48	1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.6		4.1	0.94	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoropentanoic acid (PFPeA)	11		4.1	0.84	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorohexanoic acid (PFHxA)	37		4.1	0.63	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoroheptanoic acid (PFHpA)	2.2 J		4.1	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorooctanoic acid (PFOA)	23		4.1	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorononanoic acid (PFNA)	1.7 J		4.1	0.45	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorodecanoic acid (PFDA)	8.6		4.1	0.98	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoroundecanoic acid (PFUnA)	1.1 J		4.1	0.85	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorododecanoic acid (PFDoA)	2.6 J		4.1	0.61	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorotridecanoic acid (PFTrDA)	ND		4.1	0.43	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorotetradecanoic acid (PFTeDA)	ND		4.1	0.75	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorobutanesulfonic acid (PFBS)	11		4.1	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.1	0.75	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorohexanesulfonic acid (PFHxS)	2.5 J I		4.1	0.59	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.1	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorooctanesulfonic acid (PFOS)	15		4.1	0.88	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorononanesulfonic acid (PFNS)	ND		4.1	0.59	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorodecanesulfonic acid (PFDS)	1.1 J		4.1	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.1	0.96	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (PFOSA)	1.2	J	4.1	0.67	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.0		4.1	0.47	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	4.1	0.98	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
4:2 FTS	ND		4.1	1.0	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
6:2 FTS	0.72	J	4.1	0.55	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
8:2 FTS	ND		4.1	0.71	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.1	0.96	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.1	1.0	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8		4.1	0.96	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.8		4.1	0.57	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
9CI-PF3ONS	ND		4.1	0.71	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
11CI-PF3OUdS	ND		4.1	0.63	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.1	0.79	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	28		4.1	0.77	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.7		4.1	0.84	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.1	0.81	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.1	0.92	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.1	0.49	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		4.1	0.65	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	62		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFBA	94		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C5 PFPeA	94		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFHxA	106		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFHpA	97		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFOA	95		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C5 PFNA	98		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFDA	89		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFUnA	89		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFDoA	77		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFTeDA	61		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C3 PFBS	92		25 - 150	07/15/25 20:33	07/22/25 09:01	1
18O2 PFHxS	92		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFOS	76		25 - 150	07/15/25 20:33	07/22/25 09:01	1
D3-NMeFOSAA	85		25 - 150	07/15/25 20:33	07/22/25 09:01	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	84		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 4:2 FTS	135		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 6:2 FTS	135		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 8:2 FTS	105		25 - 150	07/15/25 20:33	07/22/25 09:01	1
d-N-MeFOSA-M	52		25 - 150	07/15/25 20:33	07/22/25 09:01	1
d-N-EtFOSA-M	55		25 - 150	07/15/25 20:33	07/22/25 09:01	1
D7-NMeFOSE	60		25 - 150	07/15/25 20:33	07/22/25 09:01	1
D9-NEtFOSE	67		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C3 HFPO-DA	75		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C-6:2 FTCA	70		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C-8:2 FTCA	57		25 - 150	07/15/25 20:33	07/22/25 09:01	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	110	B	4.1	0.94	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoropentanoic acid (PFPeA)	63		4.1	0.84	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorohexanoic acid (PFHxA)	64		4.1	0.63	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoroheptanoic acid (PFHpA)	26		4.1	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorooctanoic acid (PFOA)	48		4.1	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorononanoic acid (PFNA)	12		4.1	0.45	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorodecanoic acid (PFDA)	12		4.1	0.98	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoroundecanoic acid (PFUnA)	4.1		4.1	0.85	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorododecanoic acid (PFDoA)	3.6	J	4.1	0.61	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorotridecanoic acid (PFTTrDA)	1.1	J *	4.1	0.43	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorotetradecanoic acid (PFTTeDA)	1.1	J	4.1	0.75	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorobutanesulfonic acid (PFBS)	9.5		4.1	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.1	0.75	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	4.1	0.59	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.1	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorooctanesulfonic acid (PFOS)	9.0		4.1	0.88	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorononanesulfonic acid (PFNS)	ND		4.1	0.59	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.1	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.1	0.96	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorooctanesulfonamide (PFOSA)	ND		4.1	0.67	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.1	0.47	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.1	0.98	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
4:2 FTS	ND		4.1	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
6:2 FTS	ND		4.1	0.55	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
8:2 FTS	ND		4.1	0.71	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.1	0.96	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.1	1.0	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.1	0.96	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.1	0.57	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
9CI-PF3ONS	ND		4.1	0.71	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
11CI-PF3OUdS	ND		4.1	0.63	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.1	0.79	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.1	0.77	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.1	0.81	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.1	0.92	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.1	0.49	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		4.1	0.65	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	55		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFBA	101		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C5 PFPeA	102		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFHxA	103		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFHpA	96		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFOA	92		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C5 PFNA	89		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFDA	71		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFUnA	64		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFDoA	60		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFTeDA	63		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C3 PFBS	98		25 - 150	07/15/25 20:40	07/22/25 05:02	1
18O2 PFHxS	97		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFOS	74		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D3-NMeFOSAA	55		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D5-NEtFOSAA	53		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 4:2 FTS	0		0 - 10	07/15/25 20:40	07/22/25 05:02	1
13C2 6:2 FTS	86		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 8:2 FTS	64		25 - 150	07/15/25 20:40	07/22/25 05:02	1
d-N-MeFOSA-M	41		25 - 150	07/15/25 20:40	07/22/25 05:02	1
d-N-EtFOSA-M	35		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D7-NMeFOSE	54		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D9-NEtFOSE	48		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C3 HFPO-DA	86		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C-6:2 FTCA	77		25 - 150	07/15/25 20:40	07/22/25 05:02	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-8:2 FTCA	58		25 - 150	07/15/25 20:40	07/22/25 05:02	1

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		15	3.4	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoropentanoic acid (PFPeA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorohexanoic acid (PFHxA)	3.0	J	15	2.3	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoroheptanoic acid (PFHpA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorooctanoic acid (PFOA)	ND		15	4.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorononanoic acid (PFNA)	ND		15	1.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorodecanoic acid (PFDA)	ND		15	3.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoroundecanoic acid (PFUnA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorododecanoic acid (PFDoA)	ND		15	2.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		15	1.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorotetradecanoic acid (PFTeDA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoropentanesulfonic acid (PFPeS)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorohexanesulfonic acid (PFHxS)	8.1	J I	15	2.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		15	3.7	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorooctanesulfonic acid (PFOS)	16	I	15	3.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorononanesulfonic acid (PFNS)	ND		15	2.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		15	3.9	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorododecanesulfonic acid (PFDoS)	ND		15	3.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		15	2.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11	J	15	1.7	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.2	J	15	3.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
4:2 FTS	ND		15	3.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
6:2 FTS	ND		15	2.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
8:2 FTS	ND		15	2.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		15	3.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		15	3.7	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.1	J	15	3.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.9	J	15	2.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
9CI-PF3ONS	ND		15	2.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
11CI-PF3OUdS	ND		15	2.3	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		15	2.9	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		15	3.1	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		15	2.8	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.6	J	15	3.1	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		15	3.0	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		15	3.4	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		15	1.8	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		15	2.4	ug/Kg	✧	07/15/25 20:33	07/22/25 09:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	79		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFBA	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C5 PFPeA	89		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFHxA	111		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFHpA	94		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFOA	98		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C5 PFNA	103		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFDA	98		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFUnA	90		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFDoA	87		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFTeDA	41		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C3 PFBS	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
18O2 PFHxS	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFOS	85		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D3-NMeFOSAA	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D5-NEtFOSAA	88		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 4:2 FTS	144		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 6:2 FTS	166	*5+	25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 8:2 FTS	136		25 - 150	07/15/25 20:33	07/22/25 09:15	1
d-N-MeFOSA-M	43		25 - 150	07/15/25 20:33	07/22/25 09:15	1
d-N-EtFOSA-M	53		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D7-NMeFOSE	46		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D9-NEtFOSE	67		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C3 HFPO-DA	79		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C-6:2 FTCA	72		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C-8:2 FTCA	76		25 - 150	07/15/25 20:33	07/22/25 09:15	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	100	B	15	3.4	ug/Kg	✧	07/15/25 20:40	07/22/25 05:16	1
Perfluoropentanoic acid (PFPeA)	68		15	3.1	ug/Kg	✧	07/15/25 20:40	07/22/25 05:16	1
Perfluorohexanoic acid (PFHxA)	28		15	2.3	ug/Kg	✧	07/15/25 20:40	07/22/25 05:16	1
Perfluoroheptanoic acid (PFHpA)	19		15	2.8	ug/Kg	✧	07/15/25 20:40	07/22/25 05:16	1
Perfluorooctanoic acid (PFOA)	24		15	4.0	ug/Kg	✧	07/15/25 20:40	07/22/25 05:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	11	J	15	1.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorodecanoic acid (PFDA)	6.6	J	15	3.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoroundecanoic acid (PFUnA)	4.4	J	15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorododecanoic acid (PFDoA)	2.9	J	15	2.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorotridecanoic acid (PFTrDA)	ND	*	15	1.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorotetradecanoic acid (PFTeDA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorobutanesulfonic acid (PFBS)	3.5	J	15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoropentanesulfonic acid (PFPeS)	ND		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorohexanesulfonic acid (PFHxS)	ND		15	2.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		15	3.7	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorooctanesulfonic acid (PFOS)	9.2	J	15	3.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorononanesulfonic acid (PFNS)	ND		15	2.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		15	3.9	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		15	3.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorooctanesulfonamide (PFOSA)	ND		15	2.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		15	1.7	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		15	3.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
4:2 FTS	ND		15	3.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
6:2 FTS	ND		15	2.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
8:2 FTS	ND		15	2.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		15	3.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		15	3.7	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		15	3.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		15	2.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
9CI-PF3ONS	ND		15	2.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
11CI-PF3OUdS	ND		15	2.3	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		15	2.9	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		15	3.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		15	3.4	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		15	1.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		15	2.4	ug/Kg	☆	07/15/25 20:40	07/22/25 05:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	54		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFBA	104		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C5 PFPeA	101		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFHxA	101		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFHpA	97		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFOA	97		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C5 PFNA	89		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFDA	72		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFUnA	66		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFDoA	58		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFTeDA	61		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C3 PFBS	97		25 - 150				07/15/25 20:40	07/22/25 05:16	1
18O2 PFHxS	99		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFOS	73		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D3-NMeFOSAA	59		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D5-NEtFOSAA	55		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 4:2 FTS	0		0 - 10				07/15/25 20:40	07/22/25 05:16	1
13C2 6:2 FTS	85		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 8:2 FTS	68		25 - 150				07/15/25 20:40	07/22/25 05:16	1
d-N-MeFOSA-M	48		25 - 150				07/15/25 20:40	07/22/25 05:16	1
d-N-EtFOSA-M	40		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D7-NMeFOSE	51		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D9-NEtFOSE	44		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C3 HFPO-DA	86		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C-6:2 FTCA	76		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C-8:2 FTCA	68		25 - 150				07/15/25 20:40	07/22/25 05:16	1

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7
Matrix: Water

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	Total PFCA-Sum			Total PFCA-Sum			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	8.6	J	ng/L	26		ng/L	17	ng/L
Perfluorobutanoic acid (PFBA)	8.6	J	ng/L	26		ng/L	17	ng/L
Perfluoropentanoic acid (PFPeA)	7.6		ng/L	17		ng/L	9.9	ng/L
Perfluoropentanoic acid (PFPeA)	7.6		ng/L	17		ng/L	9.9	ng/L
Perfluorohexanoic acid (PFHxA)	14		ng/L	17		ng/L	2.7	ng/L
Perfluorohexanoic acid (PFHxA)	14		ng/L	17		ng/L	2.7	ng/L
Perfluoroheptanoic acid (PFHpA)	1.5	J	ng/L	2.9	J	ng/L	1.4	ng/L
Perfluoroheptanoic acid (PFHpA)	1.5	J	ng/L	2.9	J	ng/L	1.4	ng/L
Perfluorooctanoic acid (PFOA)	7.2		ng/L	8.9		ng/L	1.7	ng/L
Perfluorooctanoic acid (PFOA)	7.2		ng/L	8.9		ng/L	1.7	ng/L
Perfluorononanoic acid (PFNA)	ND		ng/L	ND		ng/L	0.00	ng/L
Perfluorononanoic acid (PFNA)	ND		ng/L	ND		ng/L	0.00	ng/L
Total Perfluoroalkyl carboxylic acid	39		ng/L	72		ng/L	33	ng/L

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	6.8		ug/Kg	120		ug/Kg	120	ug/Kg
Perfluoropentanoic acid (PFPeA)	16		ug/Kg	70		ug/Kg	54	ug/Kg
Perfluorohexanoic acid (PFHxA)	31		ug/Kg	60		ug/Kg	29	ug/Kg
Perfluoroheptanoic acid (PFHpA)	2.3	J	ug/Kg	25		ug/Kg	23	ug/Kg
Perfluorooctanoic acid (PFOA)	23		ug/Kg	52		ug/Kg	28	ug/Kg
Perfluorononanoic acid (PFNA)	1.6	J	ug/Kg	13		ug/Kg	11	ug/Kg
Total Perfluoroalkyl carboxylic acid	81		ug/Kg	340		ug/Kg	260	ug/Kg

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	5.6		ug/Kg	110		ug/Kg	100	ug/Kg
Perfluoropentanoic acid (PFPeA)	11		ug/Kg	63		ug/Kg	52	ug/Kg
Perfluorohexanoic acid (PFHxA)	37		ug/Kg	64		ug/Kg	27	ug/Kg
Perfluoroheptanoic acid (PFHpA)	2.2	J	ug/Kg	26		ug/Kg	24	ug/Kg
Perfluorooctanoic acid (PFOA)	23		ug/Kg	48		ug/Kg	25	ug/Kg
Perfluorononanoic acid (PFNA)	1.7	J	ug/Kg	12		ug/Kg	10	ug/Kg
Total Perfluoroalkyl carboxylic acid	81		ug/Kg	320		ug/Kg	240	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	ND		ug/Kg	100		ug/Kg	100	ug/Kg
Perfluoropentanoic acid (PFPeA)	ND		ug/Kg	68		ug/Kg	68	ug/Kg
Perfluorohexanoic acid (PFHxA)	3.0	J	ug/Kg	28		ug/Kg	25	ug/Kg
Perfluoroheptanoic acid (PFHpA)	ND		ug/Kg	19		ug/Kg	19	ug/Kg
Perfluorooctanoic acid (PFOA)	ND		ug/Kg	24		ug/Kg	24	ug/Kg
Perfluorononanoic acid (PFNA)	ND		ug/Kg	11	J	ug/Kg	11	ug/Kg
Total Perfluoroalkyl carboxylic acid	3.0		ug/Kg	250		ug/Kg	250	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-122544-8	BIO-A-23-202506	66	88	91	108	93	94	97	90
320-122544-9	BIO-A-24-202506	62	94	94	106	97	95	98	89
320-122544-10	BIO-B-202506	79	92	89	111	94	98	103	98
LCS 320-863226/2-A	Lab Control Sample	71	98	97	98	92	95	99	86
LCSD 320-863226/3-A	Lab Control Sample Dup	83	109	108	106	105	99	106	92
MB 320-863226/1-A	Method Blank	68	88	92	94	87	86	89	80

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-122544-8	BIO-A-23-202506	84	73	53	89	88	82	71	83
320-122544-9	BIO-A-24-202506	89	77	61	92	92	76	85	84
320-122544-10	BIO-B-202506	90	87	41	92	92	85	92	88
LCS 320-863226/2-A	Lab Control Sample	76	76	77	94	94	85	66	76
LCSD 320-863226/3-A	Lab Control Sample Dup	93	92	88	102	104	94	85	92
MB 320-863226/1-A	Method Blank	80	78	76	84	89	82	75	85

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-122544-8	BIO-A-23-202506	138	159 *5+	125	41	49	44	56	76
320-122544-9	BIO-A-24-202506	135	135	105	52	55	60	67	75
320-122544-10	BIO-B-202506	144	166 *5+	136	43	53	46	67	79
LCS 320-863226/2-A	Lab Control Sample	85	87	74	68	61	66	66	85
LCSD 320-863226/3-A	Lab Control Sample Dup	92	91	85	70	63	82	78	90
MB 320-863226/1-A	Method Blank	79	79	70	56	52	70	68	77

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-122544-8	BIO-A-23-202506	70	61
320-122544-9	BIO-A-24-202506	70	57
320-122544-10	BIO-B-202506	72	76
LCS 320-863226/2-A	Lab Control Sample	70	70
LCSD 320-863226/3-A	Lab Control Sample Dup	81	75
MB 320-863226/1-A	Method Blank	66	62

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-122544-2

Project/Site: PFAS Sampling

d3NMFOS = D3-NMeFOSAA

d5NEFOS = D5-NEtFOSAA

M242FTS = 13C2 4:2 FTS

M262FTS = 13C2 6:2 FTS

M282FTS = 13C2 8:2 FTS

dMeFOSA = d-N-MeFOSA-M

dEtFOSA = d-N-EtFOSA-M

NMFM = D7-NMeFOSE

NEFM = D9-NEtFOSE

HFPODA = 13C3 HFPO-DA

MFHEA = 13C-6:2 FTCA

MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-122544-8	BIO-A-23-202506	63	109	107	109	103	97	97	82
320-122544-9	BIO-A-24-202506	55	101	102	103	96	92	89	71
320-122544-10	BIO-B-202506	54	104	101	101	97	97	89	72
LCS 320-863235/2-A	Lab Control Sample	62	114	112	112	108	105	106	84
LCSD 320-863235/3-A	Lab Control Sample Dup	60	110	109	111	103	99	100	79
MB 320-863235/1-A	Method Blank	59	106	102	101	96	96	94	74

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-122544-8	BIO-A-23-202506	76	67	68	104	102	82	64	69
320-122544-9	BIO-A-24-202506	64	60	63	98	97	74	55	53
320-122544-10	BIO-B-202506	66	58	61	97	99	73	59	55
LCS 320-863235/2-A	Lab Control Sample	76	69	67	106	108	87	58	67
LCSD 320-863235/3-A	Lab Control Sample Dup	72	62	64	105	104	82	56	56
MB 320-863235/1-A	Method Blank	66	56	62	100	97	76	52	52

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-122544-8	BIO-A-23-202506	0	94	74	51	41	59	53	90
320-122544-9	BIO-A-24-202506	0	86	64	41	35	54	48	86
320-122544-10	BIO-B-202506	0	85	68	48	40	51	44	86
LCS 320-863235/2-A	Lab Control Sample	0	113	82	48	41	58	52	98
LCSD 320-863235/3-A	Lab Control Sample Dup	0	97	75	43	37	55	50	89
MB 320-863235/1-A	Method Blank	0	90	71	44	38	53	46	92

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-122544-8	BIO-A-23-202506	86	68
320-122544-9	BIO-A-24-202506	77	58
320-122544-10	BIO-B-202506	76	68
LCS 320-863235/2-A	Lab Control Sample	92	66
LCSD 320-863235/3-A	Lab Control Sample Dup	82	66
MB 320-863235/1-A	Method Blank	82	57

Surrogate Legend

PFOSA = 13C8 FOSA

PFBA = 13C4 PFBA

Eurofins Sacramento

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-122544-2

Project/Site: PFAS Sampling

PFPeA = 13C5 PFPeA
 PFHxA = 13C2 PFHxA
 C4PFHA = 13C4 PFHpA
 PFOA = 13C4 PFOA
 PFNA = 13C5 PFNA
 PFDA = 13C2 PFDA
 PFUnA = 13C2 PFUnA
 PFDoA = 13C2 PFDoA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS
 PFOS = 13C4 PFOS
 d3NMFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS
 dMeFOSA = d-N-MeFOSA-M
 dEtFOSA = d-N-EtFOSA-M
 NMFM = D7-NMeFOSE
 NEFM = D9-NEtFOSE
 HFPODA = 13C3 HFPO-DA
 MFHEA = 13C-6:2 FTCA
 MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Pre-Treatment

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-122544-7	EFF G-202506	69	93	96	110	94	94	91	69
320-122544-7 - RE	EFF G-202506								
LCS 320-859928/2-A	Lab Control Sample	82	101	93	100	94	92	99	89
LCS 320-862763/2-A	Lab Control Sample								
LCSD 320-859928/3-A	Lab Control Sample Dup	81	109	96	100	97	98	103	100
MB 320-859928/1-A	Method Blank	70	106	96	101	95	102	104	102
MB 320-862763/1-A	Method Blank								
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-122544-7	EFF G-202506	52	42	40	99	90	71	63	65
320-122544-7 - RE	EFF G-202506				91				
LCS 320-859928/2-A	Lab Control Sample	89	87	83	95	98	94	97	99
LCS 320-862763/2-A	Lab Control Sample				91				
LCSD 320-859928/3-A	Lab Control Sample Dup	95	88	81	98	96	93	100	97
MB 320-859928/1-A	Method Blank	87	75	74	102	98	95	93	94
MB 320-862763/1-A	Method Blank				88				
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-122544-7	EFF G-202506	111	98	70	48	41	39	34	87
320-122544-7 - RE	EFF G-202506	115							
LCS 320-859928/2-A	Lab Control Sample	98	95	90	71	63	81	75	93
LCS 320-862763/2-A	Lab Control Sample								
LCSD 320-859928/3-A	Lab Control Sample Dup	96	92	91	75	67	83	80	97

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
MB 320-859928/1-A	Method Blank	99	100	88	68	63	66	62	98
MB 320-862763/1-A	Method Blank	88							

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-122544-7	EFF G-202506	81	86
320-122544-7 - RE	EFF G-202506		
LCS 320-859928/2-A	Lab Control Sample	79	91
LCS 320-862763/2-A	Lab Control Sample		
LCSD 320-859928/3-A	Lab Control Sample Dup	88	96
MB 320-859928/1-A	Method Blank	88	97
MB 320-862763/1-A	Method Blank		

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOA = D3-NMeFOA
d5NEFOA = D5-NEtFOA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-122544-7	EFF G-202506	60	107	100	104	98	99	93	73
320-122544-7 - RE	EFF G-202506								
LCS 320-859937/2-A	Lab Control Sample	69	108	99	106	98	96	96	
LCS 320-859937/2-A - RA	Lab Control Sample								84

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water

Prep Type: Post-Treatment

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
LCS 320-862764/2-A	Lab Control Sample								
LCSD 320-859937/3-A	Lab Control Sample Dup	76	105	100	98	95	94	96	
LCSD 320-859937/3-A - RA	Lab Control Sample Dup								83
MB 320-859937/1-A	Method Blank	88	109	97	106	100	96	102	93
MB 320-862764/1-A	Method Blank								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-122544-7	EFF G-202506	66	66	66	97	96	72	67	79
320-122544-7 - RE	EFF G-202506				86				
LCS 320-859937/2-A	Lab Control Sample	69	70	67	102	100	84	87	84
LCS 320-859937/2-A - RA	Lab Control Sample		70						
LCS 320-862764/2-A	Lab Control Sample				94				
LCSD 320-859937/3-A	Lab Control Sample Dup	75	72	63	100	96	82	80	83
LCSD 320-859937/3-A - RA	Lab Control Sample Dup		73						
MB 320-859937/1-A	Method Blank	93	96	82	100	95	89	99	106
MB 320-862764/1-A	Method Blank				88				

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-122544-7	EFF G-202506	0	93	62	53	46	55	50	96
320-122544-7 - RE	EFF G-202506	0							
LCS 320-859937/2-A	Lab Control Sample	0	91	70	52	47	54	45	99
LCS 320-859937/2-A - RA	Lab Control Sample	0							
LCS 320-862764/2-A	Lab Control Sample	0							
LCSD 320-859937/3-A	Lab Control Sample Dup	0	96	79	57	50	57	49	94
LCSD 320-859937/3-A - RA	Lab Control Sample Dup	0							
MB 320-859937/1-A	Method Blank	0	92	87	71	61	78	73	98
MB 320-862764/1-A	Method Blank	0							

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-122544-7	EFF G-202506	85	83
320-122544-7 - RE	EFF G-202506		
LCS 320-859937/2-A	Lab Control Sample	88	90
LCS 320-859937/2-A - RA	Lab Control Sample		
LCS 320-862764/2-A	Lab Control Sample		
LCSD 320-859937/3-A	Lab Control Sample Dup	82	84
LCSD 320-859937/3-A - RA	Lab Control Sample Dup		
MB 320-859937/1-A	Method Blank	91	99
MB 320-862764/1-A	Method Blank		

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-859928/1-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorooctanesulfonic acid (PFOS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		06/25/25 19:45	07/01/25 04:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 04:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 04:53	1
4:2 FTS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
6:2 FTS	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 04:53	1
8:2 FTS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		06/25/25 19:45	07/01/25 04:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		06/25/25 19:45	07/01/25 04:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		06/25/25 19:45	07/01/25 04:53	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		06/25/25 19:45	07/01/25 04:53	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		06/25/25 19:45	07/01/25 04:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 04:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		06/25/25 19:45	07/01/25 04:53	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-859928/1-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 04:53	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	70		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C4 PFBA	106		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C5 PFPeA	96		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 PFHxA	101		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C4 PFHpA	95		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C4 PFOA	102		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C5 PFNA	104		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 PFDA	102		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 PFUnA	87		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 PFDoA	75		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 PFTeDA	74		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C3 PFBS	102		25 - 150				06/25/25 19:45	07/01/25 04:53	1
18O2 PFHxS	98		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C4 PFOS	95		25 - 150				06/25/25 19:45	07/01/25 04:53	1
D3-NMeFOSAA	93		25 - 150				06/25/25 19:45	07/01/25 04:53	1
D5-NEtFOSAA	94		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 4:2 FTS	99		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 6:2 FTS	100		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C2 8:2 FTS	88		25 - 150				06/25/25 19:45	07/01/25 04:53	1
d-N-MeFOSA-M	68		25 - 150				06/25/25 19:45	07/01/25 04:53	1
d-N-EtFOSA-M	63		25 - 150				06/25/25 19:45	07/01/25 04:53	1
D7-NMeFOSE	66		25 - 150				06/25/25 19:45	07/01/25 04:53	1
D9-NEtFOSE	62		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C3 HFPO-DA	98		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C-6:2 FTCA	88		25 - 150				06/25/25 19:45	07/01/25 04:53	1
13C-8:2 FTCA	97		25 - 150				06/25/25 19:45	07/01/25 04:53	1

Lab Sample ID: LCS 320-859928/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	44.1		ng/L		110	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	48.9		ng/L		122	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	44.8		ng/L		112	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	47.3		ng/L		118	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	46.5		ng/L		116	70 - 130
Perfluorononanoic acid (PFNA)	40.0	42.8		ng/L		107	68 - 135
Perfluorodecanoic acid (PFDA)	40.0	47.5		ng/L		119	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	45.8		ng/L		115	75 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-859928/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	40.0	47.3		ng/L		118	76 - 136
Perfluorotridecanoic acid (PFTTrDA)	40.0	41.2		ng/L		103	70 - 130
Perfluorotetradecanoic acid (PFTeDA)	40.0	40.1		ng/L		100	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	37.6	46.3		ng/L		123	75 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	41.6		ng/L		114	68 - 128
Perfluoroheptanesulfonic acid (PFHpS)	38.2	46.5		ng/L		122	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	38.5		ng/L		104	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	41.8		ng/L		109	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	40.1		ng/L		104	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	32.1		ng/L		83	59 - 142
Perfluorooctanesulfonamide (PFOSA)	40.0	41.2		ng/L		103	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	45.7		ng/L		114	71 - 131
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.0		ng/L		92	71 - 129
4:2 FTS	37.5	44.4		ng/L		118	71 - 131
6:2 FTS	38.1	42.0		ng/L		110	71 - 131
8:2 FTS	38.4	40.3		ng/L		105	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	33.2		ng/L		83	65 - 127
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	26.8	*-	ng/L		67	72 - 132
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	39.6		ng/L		99	70 - 130
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	41.6		ng/L		104	71 - 131
9Cl-PF3ONS	37.4	40.6		ng/L		109	75 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	49.5		ng/L		124	74 - 134
11Cl-PF3OUdS	37.8	35.7		ng/L		95	70 - 142
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	44.7		ng/L		118	66 - 146
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	42.5		ng/L		106	68 - 144
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	47.8		ng/L		120	61 - 132
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	36.1		ng/L		90	61 - 132
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	45.6		ng/L		114	63 - 139
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	50.2		ng/L		125	73 - 133
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.1		ng/L		110	72 - 132

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-859928/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	40.8		ng/L		114	75 - 144
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C8 FOSA	82		25 - 150				
13C4 PFBA	101		25 - 150				
13C5 PFPeA	93		25 - 150				
13C2 PFHxA	100		25 - 150				
13C4 PFHpA	94		25 - 150				
13C4 PFOA	92		25 - 150				
13C5 PFNA	99		25 - 150				
13C2 PFDA	89		25 - 150				
13C2 PFUnA	89		25 - 150				
13C2 PFDoA	87		25 - 150				
13C2 PFTeDA	83		25 - 150				
13C3 PFBS	95		25 - 150				
18O2 PFHxS	98		25 - 150				
13C4 PFOS	94		25 - 150				
D3-NMeFOSAA	97		25 - 150				
D5-NEtFOSAA	99		25 - 150				
13C2 4:2 FTS	98		25 - 150				
13C2 6:2 FTS	95		25 - 150				
13C2 8:2 FTS	90		25 - 150				
d-N-MeFOSA-M	71		25 - 150				
d-N-EtFOSA-M	63		25 - 150				
D7-NMeFOSE	81		25 - 150				
D9-NEtFOSE	75		25 - 150				
13C3 HFPO-DA	93		25 - 150				
13C-6:2 FTCA	79		25 - 150				
13C-8:2 FTCA	91		25 - 150				

Lab Sample ID: LCSD 320-859928/3-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	42.5		ng/L		106	76 - 136	4	30
Perfluoropentanoic acid (PFPeA)	40.0	48.6		ng/L		122	71 - 131	1	30
Perfluorohexanoic acid (PFHxA)	40.0	46.3		ng/L		116	73 - 133	3	30
Perfluoroheptanoic acid (PFHpA)	40.0	47.5		ng/L		119	72 - 132	0	30
Perfluorooctanoic acid (PFOA)	40.0	44.6		ng/L		111	70 - 130	4	30
Perfluorononanoic acid (PFNA)	40.0	43.1		ng/L		108	68 - 135	1	30
Perfluorodecanoic acid (PFDA)	40.0	43.5		ng/L		109	76 - 136	9	30
Perfluoroundecanoic acid (PFUnA)	40.0	43.9		ng/L		110	75 - 135	4	30
Perfluorododecanoic acid (PFDoA)	40.0	44.1		ng/L		110	76 - 136	7	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	37.0		ng/L		93	70 - 130	11	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-859928/3-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 859928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotetradecanoic acid (PFTeDA)	40.0	38.1		ng/L		95	70 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	45.2		ng/L		120	75 - 135	3	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	43.2		ng/L		118	68 - 128	4	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	45.6		ng/L		119	76 - 136	2	30
Perfluorooctanesulfonic acid (PFOS)	37.2	40.3		ng/L		108	70 - 130	5	30
Perfluorononanesulfonic acid (PFNS)	38.5	44.6		ng/L		116	75 - 135	7	30
Perfluorodecanesulfonic acid (PFDS)	38.6	36.2		ng/L		94	71 - 131	10	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	31.9		ng/L		82	59 - 142	1	30
Perfluorooctanesulfonamide (PFOSA)	40.0	38.0		ng/L		95	73 - 133	8	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.8		ng/L		99	71 - 131	14	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.8		ng/L		92	71 - 129	0	30
4:2 FTS	37.5	45.7		ng/L		122	71 - 131	3	30
6:2 FTS	38.1	44.6		ng/L		117	71 - 131	6	30
8:2 FTS	38.4	43.5		ng/L		113	75 - 135	8	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	33.4		ng/L		84	65 - 127	1	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	27.6	*	ng/L		69	72 - 132	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	40.4		ng/L		101	70 - 130	2	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	39.6		ng/L		99	71 - 131	5	30
9CI-PF3ONS	37.4	42.3		ng/L		113	75 - 135	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	51.4		ng/L		129	74 - 134	4	30
11CI-PF3OUdS	37.8	34.9		ng/L		92	70 - 142	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	46.6		ng/L		123	66 - 146	4	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	41.8		ng/L		105	68 - 144	2	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	47.9		ng/L		120	61 - 132	0	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	34.7		ng/L		87	61 - 132	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	50.3		ng/L		126	63 - 139	10	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	49.3		ng/L		123	73 - 133	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	45.2		ng/L		113	72 - 132	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	39.6		ng/L		111	75 - 144	3	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C8 FOSA	81		25 - 150
13C4 PFBA	109		25 - 150
13C5 PFPeA	96		25 - 150
13C2 PFHxA	100		25 - 150
13C4 PFHpA	97		25 - 150
13C4 PFOA	98		25 - 150
13C5 PFNA	103		25 - 150
13C2 PFDA	100		25 - 150
13C2 PFUnA	95		25 - 150
13C2 PFDoA	88		25 - 150
13C2 PFTeDA	81		25 - 150
13C3 PFBS	98		25 - 150
18O2 PFHxS	96		25 - 150
13C4 PFOS	93		25 - 150
D3-NMeFOSAA	100		25 - 150
D5-NEtFOSAA	97		25 - 150
13C2 4:2 FTS	96		25 - 150
13C2 6:2 FTS	92		25 - 150
13C2 8:2 FTS	91		25 - 150
d-N-MeFOSA-M	75		25 - 150
d-N-EtFOSA-M	67		25 - 150
D7-NMeFOSE	83		25 - 150
D9-NEtFOSE	80		25 - 150
13C3 HFPO-DA	97		25 - 150
13C-6:2 FTCA	88		25 - 150
13C-8:2 FTCA	96		25 - 150

Lab Sample ID: MB 320-862763/1-A

Matrix: Water

Analysis Batch: 863222

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 862763

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		07/13/25 20:15	07/15/25 11:16	1
Isotope Dilution	MB		Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
13C3 PFBS	88		25 - 150				07/13/25 20:15	07/15/25 11:16	1
13C2 4:2 FTS	88		25 - 150				07/13/25 20:15	07/15/25 11:16	1

Lab Sample ID: LCS 320-862763/2-A

Matrix: Water

Analysis Batch: 863222

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 862763

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanesulfonic acid (PFBS)	35.5	41.5		ng/L		117	76 - 136
Isotope Dilution	LCS		Limits				
	%Recovery	Qualifier					
13C3 PFBS	91		25 - 150				

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-863226/1-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.0	0.23	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
4:2 FTS	ND		1.0	0.26	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
6:2 FTS	ND		1.0	0.14	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
8:2 FTS	ND		1.0	0.18	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		07/15/25 20:33	07/22/25 08:05	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-863226/1-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		07/15/25 20:33	07/22/25 08:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		07/15/25 20:33	07/22/25 08:05	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	68		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C4 PFBA	88		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C5 PFPeA	92		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 PFHxA	94		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C4 PFHpA	87		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C4 PFOA	86		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C5 PFNA	89		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 PFDA	80		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 PFUnA	80		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 PFDoA	78		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 PFTeDA	76		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C3 PFBS	84		25 - 150	07/15/25 20:33	07/22/25 08:05	1
18O2 PFHxS	89		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C4 PFOS	82		25 - 150	07/15/25 20:33	07/22/25 08:05	1
D3-NMeFOSAA	75		25 - 150	07/15/25 20:33	07/22/25 08:05	1
D5-NEtFOSAA	85		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 4:2 FTS	79		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 6:2 FTS	79		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C2 8:2 FTS	70		25 - 150	07/15/25 20:33	07/22/25 08:05	1
d-N-MeFOSA-M	56		25 - 150	07/15/25 20:33	07/22/25 08:05	1
d-N-EtFOSA-M	52		25 - 150	07/15/25 20:33	07/22/25 08:05	1
D7-NMeFOSE	70		25 - 150	07/15/25 20:33	07/22/25 08:05	1
D9-NEtFOSE	68		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C3 HFPO-DA	77		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C-6:2 FTCA	66		25 - 150	07/15/25 20:33	07/22/25 08:05	1
13C-8:2 FTCA	62		25 - 150	07/15/25 20:33	07/22/25 08:05	1

Lab Sample ID: LCS 320-863226/2-A

Matrix: Solid

Analysis Batch: 864961

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	4.39		ug/Kg		110	76 - 136
Perfluoropentanoic acid (PFPeA)	4.00	3.90		ug/Kg		97	69 - 129
Perfluorohexanoic acid (PFHxA)	4.00	4.43		ug/Kg		111	71 - 131
Perfluoroheptanoic acid (PFHpA)	4.00	4.46		ug/Kg		112	71 - 131
Perfluorooctanoic acid (PFOA)	4.00	3.89		ug/Kg		97	72 - 132
Perfluorononanoic acid (PFNA)	4.00	3.84		ug/Kg		96	73 - 133
Perfluorodecanoic acid (PFDA)	4.00	4.15		ug/Kg		104	72 - 132
Perfluoroundecanoic acid (PFUnA)	4.00	4.35		ug/Kg		109	66 - 126

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-863226/2-A

Matrix: Solid

Analysis Batch: 864961

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	4.00	4.24		ug/Kg		106	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.84		ug/Kg		96	71 - 131
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.73		ug/Kg		93	67 - 127
Perfluorobutanesulfonic acid (PFBS)	3.55	4.11		ug/Kg		116	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.21		ug/Kg		112	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.06		ug/Kg		111	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.39		ug/Kg		115	76 - 136
Perfluorooctanesulfonic acid (PFOS)	3.72	3.79		ug/Kg		102	68 - 141
Perfluorononanesulfonic acid (PFNS)	3.85	3.95		ug/Kg		103	72 - 132
Perfluorodecanesulfonic acid (PFDS)	3.86	3.38		ug/Kg		88	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.12		ug/Kg		80	70 - 130
Perfluorooctanesulfonamide (PFOSA)	4.00	3.95		ug/Kg		99	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.46		ug/Kg		111	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.39		ug/Kg		85	72 - 132
4:2 FTS	3.75	3.90		ug/Kg		104	68 - 143
6:2 FTS	3.81	3.84		ug/Kg		101	73 - 139
8:2 FTS	3.84	4.05		ug/Kg		105	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.25		ug/Kg		106	47 - 161
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.57		ug/Kg		89	63 - 148
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.17		ug/Kg		104	43 - 153
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.06		ug/Kg		101	44 - 155
9CI-PF3ONS	3.74	3.85		ug/Kg		103	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.61		ug/Kg		115	53 - 158
11CI-PF3OUdS	3.78	3.37		ug/Kg		89	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.72		ug/Kg		125	79 - 139
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	4.34		ug/Kg		109	50 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	4.54		ug/Kg		113	50 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	2.85		ug/Kg		71	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.99		ug/Kg		100	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.39		ug/Kg		110	50 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-863226/2-A

Matrix: Solid

Analysis Batch: 864961

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.89		ug/Kg		97	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.77		ug/Kg		106	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	71		25 - 150
13C4 PFBA	98		25 - 150
13C5 PFPeA	97		25 - 150
13C2 PFHxA	98		25 - 150
13C4 PFHpA	92		25 - 150
13C4 PFOA	95		25 - 150
13C5 PFNA	99		25 - 150
13C2 PFDA	86		25 - 150
13C2 PFUnA	76		25 - 150
13C2 PFDoA	76		25 - 150
13C2 PFTeDA	77		25 - 150
13C3 PFBS	94		25 - 150
18O2 PFHxS	94		25 - 150
13C4 PFOS	85		25 - 150
D3-NMeFOSAA	66		25 - 150
D5-NEtFOSAA	76		25 - 150
13C2 4:2 FTS	85		25 - 150
13C2 6:2 FTS	87		25 - 150
13C2 8:2 FTS	74		25 - 150
d-N-MeFOSA-M	68		25 - 150
d-N-EtFOSA-M	61		25 - 150
D7-NMeFOSE	66		25 - 150
D9-NEtFOSE	66		25 - 150
13C3 HFPO-DA	85		25 - 150
13C-6:2 FTCA	70		25 - 150
13C-8:2 FTCA	70		25 - 150

Lab Sample ID: LCSD 320-863226/3-A

Matrix: Solid

Analysis Batch: 864961

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	4.27		ug/Kg		107	76 - 136	3	30
Perfluoropentanoic acid (PFPeA)	4.00	3.89		ug/Kg		97	69 - 129	0	30
Perfluorohexanoic acid (PFHxA)	4.00	4.42		ug/Kg		110	71 - 131	0	30
Perfluoroheptanoic acid (PFHpA)	4.00	4.40		ug/Kg		110	71 - 131	1	30
Perfluorooctanoic acid (PFOA)	4.00	4.25		ug/Kg		106	72 - 132	9	30
Perfluorononanoic acid (PFNA)	4.00	4.01		ug/Kg		100	73 - 133	4	30
Perfluorodecanoic acid (PFDA)	4.00	4.26		ug/Kg		106	72 - 132	3	30
Perfluoroundecanoic acid (PFUnA)	4.00	3.94		ug/Kg		98	66 - 126	10	30
Perfluorododecanoic acid (PFDoA)	4.00	4.21		ug/Kg		105	71 - 131	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-863226/3-A

Matrix: Solid

Analysis Batch: 864961

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.62		ug/Kg		90	71 - 131	6	30
Perfluorotetradecanoic acid (PFTTeDA)	4.00	3.97		ug/Kg		99	67 - 127	6	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.98		ug/Kg		112	69 - 129	3	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.02		ug/Kg		107	66 - 126	5	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.82		ug/Kg		105	62 - 122	6	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.57		ug/Kg		120	76 - 136	4	30
Perfluorooctanesulfonic acid (PFOS)	3.72	3.64		ug/Kg		98	68 - 141	4	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.92		ug/Kg		102	72 - 132	1	30
Perfluorodecanesulfonic acid (PFDS)	3.86	3.66		ug/Kg		95	71 - 131	8	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.37		ug/Kg		87	70 - 130	8	30
Perfluorooctanesulfonamide (PFOSA)	4.00	3.99		ug/Kg		100	77 - 137	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.83		ug/Kg		121	72 - 132	8	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.20		ug/Kg		80	72 - 132	6	30
4:2 FTS	3.75	3.64		ug/Kg		97	68 - 143	7	30
6:2 FTS	3.81	3.61		ug/Kg		95	73 - 139	6	30
8:2 FTS	3.84	3.50		ug/Kg		91	75 - 135	15	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.50		ug/Kg		113	47 - 161	6	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.75		ug/Kg		94	63 - 148	5	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.33		ug/Kg		108	43 - 153	4	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.04		ug/Kg		101	44 - 155	0	30
9CI-PF3ONS	3.74	3.53		ug/Kg		94	74 - 134	9	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	5.09		ug/Kg		127	53 - 158	10	30
11CI-PF3OUdS	3.78	3.30		ug/Kg		87	66 - 136	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.60		ug/Kg		122	79 - 139	2	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	4.13		ug/Kg		103	50 - 150	5	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	4.95		ug/Kg		124	50 - 150	9	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	3.07		ug/Kg		77	50 - 150	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.12		ug/Kg		103	50 - 150	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.24		ug/Kg		106	50 - 150	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.79		ug/Kg		95	50 - 150	3	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-863226/3-A

Matrix: Solid

Analysis Batch: 864961

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 863226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.75		ug/Kg		105	50 - 150	1	30
Isotope Dilution									
	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
13C8 FOSA	83		25 - 150						
13C4 PFBA	109		25 - 150						
13C5 PFPeA	108		25 - 150						
13C2 PFHxA	106		25 - 150						
13C4 PFHpA	105		25 - 150						
13C4 PFOA	99		25 - 150						
13C5 PFNA	106		25 - 150						
13C2 PFDA	92		25 - 150						
13C2 PFUnA	93		25 - 150						
13C2 PFDoA	92		25 - 150						
13C2 PFTeDA	88		25 - 150						
13C3 PFBS	102		25 - 150						
18O2 PFHxS	104		25 - 150						
13C4 PFOS	94		25 - 150						
D3-NMeFOSAA	85		25 - 150						
D5-NEtFOSAA	92		25 - 150						
13C2 4:2 FTS	92		25 - 150						
13C2 6:2 FTS	91		25 - 150						
13C2 8:2 FTS	85		25 - 150						
d-N-MeFOSA-M	70		25 - 150						
d-N-EtFOSA-M	63		25 - 150						
D7-NMeFOSE	82		25 - 150						
D9-NEtFOSE	78		25 - 150						
13C3 HFPO-DA	90		25 - 150						
13C-6:2 FTCA	81		25 - 150						
13C-8:2 FTCA	75		25 - 150						

Lab Sample ID: MB 320-859937/1-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 859937

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.88	J	13	3.1	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-859937/1-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 859937

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorooctanesulfonic acid (PFOS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		06/25/25 20:19	07/01/25 06:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 06:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 06:31	1
4:2 FTS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
6:2 FTS	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 06:31	1
8:2 FTS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		06/25/25 20:19	07/01/25 06:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		06/25/25 20:19	07/01/25 06:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		06/25/25 20:19	07/01/25 06:31	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		06/25/25 20:19	07/01/25 06:31	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		06/25/25 20:19	07/01/25 06:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 06:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 06:31	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	88		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C4 PFBA	109		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C5 PFPeA	97		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C2 PFHxA	106		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C4 PFHpA	100		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C4 PFOA	96		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C5 PFNA	102		25 - 150	06/25/25 20:19	07/01/25 06:31	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-859937/1-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 859937

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDA	93		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C2 PFUnA	93		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C2 PFDoA	96		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C2 PFTeDA	82		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C3 PFBS	100		25 - 150	06/25/25 20:19	07/01/25 06:31	1
18O2 PFHxS	95		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C4 PFOS	89		25 - 150	06/25/25 20:19	07/01/25 06:31	1
D3-NMeFOSAA	99		25 - 150	06/25/25 20:19	07/01/25 06:31	1
D5-NEtFOSAA	106		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C2 4:2 FTS	0		0 - 10	06/25/25 20:19	07/01/25 06:31	1
13C2 6:2 FTS	92		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C2 8:2 FTS	87		25 - 150	06/25/25 20:19	07/01/25 06:31	1
d-N-MeFOSA-M	71		25 - 150	06/25/25 20:19	07/01/25 06:31	1
d-N-EtFOSA-M	61		25 - 150	06/25/25 20:19	07/01/25 06:31	1
D7-NMeFOSE	78		25 - 150	06/25/25 20:19	07/01/25 06:31	1
D9-NEtFOSE	73		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C3 HFPO-DA	98		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C-6:2 FTCA	91		25 - 150	06/25/25 20:19	07/01/25 06:31	1
13C-8:2 FTCA	99		25 - 150	06/25/25 20:19	07/01/25 06:31	1

Lab Sample ID: LCS 320-859937/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 859937

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	90.8		ng/L		227	157 - 278
Perfluoropentanoic acid (PFPeA)	40.0	99.7	*+	ng/L		249	151 - 208
Perfluorohexanoic acid (PFHxA)	40.0	107		ng/L		268	194 - 269
Perfluoroheptanoic acid (PFHpA)	40.0	95.9		ng/L		240	199 - 252
Perfluorooctanoic acid (PFOA)	40.0	180		ng/L		450	351 - 490
Perfluorononanoic acid (PFNA)	40.0	75.8		ng/L		190	145 - 205
Perfluoroundecanoic acid (PFUnA)	40.0	45.5		ng/L		114	82 - 142
Perfluorododecanoic acid (PFDoA)	40.0	42.2		ng/L		106	82 - 142
Perfluorotetradecanoic acid (PFTeDA)	40.0	34.4		ng/L		86	72 - 132
Perfluoropentanesulfonic acid (PFPeS)	37.6	44.2		ng/L		118	83 - 143
Perfluorohexanesulfonic acid (PFHxS)	36.5	40.4		ng/L		111	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	38.2	48.5		ng/L		127	80 - 140
Perfluorooctanesulfonic acid (PFOS)	37.2	41.6		ng/L		112	82 - 142
Perfluorononanesulfonic acid (PFNS)	38.5	38.2		ng/L		99	79 - 139
Perfluorodecanesulfonic acid (PFDS)	38.6	32.4		ng/L		84	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	22.3		ng/L		57	52 - 139

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-859937/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 859937

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (PFOSA)	40.0	ND		ng/L		0.9	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10
4:2 FTS	37.5	ND		ng/L		0	0 - 10
6:2 FTS	38.1	ND		ng/L		0	0 - 10
8:2 FTS	38.4	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10
9CI-PF3ONS	37.4	33.2		ng/L		89	66 - 126
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	46.1	*+	ng/L		115	52 - 112
11CI-PF3OUdS	37.8	14.6	*-	ng/L		39	45 - 105
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	ND		ng/L		0.3	0 - 10
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	48.9		ng/L		122	67 - 127
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	48.2		ng/L		120	60 - 120
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	69.8		ng/L		174	111 - 174
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	39.6		ng/L		111	81 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	69		25 - 150
13C4 PFBA	108		25 - 150
13C5 PFPeA	99		25 - 150
13C2 PFHxA	106		25 - 150
13C4 PFHpA	98		25 - 150
13C4 PFOA	96		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFUnA	69		25 - 150
13C2 PFDoA	70		25 - 150
13C2 PFTeDA	67		25 - 150
13C3 PFBS	102		25 - 150
18O2 PFHxS	100		25 - 150
13C4 PFOS	84		25 - 150
D3-NMeFOSAA	87		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-859937/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 859937

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
D5-NEtFOSAA	84		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	91		25 - 150
13C2 8:2 FTS	70		25 - 150
d-N-MeFOSA-M	52		25 - 150
d-N-EtFOSA-M	47		25 - 150
D7-NMeFOSE	54		25 - 150
D9-NEtFOSE	45		25 - 150
13C3 HFPO-DA	99		25 - 150
13C-6:2 FTCA	88		25 - 150
13C-8:2 FTCA	90		25 - 150

Lab Sample ID: LCSD 320-859937/3-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 859937

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	86.8		ng/L		217	157 - 278	5	30
Perfluoropentanoic acid (PFPeA)	40.0	93.7	*+	ng/L		234	151 - 208	6	30
Perfluorohexanoic acid (PFHxA)	40.0	118	*+	ng/L		295	194 - 269	9	30
Perfluoroheptanoic acid (PFHpA)	40.0	99.0		ng/L		248	199 - 252	3	30
Perfluorooctanoic acid (PFOA)	40.0	180		ng/L		451	351 - 490	0	30
Perfluorononanoic acid (PFNA)	40.0	78.1		ng/L		195	145 - 205	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	46.4		ng/L		116	82 - 142	2	30
Perfluorododecanoic acid (PFDoA)	40.0	43.8		ng/L		110	82 - 142	4	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	37.0		ng/L		92	72 - 132	7	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	44.7		ng/L		119	83 - 143	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	41.2		ng/L		113	73 - 133	2	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	49.6		ng/L		130	80 - 140	2	30
Perfluorooctanesulfonic acid (PFOS)	37.2	39.7		ng/L		107	82 - 142	5	30
Perfluorononanesulfonic acid (PFNS)	38.5	37.9		ng/L		99	79 - 139	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	32.8		ng/L		85	71 - 131	1	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	23.3		ng/L		60	52 - 139	4	30
Perfluorooctanesulfonamide (PFOSA)	40.0	ND	*1	ng/L		1	0 - 10	47	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30
4:2 FTS	37.5	ND		ng/L		0	0 - 10	NC	30
6:2 FTS	38.1	3.70	J *1	ng/L		10	0 - 10	200	30
8:2 FTS	38.4	ND		ng/L		0	0 - 10	NC	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-859937/3-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 859937

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
9CI-PF3ONS	37.4	34.7		ng/L		93	66 - 126	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	46.4	*+	ng/L		116	52 - 112	1	30
11CI-PF3OUdS	37.8	15.6	*-	ng/L		41	45 - 105	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	ND	*1	ng/L		0.5	0 - 10	42	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	44.5		ng/L		111	67 - 127	10	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	43.4		ng/L		109	60 - 120	10	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	66.6		ng/L		167	111 - 174	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	39.0		ng/L		109	81 - 141	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C8 FOSA	76		25 - 150
13C4 PFBA	105		25 - 150
13C5 PFPeA	100		25 - 150
13C2 PFHxA	98		25 - 150
13C4 PFHpA	95		25 - 150
13C4 PFOA	94		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFUnA	75		25 - 150
13C2 PFDoA	72		25 - 150
13C2 PFTeDA	63		25 - 150
13C3 PFBS	100		25 - 150
18O2 PFHxS	96		25 - 150
13C4 PFOS	82		25 - 150
D3-NMeFOSAA	80		25 - 150
D5-NEtFOSAA	83		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	96		25 - 150
13C2 8:2 FTS	79		25 - 150
d-N-MeFOSA-M	57		25 - 150
d-N-EtFOSA-M	50		25 - 150
D7-NMeFOSE	57		25 - 150
D9-NEtFOSE	49		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-859937/3-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 859937

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	94		25 - 150
13C-6:2 FTCA	82		25 - 150
13C-8:2 FTCA	84		25 - 150

Lab Sample ID: MB 320-862764/1-A

Matrix: Water

Analysis Batch: 863223

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 862764

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		07/13/25 20:31	07/15/25 15:15	1
Isotope Dilution	MB	MB	Limits	Prepared		Analyzed	Dil Fac		
	%Recovery	Qualifier							
	13C3 PFBS	88		25 - 150	07/13/25 20:31			07/15/25 15:15	1
13C2 4:2 FTS	0		0 - 10	07/13/25 20:31	07/15/25 15:15	1			

Lab Sample ID: LCS 320-862764/2-A

Matrix: Water

Analysis Batch: 863223

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 862764

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Perfluorobutanesulfonic acid (PFBS)			35.5	38.8		ng/L		109	84 - 144		
Isotope Dilution	LCS		Limits								
	%Recovery	Qualifier									
13C3 PFBS	94		25 - 150								
13C2 4:2 FTS	0		0 - 10								

Lab Sample ID: MB 320-863235/1-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 863235

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	0.531	J	1.0	0.23	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorotridecanoic acid (PFTriDA)	ND		1.0	0.11	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		07/15/25 20:40	07/22/25 04:06	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-863235/1-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 863235

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
4:2 FTS	ND		1.0	0.26	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
6:2 FTS	ND		1.0	0.14	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
8:2 FTS	ND		1.0	0.18	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		07/15/25 20:40	07/22/25 04:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		07/15/25 20:40	07/22/25 04:06	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	59		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C4 PFBA	106		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C5 PFPeA	102		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 PFHxA	101		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C4 PFHpA	96		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C4 PFOA	96		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C5 PFNA	94		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 PFDA	74		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 PFUnA	66		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 PFDoA	56		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 PFTeDA	62		25 - 150	07/15/25 20:40	07/22/25 04:06	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-863235/1-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 863235

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	100		25 - 150	07/15/25 20:40	07/22/25 04:06	1
18O2 PFHxS	97		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C4 PFOS	76		25 - 150	07/15/25 20:40	07/22/25 04:06	1
D3-NMeFOSAA	52		25 - 150	07/15/25 20:40	07/22/25 04:06	1
D5-NEtFOSAA	52		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 4:2 FTS	0		0 - 10	07/15/25 20:40	07/22/25 04:06	1
13C2 6:2 FTS	90		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C2 8:2 FTS	71		25 - 150	07/15/25 20:40	07/22/25 04:06	1
d-N-MeFOSA-M	44		25 - 150	07/15/25 20:40	07/22/25 04:06	1
d-N-EtFOSA-M	38		25 - 150	07/15/25 20:40	07/22/25 04:06	1
D7-NMeFOSE	53		25 - 150	07/15/25 20:40	07/22/25 04:06	1
D9-NEtFOSE	46		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C3 HFPO-DA	92		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C-6:2 FTCA	82		25 - 150	07/15/25 20:40	07/22/25 04:06	1
13C-8:2 FTCA	57		25 - 150	07/15/25 20:40	07/22/25 04:06	1

Lab Sample ID: LCS 320-863235/2-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 863235

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	9.06		ug/Kg		226	167 - 261
Perfluoropentanoic acid (PFPeA)	4.00	8.42		ug/Kg		210	159 - 221
Perfluorohexanoic acid (PFHxA)	4.00	10.2		ug/Kg		255	208 - 257
Perfluoroheptanoic acid (PFHpA)	4.00	8.97		ug/Kg		224	189 - 267
Perfluorooctanoic acid (PFOA)	4.00	17.6		ug/Kg		439	372 - 496
Perfluorononanoic acid (PFNA)	4.00	6.73		ug/Kg		168	154 - 205
Perfluorodecanoic acid (PFDA)	4.00	6.18		ug/Kg		155	130 - 190
Perfluoroundecanoic acid (PFUnA)	4.00	3.99		ug/Kg		100	81 - 141
Perfluorododecanoic acid (PFDoA)	4.00	3.74		ug/Kg		93	84 - 144
Perfluorotridecanoic acid (PFTTrDA)	4.00	2.82	*-	ug/Kg		70	78 - 138
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.20		ug/Kg		80	72 - 132
Perfluorobutanesulfonic acid (PFBS)	3.55	4.01		ug/Kg		113	89 - 149
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.85		ug/Kg		102	94 - 154
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.71		ug/Kg		102	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.53		ug/Kg		119	68 - 128
Perfluorooctanesulfonic acid (PFOS)	3.72	3.76		ug/Kg		101	70 - 138
Perfluorononanesulfonic acid (PFNS)	3.85	3.40		ug/Kg		88	66 - 126
Perfluorodecanesulfonic acid (PFDS)	3.86	2.69		ug/Kg		70	66 - 126
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.07		ug/Kg		53	47 - 107

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-863235/2-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 863235

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10
9CI-PF3ONS	3.74	3.08		ug/Kg		82	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.21		ug/Kg		105	53 - 158
11CI-PF3OUdS	3.78	1.72		ug/Kg		46	46 - 106
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.91		ug/Kg		98	60 - 138
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.29		ug/Kg		107	62 - 122
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	5.78		ug/Kg		144	112 - 172
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.56		ug/Kg		100	84 - 152

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	62		25 - 150
13C4 PFBA	114		25 - 150
13C5 PFPeA	112		25 - 150
13C2 PFHxA	112		25 - 150
13C4 PFHpA	108		25 - 150
13C4 PFOA	105		25 - 150
13C5 PFNA	106		25 - 150
13C2 PFDA	84		25 - 150
13C2 PFUnA	76		25 - 150
13C2 PFDoA	69		25 - 150
13C2 PFTeDA	67		25 - 150
13C3 PFBS	106		25 - 150
18O2 PFHxS	108		25 - 150
13C4 PFOS	87		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-863235/2-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 863235

<i>Isotope Dilution</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
D3-NMeFOSAA	58		25 - 150
D5-NEtFOSAA	67		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	113		25 - 150
13C2 8:2 FTS	82		25 - 150
d-N-MeFOSA-M	48		25 - 150
d-N-EtFOSA-M	41		25 - 150
D7-NMeFOSE	58		25 - 150
D9-NEtFOSE	52		25 - 150
13C3 HFPO-DA	98		25 - 150
13C-6:2 FTCA	92		25 - 150
13C-8:2 FTCA	66		25 - 150

Lab Sample ID: LCSD 320-863235/3-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 863235

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Perfluorobutanoic acid (PFBA)	4.00	9.00		ug/Kg		225	167 - 261	1	30
Perfluoropentanoic acid (PFPeA)	4.00	8.20		ug/Kg		205	159 - 221	3	30
Perfluorohexanoic acid (PFHxA)	4.00	10.2		ug/Kg		256	208 - 257	0	30
Perfluoroheptanoic acid (PFHpA)	4.00	8.92		ug/Kg		223	189 - 267	1	30
Perfluorooctanoic acid (PFOA)	4.00	18.2		ug/Kg		454	372 - 496	3	30
Perfluorononanoic acid (PFNA)	4.00	7.19		ug/Kg		180	154 - 205	7	30
Perfluorodecanoic acid (PFDA)	4.00	5.69		ug/Kg		142	130 - 190	8	30
Perfluoroundecanoic acid (PFUnA)	4.00	3.83		ug/Kg		96	81 - 141	4	30
Perfluorododecanoic acid (PFDoA)	4.00	3.77		ug/Kg		94	84 - 144	1	30
Perfluorotridecanoic acid (PFTrDA)	4.00	2.85	*-	ug/Kg		71	78 - 138	1	30
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.00		ug/Kg		75	72 - 132	7	30
Perfluorobutanesulfonic acid (PFBS)	3.55	4.18		ug/Kg		118	89 - 149	4	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.92		ug/Kg		104	94 - 154	2	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.71		ug/Kg		102	73 - 133	0	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.58		ug/Kg		120	68 - 128	1	30
Perfluorooctanesulfonic acid (PFOS)	3.72	3.82		ug/Kg		103	70 - 138	1	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.20		ug/Kg		83	66 - 126	6	30
Perfluorodecanesulfonic acid (PFDS)	3.86	2.90		ug/Kg		75	66 - 126	8	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.18		ug/Kg		56	47 - 107	5	30
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-863235/3-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 863235

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10	NC	30
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10	NC	30
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
9CI-PF3ONS	3.74	3.05		ug/Kg		82	74 - 134	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.55		ug/Kg		114	53 - 158	8	30
11CI-PF3OUdS	3.78	1.80		ug/Kg		48	46 - 106	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.95		ug/Kg		99	60 - 138	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.07		ug/Kg		102	62 - 122	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	6.32		ug/Kg		158	112 - 172	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.64		ug/Kg		102	84 - 152	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C8 FOSA	60		25 - 150
13C4 PFBA	110		25 - 150
13C5 PFPeA	109		25 - 150
13C2 PFHxA	111		25 - 150
13C4 PFHpA	103		25 - 150
13C4 PFOA	99		25 - 150
13C5 PFNA	100		25 - 150
13C2 PFDA	79		25 - 150
13C2 PFUnA	72		25 - 150
13C2 PFDoA	62		25 - 150
13C2 PFTeDA	64		25 - 150
13C3 PFBS	105		25 - 150
18O2 PFHxS	104		25 - 150
13C4 PFOS	82		25 - 150
D3-NMeFOSAA	56		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-863235/3-A

Matrix: Solid

Analysis Batch: 864672

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 863235

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
D5-NEtFOSAA	56		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	97		25 - 150
13C2 8:2 FTS	75		25 - 150
d-N-MeFOSA-M	43		25 - 150
d-N-EtFOSA-M	37		25 - 150
D7-NMeFOSE	55		25 - 150
D9-NEtFOSE	50		25 - 150
13C3 HFPO-DA	89		25 - 150
13C-6:2 FTCA	82		25 - 150
13C-8:2 FTCA	66		25 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances - RA

Lab Sample ID: LCS 320-859937/2-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 859937

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluorodecanoic acid (PFDA) - RA	40.0	71.9		ng/L		180	130 - 190
Perfluorotridecanoic acid (PFTrDA) - RA	40.0	34.2		ng/L		85	85 - 145

<i>Isotope Dilution</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
13C2 PFDA - RA	84		25 - 150
13C2 PFDoA - RA	70		25 - 150
13C2 4:2 FTS - RA	0		0 - 10

Lab Sample ID: LCSD 320-859937/3-A

Matrix: Water

Analysis Batch: 860698

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 859937

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Perfluorodecanoic acid (PFDA) - RA	40.0	74.8		ng/L		187	130 - 190	4	30
Perfluorotridecanoic acid (PFTrDA) - RA	40.0	36.0		ng/L		90	85 - 145	5	30

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C2 PFDA - RA	83		25 - 150
13C2 PFDoA - RA	73		25 - 150
13C2 4:2 FTS - RA	0		0 - 10

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

LCMS

Prep Batch: 859928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7	EFF G-202506	Pre-Treatment	Water	TOP Pre - Prep	
MB 320-859928/1-A	Method Blank	Pre-Treatment	Water	TOP Pre - Prep	
LCS 320-859928/2-A	Lab Control Sample	Pre-Treatment	Water	TOP Pre - Prep	
LCSD 320-859928/3-A	Lab Control Sample Dup	Pre-Treatment	Water	TOP Pre - Prep	

Prep Batch: 859937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7	EFF G-202506	Post-Treatment	Water	TOP Post Prep	
MB 320-859937/1-A	Method Blank	Post-Treatment	Water	TOP Post Prep	
LCS 320-859937/2-A - RA	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCS 320-859937/2-A	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCSD 320-859937/3-A	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	
LCSD 320-859937/3-A - RA	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	

Analysis Batch: 860698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7	EFF G-202506	Post-Treatment	Water	537 (modified)	859937
320-122544-7	EFF G-202506	Pre-Treatment	Water	537 (modified)	859928
MB 320-859928/1-A	Method Blank	Pre-Treatment	Water	537 (modified)	859928
MB 320-859937/1-A	Method Blank	Post-Treatment	Water	537 (modified)	859937
LCS 320-859928/2-A	Lab Control Sample	Pre-Treatment	Water	537 (modified)	859928
LCS 320-859937/2-A	Lab Control Sample	Post-Treatment	Water	537 (modified)	859937
LCS 320-859937/2-A - RA	Lab Control Sample	Post-Treatment	Water	537 (modified)	859937
LCSD 320-859928/3-A	Lab Control Sample Dup	Pre-Treatment	Water	537 (modified)	859928
LCSD 320-859937/3-A	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	859937
LCSD 320-859937/3-A - RA	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	859937

Prep Batch: 862763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7 - RE	EFF G-202506	Pre-Treatment	Water	TOP Pre - Prep	
MB 320-862763/1-A	Method Blank	Pre-Treatment	Water	TOP Pre - Prep	
LCS 320-862763/2-A	Lab Control Sample	Pre-Treatment	Water	TOP Pre - Prep	

Prep Batch: 862764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7 - RE	EFF G-202506	Post-Treatment	Water	TOP Post Prep	
MB 320-862764/1-A	Method Blank	Post-Treatment	Water	TOP Post Prep	
LCS 320-862764/2-A	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	

Analysis Batch: 863222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7 - RE	EFF G-202506	Pre-Treatment	Water	537 (modified)	862763
MB 320-862763/1-A	Method Blank	Pre-Treatment	Water	537 (modified)	862763
LCS 320-862763/2-A	Lab Control Sample	Pre-Treatment	Water	537 (modified)	862763

Analysis Batch: 863223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-7 - RE	EFF G-202506	Post-Treatment	Water	537 (modified)	862764
MB 320-862764/1-A	Method Blank	Post-Treatment	Water	537 (modified)	862764
LCS 320-862764/2-A	Lab Control Sample	Post-Treatment	Water	537 (modified)	862764

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

LCMS

Prep Batch: 863226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8	BIO-A-23-202506	Pre-Treatment	Solid	TOP Pre-Prep	
320-122544-9	BIO-A-24-202506	Pre-Treatment	Solid	TOP Pre-Prep	
320-122544-10	BIO-B-202506	Pre-Treatment	Solid	TOP Pre-Prep	
MB 320-863226/1-A	Method Blank	Pre-Treatment	Solid	TOP Pre-Prep	
LCS 320-863226/2-A	Lab Control Sample	Pre-Treatment	Solid	TOP Pre-Prep	
LCSD 320-863226/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	TOP Pre-Prep	

Prep Batch: 863235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8	BIO-A-23-202506	Post-Treatment	Solid	TOP Post-Prep	
320-122544-9	BIO-A-24-202506	Post-Treatment	Solid	TOP Post-Prep	
320-122544-10	BIO-B-202506	Post-Treatment	Solid	TOP Post-Prep	
MB 320-863235/1-A	Method Blank	Post-Treatment	Solid	TOP Post-Prep	
LCS 320-863235/2-A	Lab Control Sample	Post-Treatment	Solid	TOP Post-Prep	
LCSD 320-863235/3-A	Lab Control Sample Dup	Post-Treatment	Solid	TOP Post-Prep	

Analysis Batch: 864672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-122544-8	BIO-A-23-202506	Post-Treatment	Solid	537 (modified)	863235
320-122544-8	BIO-A-23-202506	Pre-Treatment	Solid	537 (modified)	863226
320-122544-9	BIO-A-24-202506	Post-Treatment	Solid	537 (modified)	863235
320-122544-9	BIO-A-24-202506	Pre-Treatment	Solid	537 (modified)	863226
320-122544-10	BIO-B-202506	Post-Treatment	Solid	537 (modified)	863235
320-122544-10	BIO-B-202506	Pre-Treatment	Solid	537 (modified)	863226
MB 320-863226/1-A	Method Blank	Pre-Treatment	Solid	537 (modified)	863226
MB 320-863235/1-A	Method Blank	Post-Treatment	Solid	537 (modified)	863235
LCS 320-863235/2-A	Lab Control Sample	Post-Treatment	Solid	537 (modified)	863235
LCSD 320-863235/3-A	Lab Control Sample Dup	Post-Treatment	Solid	537 (modified)	863235

Analysis Batch: 864961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-863226/2-A	Lab Control Sample	Pre-Treatment	Solid	537 (modified)	863226
LCSD 320-863226/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	537 (modified)	863226

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post Prep			100 mL	10.0 mL	859937	06/25/25 20:19	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	860698	07/01/25 07:14	P1P	EET SAC
Post-Treatment	Prep	TOP Post Prep	RE		100 mL	10.0 mL	862764	07/13/25 20:31	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)	RE	1	1 mL	1 mL	863223	07/15/25 18:17	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre - Prep			100 mL	10.0 mL	859928	06/25/25 19:45	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	860698	07/01/25 05:35	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre - Prep	RE		100 mL	10.0 mL	862763	07/13/25 20:15	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)	RE	1	1 mL	1 mL	863222	07/15/25 14:19	P1P	EET SAC

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.02 g	10.0 mL	863235	07/15/25 20:40	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	864672	07/22/25 04:48	AP1	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.02 g	10.0 mL	863226	07/15/25 20:33	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	864672	07/22/25 08:47	AP1	EET SAC

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.02 g	10.0 mL	863235	07/15/25 20:40	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	864672	07/22/25 05:02	AP1	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.02 g	10.0 mL	863226	07/15/25 20:33	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	864672	07/22/25 09:01	AP1	EET SAC

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.02 g	10.0 mL	863235	07/15/25 20:40	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	864672	07/22/25 05:16	AP1	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.02 g	10.0 mL	863226	07/15/25 20:33	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	864672	07/22/25 09:15	AP1	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26
Wisconsin	State	998204680	08-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Post Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Pre-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
TOP Post Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Post-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC
TOP Pre - Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Pre-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-122544-7	EFF G-202506	Water	06/17/25 07:37	06/18/25 09:45
320-122544-8	BIO-A-23-202506	Solid	06/16/25 14:15	06/18/25 09:45
320-122544-9	BIO-A-24-202506	Solid	06/16/25 14:40	06/18/25 09:45
320-122544-10	BIO-B-202506	Solid	06/16/25 15:00	06/18/25 09:45

Eurofins Sacramento

880 Riverside Parkway
West Sacramento CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environ Testing

Client Information		Sampler <i>Jennifer Faust</i>		Lab PM <i>Jessica McComman</i>		Carrier Tracking No(s) <i>4493 3565 3737</i>		COC No:													
Client Contact: <i>Mike Ursin</i>		Phone:		E-Mail: <i>jessicam@madsewer.org</i>		State of Origin: <i>WI</i>		Page Page <i>1</i> of <i>2</i>													
Company: <i>TRC 999 Fourier Dr Suite 101 Madison WI 53717</i>		PWSID:		Analysis Requested																	
Address: <i>Madison Metro Sewerage Dist</i>		Due Date Requested		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <i>TSS</i> <i>PFAS #23</i> <i>TOP</i> Total Number of containers																	
City: <i>1610 Moorland</i>		TAT Requested (days) <i>20 business days per contract</i>																			
State Zip: <i>Madison, WI 53713</i>		Compliance Project: ☐ Yes ☒ No																			
Phone: <i>608 222-1201</i>		PO # <i>2460419</i>																			
Email: <i>mursin@trccompanies.com</i>		WO #:																			
Project Name: <i>PFAS study</i>		Project #:		Preservation Codes A HCL M - Hexane B NaOH N None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E NaHSO4 Q Na2SO3 F MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I Ice U - Acetone J - DI Water V MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify) Other																	
Site: <i>MMSD</i>		SSOW#:																			
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)				Perform MS/MSD (Yes or No)				Total Number of containers				Special Instructions/Note:			
						Preservation Code:															
<i>INF-02-202506</i>		<i>6/16/25</i>	<i>23:59</i>	<i>C</i>	<i>W</i>	<i>NN</i>				<i>XX</i>											
<i>INF-07-202506</i>		<i>6/16/25</i>	<i>23:59</i>	<i>C</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
<i>INF-08-202506</i>		<i>6/16/25</i>	<i>23:59</i>	<i>C</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
<i>INF-11-202506</i>		<i>6/16/25</i>	<i>23:59</i>	<i>C</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
<i>INF-18-202506</i>		<i>6/16/25</i>	<i>23:59</i>	<i>C</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
<i>INF-COMP 202506</i>		<i>6/16/25</i>	<i>23:59</i>	<i>C</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
<i>EFFGR 202506</i>		<i>6/17/25</i>	<i>7:37</i>	<i>G</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
<i>B10-A-23 202506</i>		<i>6/16/25</i>	<i>14:15</i>	<i>C</i>	<i>S</i>	<i>XX</i>				<i>XX</i>											
<i>B10-A-24-202506</i>		<i>6/16/25</i>	<i>14:40</i>	<i>C</i>	<i>S</i>	<i>XX</i>				<i>XX</i>											
<i>B10-B-202506</i>		<i>6/16/25</i>	<i>15:00</i>	<i>G</i>	<i>S</i>	<i>XX</i>				<i>XX</i>											
<i>EB-01-202506</i>		<i>6/16/25</i>	<i>13:35</i>	<i>G</i>	<i>W</i>	<i>XX</i>				<i>XX</i>											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)															
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months															
Deliverable Requested I II III IV Other (specify)						Special Instructions/QC Requirements.															
Empty Kit Relinquished by:			Date:			Time:			Method of Shipment:												
Relinquished by: <i>Jennifer Faust</i>			Date/Time: <i>6/17/25 08:45</i>			Company:			Received by: <i>DSM</i>			Date/Time: <i>06/18/25 09:45</i>			Company: <i>EECS</i>						
Relinquished by:			Date/Time:			Company:			Received by:			Date/Time:			Company:						
Relinquished by:			Date/Time:			Company:			Received by:			Date/Time:			Company:						
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No <i>2712134</i>		Cooler Temperature(s) °C and Other Remarks: <i>1, 1 °C</i>																	

reports to

Reports to

Page 66 of 70

7/23/2025

eurofins | Environment Testing

[illegible]

Madlien Kendrick

From: Esser, Jessica <JEsser@trccompanies.com>
Sent: Tuesday, June 24, 2025 7:18 AM
To: Madlien Kendrick; Morin, Kristen; Auner, Lydia; Micah Smith; Ursin, Mike
Subject: Re: [EXTERNAL] Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-122544-1 PFAS Sampling

Follow Up Flag: Follow up
Flag Status: Flagged

Unverified Sender: The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Madlien / Micah

Could we cancel the TOP analysis for sample EB-02-202506? TOP analysis was requested on the COC in error for this sample.

Also, can you correct the collection date for sample EFF-G-202506? – This sample is logged in with a 6/16 collection date, but it should be 6/17.

Thank you!

Jessica Esser
608-576-5164

From: Madlien Kendrick <TALS@reports.et.eurofinsus.com>
Sent: Thursday, June 19, 2025 6:44 PM
To: Esser, Jessica <JEsser@trccompanies.com>; Morin, Kristen <KMorin@trccompanies.com>; Auner, Lydia <LAuner@trccompanies.com>; micah.smith@et.eurofinsus.com <micah.smith@et.eurofinsus.com>; Ursin, Mike <MUrsin@trccompanies.com>
Subject: [EXTERNAL] Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-122544-1 PFAS Sampling

This is an **External** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

Hello,

Attached please find the sample confirmation files for job 320-122544-1; PFAS Sampling

The samples were received on 6/18/2025 09:45 AM.

Please review the attachments for accuracy and notify your Project Manager of any discrepancies as quickly as

possible.

Any discrepancies not communicated in a timely fashion could result in missed holding times, TAT delays and may potentially incur additional charges.

Please feel free to contact me or your PM Micah Smith if you have any questions.

Thank you.

Madlien G Kendrick
Project Manager Assistant

Eurofins Sacramento

E-mail: madlien.kendrick@et.eurofinsus.com
www.eurofinsus.com/env



Reference: [320-696099]
Attachments: 3

July 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 7/31/2025 3:27:33 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-123508-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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7/31/2025 3:27:33 PM

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-123508-1

Job ID: 320-123508-1

Eurofins Sacramento

Job Narrative 320-123508-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 7/17/2025 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

PFAS

Method 1633_Final_WI: Per client request, the following samples INF-COMP-202507 (320-123508-1) with elevated total suspended solids (TSS) in the sample containers were fortified with Extracted Internal Standards (EIS), equilibrated, and centrifuged. The aqueous phase was separated and then extracted using Solid Phase Extraction (SPE). A rinse of the solid residue was added to the aqueous sample prior to extraction. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method 1633_Final_WI: The following samples in preparation batch 320-864704 were discolored following extraction: INF-COMP-202507 (320-123508-1) and EFF-G-202507 (320-123508-2).

Method 1633_Final_WI: The continuing calibration verification low level (CCVL) associated with batch 320-864878 recovered above the upper control limit for isotope dilution analyte (IDA) 13C2 4:2 FTS. The associated target analyte, 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) was within control limits in the CCVL. The client samples were in control for the affected IDA. The method blank associated with this CCV was non-detect, the low level laboratory control sample/laboratory control sample duplicate recoveries were in control for the associated target analyte; therefore, the data have been reported. The associated samples are impacted: EB-01-202507 (320-123508-3), (CCVL 320-864878/2), (LCS 320-864704/3-A), (LCSD 320-864704/4-A) and (MB 320-864704/1-A).

Method 1633_Final_WI: The continuing calibration verification (CCV) associated with batch 320-865050 recovered above the upper control limit for the following isotope dilution analyte (IDA): 13C2 4:2 FTS. The associated target analyte, 4:2 FTS, was within control limits in the CCV. The client samples were in control for the affected IDA. The method blank associated with this CCV was non-detect, the low level laboratory control sample/laboratory control sample duplicate recoveries were in control for the associated target analyte; therefore, the data have been reported. The associated samples are impacted: EB-01-202507 (320-123508-3), (CCV 320-865050/1), (CCV 320-865050/13), (LCS 320-864704/3-A), (LCSD 320-864704/4-A), (LLCS 320-864704/2-A) and (MB 320-864704/1-A).

Method 1633_Final_WI: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: INF-COMP-202507 (320-123508-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633_Final_WI: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INF-COMP-202507 (320-123508-1) and EFF-G-202507 (320-123508-2). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633_Final_WI: The following sample has chromatographic interferences that could adversely impact the identification and quantitation of Perfluoropentanoic acid (PFPeA) : EFF-G-202507 (320-123508-2) These interferences could cause false positive results.

Method PFC_IDA - Post-Treatment: The labeled analyte M2-4:2 FTS is converted to PFBA during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors.

Eurofins Sacramento

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-123508-1

Job ID: 320-123508-1 (Continued)

Eurofins Sacramento

Method PFC_IDA - Post-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-A-25-202507 (320-123508-4), (LCS 320-864413/2-A), (LCS 320-864414/2-A), (LCSD 320-864413/3-A), (LCSD 320-864414/3-A), (MB 320-864413/1-A) and (MB 320-864414/1-A).

Method PFC_IDA - Post-Treatment: Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NEtFOSAA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes. The following samples are associated with this narration: BIO-A-25-202507 (320-123508-4), (LCS 320-864414/2-A), (LCSD 320-864414/3-A) and (MB 320-864414/1-A).

Method PFC_IDA - Post-Treatment: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: BIO-A-25-202507 (320-123508-4).

Method PFC_IDA - Post-Treatment: The laboratory control sample (LCS) for preparation batch 320-864414 and analytical batch 320-865216 recovered outside control limits for several analytes. Re-analysis confirms the recoveries outside control limits. The associated samples were non-detect (ND) for this analyte and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No such results were identified and therefore there is no adverse impact on the reported results. The following samples are associated with this narration: BIO-A-25-202507 (320-123508-4), (LCS 320-864414/2-A) and (LCSD 320-864414/3-A).

Method PFC_IDA - Pre-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-A-25-202507 (320-123508-4), (LCS 320-864413/2-A), (LCS 320-864414/2-A), (LCSD 320-864413/3-A), (LCSD 320-864414/3-A), (MB 320-864413/1-A) and (MB 320-864414/1-A).

Method PFC_IDA - Pre-Treatment: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: BIO-A-25-202507 (320-123508-4).

Method PFC_IDA - Pre-Treatment: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: BIO-A-25-202507 (320-123508-4). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: INF-COMP-202507

Lab Sample ID: 320-123508-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	7.9		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.7	0.30	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		1.7	0.33	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.51	J	1.7	0.39	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.43	J	1.7	0.38	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.9		1.7	0.24	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.6		1.7	0.21	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.8		1.7	0.24	ng/L	1		1633A	Total/NA
6:2 FTS	2.6	J	3.4	0.35	ng/L	1		1633A	Total/NA
8:2 FTS	0.88	J	3.4	0.77	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.7	0.30	ng/L	1		1633A	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	J	1.7	0.16	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	21		8.6	1.5	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.4	J	8.6	1.1	ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	14		3.4	0.32	ng/L	1		1633A	Total/NA

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	4.6	CI	1.6	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	12		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	6.9		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.52	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.75	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.2		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.6		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.8		1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	0.56	J	3.2	0.32	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.34	J	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.67	J	1.6	0.28	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.36	J	1.6	0.35	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	8.0	1.4	ng/L	1		1633A	Total/NA
Perfluorobutanoic acid (PFBA) - RA	14		3.2	0.30	ng/L	1		1633A	Total/NA

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.49	J	3.3	0.31	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	0.80	J	1.6	0.22	ng/L	1		1633A	Total/NA

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.1	J	3.8	0.87	ug/Kg	1	✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	4.4		3.8	0.78	ug/Kg	1	✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507 (Continued)

Lab Sample ID: 320-123508-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	17		3.8	0.59	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	0.78	J	3.8	0.72	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	10		3.8	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.0	J	3.8	0.42	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	4.2		3.8	0.91	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroundecanoic acid (PFUnA)	1.2	J	3.8	0.80	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	1.5	J	3.8	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.6	J	3.8	0.72	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.7	J I	3.8	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	12		3.8	0.82	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	0.74	J	3.8	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		3.8	0.44	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.1	J	3.8	0.91	ug/Kg	1		✱	537 (modified)	Pre-Treatment
8:2 FTS	0.95	J	3.8	0.66	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.0		3.8	0.90	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.1	J	3.8	0.53	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	28		3.8	0.72	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.1		3.8	0.78	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	110	B	3.8	0.87	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	57	*+	3.8	0.78	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	47	*+	3.8	0.59	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	22		3.8	0.72	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	38		3.8	1.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	12		3.8	0.42	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	9.5		3.8	0.91	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	3.9		3.8	0.80	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	3.1	J	3.8	0.57	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTrDA)	0.90	J *-	3.8	0.40	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.1	J *-	3.8	0.70	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507 (Continued)

Lab Sample ID: 320-123508-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	5.7		3.8	0.72	ug/Kg	1	✳	537 (modified)	Post-Treatme nt
Perfluorohexanesulfonic acid (PFHxS)	1.4	J I	3.8	0.55	ug/Kg	1	✳	537 (modified)	Post-Treatme nt
Perfluorooctanesulfonic acid (PFOS)	10		3.8	0.82	ug/Kg	1	✳	537 (modified)	Post-Treatme nt

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: INF-COMP-202507

Lab Sample ID: 320-123508-1

Date Collected: 07/14/25 23:59

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.20	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorohexanoic acid (PFHxA)	7.9		1.7	0.23	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.7	0.30	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorooctanoic acid (PFOA)	5.2		1.7	0.33	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorononanoic acid (PFNA)	0.51	J	1.7	0.39	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorodecanoic acid (PFDA)	0.43	J	1.7	0.38	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.49	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.69	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorobutanesulfonic acid (PFBS)	5.9		1.7	0.24	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorohexanesulfonic acid (PFHxS)	7.6		1.7	0.21	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorooctanesulfonic acid (PFOS)	8.8		1.7	0.24	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.27	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.45	ng/L		07/22/25 04:17	07/23/25 23:42	1
6:2 FTS	2.6	J	3.4	0.35	ng/L		07/22/25 04:17	07/23/25 23:42	1
8:2 FTS	0.88	J	3.4	0.77	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.33	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.38	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.7	0.30	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.38	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.6	2.0	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.6	2.1	ng/L		07/22/25 04:17	07/23/25 23:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		07/22/25 04:17	07/23/25 23:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	J	1.7	0.16	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		07/22/25 04:17	07/23/25 23:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.62	ng/L		07/22/25 04:17	07/23/25 23:42	1
9CI-PF3ONS	ND		1.7	0.50	ng/L		07/22/25 04:17	07/23/25 23:42	1
11CI-PF3OUdS	ND		1.7	0.25	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		07/22/25 04:17	07/23/25 23:42	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: INF-COMP-202507

Lab Sample ID: 320-123508-1

Date Collected: 07/14/25 23:59

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.62	ng/L		07/22/25 04:17	07/23/25 23:42	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	21		8.6	1.5	ng/L		07/22/25 04:17	07/23/25 23:42	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.4 J		8.6	1.1	ng/L		07/22/25 04:17	07/23/25 23:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	47.1		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C5 PFHxA	60.8		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C4 PFHpA	64.6		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C8 PFOA	106		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C9 PFNA	102		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C6 PFDA	84.0		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C7 PFUnA	52.9		30 - 130				07/22/25 04:17	07/23/25 23:42	1
13C2 PFDoA	40.6		10 - 130				07/22/25 04:17	07/23/25 23:42	1
13C2 PFTeDA	51.3		10 - 130				07/22/25 04:17	07/23/25 23:42	1
13C3 PFBS	95.8		40 - 135				07/22/25 04:17	07/23/25 23:42	1
13C3 PFHxS	102		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C8 PFOS	82.7		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C8 FOSA	61.1		40 - 130				07/22/25 04:17	07/23/25 23:42	1
D3-NMeFOSAA	40.7		40 - 170				07/22/25 04:17	07/23/25 23:42	1
D5-NEtFOSAA	25.9		25 - 135				07/22/25 04:17	07/23/25 23:42	1
13C2 6:2 FTS	230	*5+	40 - 200				07/22/25 04:17	07/23/25 23:42	1
13C2 8:2 FTS	182		40 - 300				07/22/25 04:17	07/23/25 23:42	1
13C3 HFPO-DA	56.4		40 - 130				07/22/25 04:17	07/23/25 23:42	1
D7-NMeFOSE	45.1		10 - 130				07/22/25 04:17	07/23/25 23:42	1
D9-NEtFOSE	15.1		10 - 130				07/22/25 04:17	07/23/25 23:42	1
D5-NEtFOSA	31.5		10 - 130				07/22/25 04:17	07/23/25 23:42	1
D3-NMeFOSA	45.4		10 - 130				07/22/25 04:17	07/23/25 23:42	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.4	0.32	ng/L		07/22/25 04:17	07/24/25 19:04	1
4:2 FTS	ND		3.4	0.37	ng/L		07/22/25 04:17	07/24/25 19:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	87.9		5 - 130				07/22/25 04:17	07/24/25 19:04	1
13C2 4:2 FTS	231	*5+	40 - 200				07/22/25 04:17	07/24/25 19:04	1

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	4.6	CI	1.6	0.18	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorohexanoic acid (PFHxA)	12		1.6	0.21	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoroheptanoic acid (PFHpA)	2.0		1.6	0.28	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorooctanoic acid (PFOA)	6.9		1.6	0.31	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorononanoic acid (PFNA)	0.52	J	1.6	0.36	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorodecanoic acid (PFDA)	0.75	J	1.6	0.35	ng/L		07/22/25 04:17	07/23/25 23:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.46	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorobutanesulfonic acid (PFBS)	6.2		1.6	0.22	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorohexanesulfonic acid (PFHxS)	6.6		1.6	0.19	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorooctanesulfonic acid (PFOS)	3.8		1.6	0.22	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		07/22/25 04:17	07/23/25 23:59	1
6:2 FTS	0.56	J	3.2	0.32	ng/L		07/22/25 04:17	07/23/25 23:59	1
8:2 FTS	ND		3.2	0.71	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorooctanesulfonamide (PFOSA)	0.34	J	1.6	0.18	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.67	J	1.6	0.28	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.36	J	1.6	0.35	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.0	1.8	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.0	1.9	ng/L		07/22/25 04:17	07/23/25 23:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		07/22/25 04:17	07/23/25 23:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		07/22/25 04:17	07/23/25 23:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		07/22/25 04:17	07/23/25 23:59	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		07/22/25 04:17	07/23/25 23:59	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		07/22/25 04:17	07/23/25 23:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		07/22/25 04:17	07/23/25 23:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	8.0	1.4	ng/L		07/22/25 04:17	07/23/25 23:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.0	0.99	ng/L		07/22/25 04:17	07/23/25 23:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	69.4		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C5 PFHxA	84.8		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C4 PFHpA	82.1		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C8 PFOA	106		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C9 PFNA	102		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C6 PFDA	104		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C7 PFUnA	95.6		30 - 130	07/22/25 04:17	07/23/25 23:59	1
13C2 PFDoA	74.8		10 - 130	07/22/25 04:17	07/23/25 23:59	1
13C2 PFTeDA	56.0		10 - 130	07/22/25 04:17	07/23/25 23:59	1
13C3 PFBS	104		40 - 135	07/22/25 04:17	07/23/25 23:59	1
13C3 PFHxS	110		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C8 PFOS	95.4		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C8 FOSA	72.7		40 - 130	07/22/25 04:17	07/23/25 23:59	1
D3-NMeFOSAA	74.0		40 - 170	07/22/25 04:17	07/23/25 23:59	1
D5-NEtFOSAA	70.6		25 - 135	07/22/25 04:17	07/23/25 23:59	1
13C2 6:2 FTS	181		40 - 200	07/22/25 04:17	07/23/25 23:59	1
13C2 8:2 FTS	132		40 - 300	07/22/25 04:17	07/23/25 23:59	1
13C3 HFPO-DA	76.3		40 - 130	07/22/25 04:17	07/23/25 23:59	1
D7-NMeFOSE	62.8		10 - 130	07/22/25 04:17	07/23/25 23:59	1
D9-NEtFOSE	64.0		10 - 130	07/22/25 04:17	07/23/25 23:59	1
D5-NEtFOSA	62.3		10 - 130	07/22/25 04:17	07/23/25 23:59	1
D3-NMeFOSA	65.8		10 - 130	07/22/25 04:17	07/23/25 23:59	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.2	0.30	ng/L		07/22/25 04:17	07/24/25 19:21	1
4:2 FTS	ND		3.2	0.35	ng/L		07/22/25 04:17	07/24/25 19:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	92.7		5 - 130				07/22/25 04:17	07/24/25 19:21	1
13C2 4:2 FTS	207	*5+	40 - 200				07/22/25 04:17	07/24/25 19:21	1

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.49	J	3.3	0.31	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorohexanoic acid (PFHxA)	0.80	J	1.6	0.22	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.37	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.19	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.23	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.20	ng/L		07/22/25 04:17	07/24/25 00:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.23	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.26	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		07/22/25 04:17	07/24/25 00:15	1
4:2 FTS	ND		3.3	0.36	ng/L		07/22/25 04:17	07/24/25 00:15	1
6:2 FTS	ND		3.3	0.33	ng/L		07/22/25 04:17	07/24/25 00:15	1
8:2 FTS	ND		3.3	0.74	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.32	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.37	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.29	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.2	1.9	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		07/22/25 04:17	07/24/25 00:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		07/22/25 04:17	07/24/25 00:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		07/22/25 04:17	07/24/25 00:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		07/22/25 04:17	07/24/25 00:15	1
9CI-PF3ONS	ND		1.6	0.48	ng/L		07/22/25 04:17	07/24/25 00:15	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		07/22/25 04:17	07/24/25 00:15	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		07/22/25 04:17	07/24/25 00:15	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.2	1.4	ng/L		07/22/25 04:17	07/24/25 00:15	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		07/22/25 04:17	07/24/25 00:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	95.3		5 - 130				07/22/25 04:17	07/24/25 00:15	1
13C5 PFPeA	110		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C5 PFHxA	110		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C4 PFHpA	108		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C9 PFNA	105		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C6 PFDA	103		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C7 PFUnA	101		30 - 130				07/22/25 04:17	07/24/25 00:15	1
13C2 PFDaA	92.7		10 - 130				07/22/25 04:17	07/24/25 00:15	1
13C2 PFTeDA	101		10 - 130				07/22/25 04:17	07/24/25 00:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	98.1		40 - 135	07/22/25 04:17	07/24/25 00:15	1
13C3 PFHxS	100		40 - 130	07/22/25 04:17	07/24/25 00:15	1
13C8 PFOS	98.7		40 - 130	07/22/25 04:17	07/24/25 00:15	1
13C8 FOSA	67.7		40 - 130	07/22/25 04:17	07/24/25 00:15	1
D3-NMeFOSAA	80.2		40 - 170	07/22/25 04:17	07/24/25 00:15	1
D5-NEtFOSAA	80.6		25 - 135	07/22/25 04:17	07/24/25 00:15	1
13C2 4:2 FTS	146		40 - 200	07/22/25 04:17	07/24/25 00:15	1
13C2 6:2 FTS	124		40 - 200	07/22/25 04:17	07/24/25 00:15	1
13C2 8:2 FTS	113		40 - 300	07/22/25 04:17	07/24/25 00:15	1
13C3 HFPO-DA	105		40 - 130	07/22/25 04:17	07/24/25 00:15	1
D7-NMeFOSE	70.5		10 - 130	07/22/25 04:17	07/24/25 00:15	1
D9-NEtFOSE	75.9		10 - 130	07/22/25 04:17	07/24/25 00:15	1
D5-NEtFOSA	62.5		10 - 130	07/22/25 04:17	07/24/25 00:15	1
D3-NMeFOSA	63.4		10 - 130	07/22/25 04:17	07/24/25 00:15	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		1.6	0.32	ng/L		07/22/25 04:17	07/24/25 19:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	100		40 - 130				07/22/25 04:17	07/24/25 19:37	1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.1	J	3.8	0.87	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoropentanoic acid (PFPeA)	4.4		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorohexanoic acid (PFHxA)	17		3.8	0.59	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoroheptanoic acid (PFHpA)	0.78	J	3.8	0.72	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorooctanoic acid (PFOA)	10		3.8	1.0	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorononanoic acid (PFNA)	1.0	J	3.8	0.42	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorodecanoic acid (PFDA)	4.2		3.8	0.91	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoroundecanoic acid (PFUnA)	1.2	J	3.8	0.80	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorododecanoic acid (PFDoA)	1.5	J	3.8	0.57	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorotridecanoic acid (PFTTrDA)	ND		3.8	0.40	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorotetradecanoic acid (PFTeDA)	ND		3.8	0.70	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorobutanesulfonic acid (PFBS)	3.6	J	3.8	0.72	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.70	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	J I	3.8	0.55	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.93	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorooctanesulfonic acid (PFOS)	12		3.8	0.82	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.55	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	0.99	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		3.8	0.90	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorooctanesulfonamide (PFOSA)	0.74	J	3.8	0.63	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		3.8	0.44	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.1	J	3.8	0.91	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
4:2 FTS	ND		3.8	0.97	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
6:2 FTS	ND		3.8	0.51	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
8:2 FTS	0.95	J	3.8	0.66	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.93	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.0		3.8	0.90	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.1	J	3.8	0.53	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
9CI-PF3ONS	ND		3.8	0.66	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
11CI-PF3OUdS	ND		3.8	0.59	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.74	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	28		3.8	0.72	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.1		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.76	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.86	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	69		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C4 PFBA	92		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C5 PFPeA	100		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFHxA	110		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C4 PFHpA	104		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C4 PFOA	102		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C5 PFNA	101		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFDA	100		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFUnA	105		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFDoA	90		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFTeDA	68		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C3 PFBS	108		25 - 150	07/20/25 20:21	07/24/25 12:56	1
18O2 PFHxS	94		25 - 150	07/20/25 20:21	07/24/25 12:56	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	82		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D3-NMeFOSAA	77		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D5-NEtFOSAA	101		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 4:2 FTS	136		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 6:2 FTS	160	*5+	25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 8:2 FTS	143		25 - 150	07/20/25 20:21	07/24/25 12:56	1
d-N-MeFOSA-M	50		25 - 150	07/20/25 20:21	07/24/25 12:56	1
d-N-EtFOSA-M	59		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D7-NMeFOSE	54		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D9-NEtFOSE	70		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C3 HFPO-DA	86		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C-6:2 FTCA	100		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C-8:2 FTCA	93		25 - 150	07/20/25 20:21	07/24/25 12:56	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	110	B	3.8	0.87	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoropentanoic acid (PFPeA)	57	+	3.8	0.78	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorohexanoic acid (PFHxA)	47	+	3.8	0.59	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoroheptanoic acid (PFHpA)	22		3.8	0.72	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorooctanoic acid (PFOA)	38		3.8	1.0	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorononanoic acid (PFNA)	12		3.8	0.42	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorodecanoic acid (PFDA)	9.5		3.8	0.91	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoroundecanoic acid (PFUnA)	3.9		3.8	0.80	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorododecanoic acid (PFDoA)	3.1	J	3.8	0.57	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorotridecanoic acid (PFTTrDA)	0.90	J *	3.8	0.40	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorotetradecanoic acid (PFTTeDA)	1.1	J *	3.8	0.70	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorobutanesulfonic acid (PFBS)	5.7		3.8	0.72	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.70	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	J I	3.8	0.55	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	+	3.8	0.93	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorooctanesulfonic acid (PFOS)	10		3.8	0.82	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.55	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	0.99	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*	3.8	0.90	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		3.8	0.63	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		3.8	0.44	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.8	0.91	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
4:2 FTS	ND		3.8	0.97	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
6:2 FTS	ND		3.8	0.51	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
8:2 FTS	ND		3.8	0.66	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.93	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		3.8	0.90	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		3.8	0.53	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
9CI-PF3ONS	ND		3.8	0.66	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.78	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
11CI-PF3OUdS	ND	*	3.8	0.59	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.74	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.78	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		3.8	0.72	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		3.8	0.78	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.76	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.86	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	51		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFBA	94		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C5 PFPeA	98		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFHxA	96		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFHpA	99		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFOA	92		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C5 PFNA	82		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFDA	66		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFUnA	61		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFDoA	53		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFTeDA	59		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C3 PFBS	104		25 - 150	07/20/25 20:24	07/24/25 14:48	1
18O2 PFHxS	93		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFOS	73		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D3-NMeFOSAA	48		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D5-NEtFOSAA	58		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 4:2 FTS	0		0 - 10	07/20/25 20:24	07/24/25 14:48	1
13C2 6:2 FTS	86		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 8:2 FTS	63		25 - 150	07/20/25 20:24	07/24/25 14:48	1
d-N-MeFOSA-M	40		25 - 150	07/20/25 20:24	07/24/25 14:48	1
d-N-EtFOSA-M	34		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D7-NMeFOSE	47		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D9-NEtFOSE	42		25 - 150	07/20/25 20:24	07/24/25 14:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C-6:2 FTCA	94		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C-8:2 FTCA	75		25 - 150	07/20/25 20:24	07/24/25 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	74		0.10	0.10	%			07/28/25 14:52	1
Percent Solids (EPA 1633)	26		0.10	0.10	%			07/28/25 14:52	1

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	3.1	J	ug/Kg	110		ug/Kg	110	ug/Kg
Perfluoropentanoic acid (PFPeA)	4.4		ug/Kg	57		ug/Kg	52	ug/Kg
Perfluorohexanoic acid (PFHxA)	17		ug/Kg	47		ug/Kg	29	ug/Kg
Perfluoroheptanoic acid (PFHpA)	0.78	J	ug/Kg	22		ug/Kg	21	ug/Kg
Perfluorooctanoic acid (PFOA)	10		ug/Kg	38		ug/Kg	28	ug/Kg
Perfluorononanoic acid (PFNA)	1.0	J	ug/Kg	12		ug/Kg	11	ug/Kg
Total Perfluoroalkyl carboxylic acid	36		ug/Kg	290		ug/Kg	250	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)	PFDaA (10-130)
320-123508-1	INF-COMP-202507	47.1	60.8	64.6	106	102	84.0	52.9	40.6
320-123508-2	EFF-G-202507	69.4	84.8	82.1	106	102	104	95.6	74.8
320-123508-3 - RA	EB-01-202507				100				

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)	M262FTS (40-200)
320-123508-1	INF-COMP-202507	51.3	95.8	102	82.7	61.1	40.7	25.9	230 *5+
320-123508-2	EFF-G-202507	56.0	104	110	95.4	72.7	74.0	70.6	181
320-123508-3 - RA	EB-01-202507								

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-123508-1	INF-COMP-202507	182	56.4	45.1	15.1	31.5	45.4
320-123508-2	EFF-G-202507	132	76.3	62.8	64.0	62.3	65.8
320-123508-3 - RA	EB-01-202507						

Surrogate Legend

PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	M242FTS (40-200)
320-123508-1 - RA	INF-COMP-202507	87.9	231 *5+
320-123508-2 - RA	EFF-G-202507	92.7	207 *5+

Surrogate Legend

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-123508-1

Project/Site: PFAS Sampling

PFBA = 13C4 PFBA

M242FTS = 13C2 4:2 FTS

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-123508-3	EB-01-202507	95.3	110	110	108		105	103	101
LCS 320-864704/3-A	Lab Control Sample	96.6	107	108	106	113	104	103	96.6
LCSD 320-864704/4-A	Lab Control Sample Dup	95.7	108	110	107	109	105	99.3	100
LLCS 320-864704/2-A	Lab Control Sample	98.0	108	107	106	117	105	103	99.6
MB 320-864704/1-A	Method Blank	96.2	102	109	100	101	102	100	94.1

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-123508-3	EB-01-202507	92.7	101	98.1	100	98.7	67.7	80.2	80.6
LCS 320-864704/3-A	Lab Control Sample	84.9	93.5	103	98.4	95.9	63.9	86.0	83.0
LCSD 320-864704/4-A	Lab Control Sample Dup	90.8	106	102	100	96.0	69.0	86.1	84.1
LLCS 320-864704/2-A	Lab Control Sample	85.9	94.7	107	108	95.3	63.5	86.3	81.0
MB 320-864704/1-A	Method Blank	81.9	98.0	97.3	103	96.5	64.0	81.3	78.6

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-123508-3	EB-01-202507	146	124	113	105	70.5	75.9	62.5	63.4
LCS 320-864704/3-A	Lab Control Sample	136	103	110	104	71.3	80.1	57.1	54.1
LCSD 320-864704/4-A	Lab Control Sample Dup	140	107	115	109	77.3	88.1	62.0	61.1
LLCS 320-864704/2-A	Lab Control Sample	155	110	119	103	68.7	74.1	53.4	52.7
MB 320-864704/1-A	Method Blank	139	102	113	96.0	70.3	79.0	61.0	58.6

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-123508-1

Project/Site: PFAS Sampling

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Pre-Treatment

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-123508-4	BIO-A-25-202507	69	92	100	110	104	102	101	100
LCS 320-864413/2-A	Lab Control Sample	64	95	98	99	99	93	89	76
LCSD 320-864413/3-A	Lab Control Sample Dup	73	98	103	100	104	96	98	85
MB 320-864413/1-A	Method Blank	69	100	101	103	103	96	93	75
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-123508-4	BIO-A-25-202507	105	90	68	108	94	82	77	101
LCS 320-864413/2-A	Lab Control Sample	76	75	86	103	96	88	65	81
LCSD 320-864413/3-A	Lab Control Sample Dup	88	86	90	108	98	91	85	100
MB 320-864413/1-A	Method Blank	69	62	80	107	100	88	65	83
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-123508-4	BIO-A-25-202507	136	160 *5+	143	50	59	54	70	86
LCS 320-864413/2-A	Lab Control Sample	77	77	67	60	56	65	62	96
LCSD 320-864413/3-A	Lab Control Sample Dup	85	84	74	63	56	77	73	98
MB 320-864413/1-A	Method Blank	81	83	68	57	51	67	64	100
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)						
320-123508-4	BIO-A-25-202507	100	93						
LCS 320-864413/2-A	Lab Control Sample	77	65						
LCSD 320-864413/3-A	Lab Control Sample Dup	87	89						
MB 320-864413/1-A	Method Blank	88	79						

Surrogate Legend

PFOSA = 13C8 FOSA
 PFBA = 13C4 PFBA
 PFPeA = 13C5 PFPeA
 PFHxA = 13C2 PFHxA
 C4PFHA = 13C4 PFHpA
 PFOA = 13C4 PFOA
 PFNA = 13C5 PFNA
 PFDA = 13C2 PFDA
 PFUnA = 13C2 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS
 PFOS = 13C4 PFOS
 d3NMFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS
 dMeFOSA = d-N-MeFOSA-M
 dEtFOSA = d-N-EtFOSA-M
 NMFM = D7-NMeFOSE
 NEFM = D9-NEtFOSE

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-123508-1

Project/Site: PFAS Sampling

HFPODA = 13C3 HFPO-DA

MFHEA = 13C-6:2 FTCA

MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-123508-4	BIO-A-25-202507	51	94	98	96	99	92	82	66
LCS 320-864414/2-A	Lab Control Sample	58	93	99	97	100	97	85	70
LCSD 320-864414/3-A	Lab Control Sample Dup	49	94	97	98	100	92	87	63
MB 320-864414/1-A	Method Blank	50	97	99	102	99	93	84	63

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-123508-4	BIO-A-25-202507	61	53	59	104	93	73	48	58
LCS 320-864414/2-A	Lab Control Sample	72	64	65	104	91	78	55	65
LCSD 320-864414/3-A	Lab Control Sample Dup	59	53	61	102	93	69	51	52
MB 320-864414/1-A	Method Blank	64	55	62	107	96	74	51	58

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-123508-4	BIO-A-25-202507	0	86	63	40	34	47	42	94
LCS 320-864414/2-A	Lab Control Sample	0	84	67	41	39	51	44	94
LCSD 320-864414/3-A	Lab Control Sample Dup	0	79	60	40	36	42	37	96
MB 320-864414/1-A	Method Blank	0	86	58	40	38	45	41	95

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-123508-4	BIO-A-25-202507	94	75
LCS 320-864414/2-A	Lab Control Sample	93	71
LCSD 320-864414/3-A	Lab Control Sample Dup	99	71
MB 320-864414/1-A	Method Blank	90	68

Surrogate Legend

PFOSA = 13C8 FOSA
 PFBA = 13C4 PFBA
 PFPeA = 13C5 PFPeA
 PFHxA = 13C2 PFHxA
 C4PFHA = 13C4 PFHpA
 PFOA = 13C4 PFOA
 PFNA = 13C5 PFNA
 PFDA = 13C2 PFDA
 PFUnA = 13C2 PFUnA
 PFDoA = 13C2 PFDoA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS
 PFOS = 13C4 PFOS
 d3NMFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-123508-1

Project/Site: PFAS Sampling

dMeFOSA = d-N-MeFOSA-M

dEtFOSA = d-N-EtFOSA-M

NMFM = D7-NMeFOSE

NEFM = D9-NEtFOSE

HFPODA = 13C3 HFPO-DA

MFHEA = 13C-6:2 FTCA

MFOEA = 13C-8:2 FTCA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-864704/1-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 864704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.28	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		07/22/25 04:17	07/23/25 22:36	1
4:2 FTS	ND		4.0	0.44	ng/L		07/22/25 04:17	07/23/25 22:36	1
6:2 FTS	ND		4.0	0.41	ng/L		07/22/25 04:17	07/23/25 22:36	1
8:2 FTS	ND		4.0	0.90	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		07/22/25 04:17	07/23/25 22:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		07/22/25 04:17	07/23/25 22:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		07/22/25 04:17	07/23/25 22:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		07/22/25 04:17	07/23/25 22:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		07/22/25 04:17	07/23/25 22:36	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		07/22/25 04:17	07/23/25 22:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		07/22/25 04:17	07/23/25 22:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		07/22/25 04:17	07/23/25 22:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		07/22/25 04:17	07/23/25 22:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		07/22/25 04:17	07/23/25 22:36	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		07/22/25 04:17	07/23/25 22:36	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		07/22/25 04:17	07/23/25 22:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		07/22/25 04:17	07/23/25 22:36	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-864704/1-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 864704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		07/22/25 04:17	07/23/25 22:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		07/22/25 04:17	07/23/25 22:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		07/22/25 04:17	07/23/25 22:36	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	96.2		5 - 130	07/22/25 04:17	07/23/25 22:36	1
13C5 PFPeA	102		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C5 PFHxA	109		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C4 PFHpA	100		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C8 PFOA	101		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C9 PFNA	102		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C6 PFDA	100		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C7 PFUnA	94.1		30 - 130	07/22/25 04:17	07/23/25 22:36	1
13C2 PFDaA	81.9		10 - 130	07/22/25 04:17	07/23/25 22:36	1
13C2 PFTeDA	98.0		10 - 130	07/22/25 04:17	07/23/25 22:36	1
13C3 PFBS	97.3		40 - 135	07/22/25 04:17	07/23/25 22:36	1
13C3 PFHxS	103		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C8 PFOS	96.5		40 - 130	07/22/25 04:17	07/23/25 22:36	1
13C8 FOSA	64.0		40 - 130	07/22/25 04:17	07/23/25 22:36	1
D3-NMeFOSAA	81.3		40 - 170	07/22/25 04:17	07/23/25 22:36	1
D5-NEtFOSAA	78.6		25 - 135	07/22/25 04:17	07/23/25 22:36	1
13C2 4:2 FTS	139		40 - 200	07/22/25 04:17	07/23/25 22:36	1
13C2 6:2 FTS	102		40 - 200	07/22/25 04:17	07/23/25 22:36	1
13C2 8:2 FTS	113		40 - 300	07/22/25 04:17	07/23/25 22:36	1
13C3 HFPO-DA	96.0		40 - 130	07/22/25 04:17	07/23/25 22:36	1
D7-NMeFOSE	70.3		10 - 130	07/22/25 04:17	07/23/25 22:36	1
D9-NEtFOSE	79.0		10 - 130	07/22/25 04:17	07/23/25 22:36	1
D5-NEtFOSA	61.0		10 - 130	07/22/25 04:17	07/23/25 22:36	1
D3-NMeFOSA	58.6		10 - 130	07/22/25 04:17	07/23/25 22:36	1

Lab Sample ID: LCS 320-864704/3-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	84.3		ng/L		105	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	41.9		ng/L		105	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	39.8		ng/L		100	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	41.2		ng/L		103	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	38.6		ng/L		97	70 - 150
Perfluorononanoic acid (PFNA)	40.0	38.1		ng/L		95	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	38.0		ng/L		95	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	40.2		ng/L		100	70 - 145
Perfluorododecanoic acid (PFDaA)	40.0	43.9		ng/L		110	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-864704/3-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.3		ng/L		98	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	40.7		ng/L		102	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	35.8		ng/L		101	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.6		ng/L		103	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.1		ng/L		96	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.6		ng/L		104	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.3		ng/L		98	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	38.4		ng/L		100	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	37.0		ng/L		96	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.6		ng/L		92	50 - 145
4:2 FTS	75.0	79.1		ng/L		105	70 - 145
6:2 FTS	76.2	81.2		ng/L		107	65 - 155
8:2 FTS	76.8	79.9		ng/L		104	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	42.7		ng/L		107	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.8		ng/L		107	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	42.5		ng/L		106	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.5		ng/L		94	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.7		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	201		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	186		ng/L		93	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	24.0		ng/L		80	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	38.9		ng/L		103	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	39.5		ng/L		99	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	39.3		ng/L		98	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	37.6		ng/L		94	50 - 150
9Cl-PF3ONS	37.4	36.9		ng/L		99	70 - 155
11Cl-PF3OUdS	37.8	40.2		ng/L		106	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	38.1		ng/L		107	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	72.5		ng/L		91	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	162		ng/L		81	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-864704/3-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	149		ng/L		75	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	96.6		5 - 130
13C5 PFPeA	107		40 - 130
13C5 PFHxA	108		40 - 130
13C4 PFHpA	106		40 - 130
13C8 PFOA	113		40 - 130
13C9 PFNA	104		40 - 130
13C6 PFDA	103		40 - 130
13C7 PFUnA	96.6		30 - 130
13C2 PFDoA	84.9		10 - 130
13C2 PFTeDA	93.5		10 - 130
13C3 PFBS	103		40 - 135
13C3 PFHxS	98.4		40 - 130
13C8 PFOS	95.9		40 - 130
13C8 FOSA	63.9		40 - 130
D3-NMeFOSAA	86.0		40 - 170
D5-NEtFOSAA	83.0		25 - 135
13C2 4:2 FTS	136		40 - 200
13C2 6:2 FTS	103		40 - 200
13C2 8:2 FTS	110		40 - 300
13C3 HFPO-DA	104		40 - 130
D7-NMeFOSE	71.3		10 - 130
D9-NEtFOSE	80.1		10 - 130
D5-NEtFOSA	57.1		10 - 130
D3-NMeFOSA	54.1		10 - 130

Lab Sample ID: LCSD 320-864704/4-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	85.2		ng/L		107	70 - 140	1	30
Perfluoropentanoic acid (PFPeA)	40.0	42.7		ng/L		107	65 - 135	2	30
Perfluorohexanoic acid (PFHxA)	40.0	40.0		ng/L		100	70 - 145	0	30
Perfluoroheptanoic acid (PFHpA)	40.0	42.1		ng/L		105	70 - 150	2	30
Perfluorooctanoic acid (PFOA)	40.0	38.9		ng/L		97	70 - 150	1	30
Perfluorononanoic acid (PFNA)	40.0	38.5		ng/L		96	70 - 150	1	30
Perfluorodecanoic acid (PFDA)	40.0	41.2		ng/L		103	70 - 140	8	30
Perfluoroundecanoic acid (PFUnA)	40.0	40.7		ng/L		102	70 - 145	1	30
Perfluorododecanoic acid (PFDoA)	40.0	43.9		ng/L		110	70 - 140	0	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.2		ng/L		98	65 - 140	0	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	39.8		ng/L		100	60 - 140	2	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-864704/4-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	35.5	37.3		ng/L		105	60 - 145	4	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	36.2		ng/L		96	65 - 140	6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.3		ng/L		94	65 - 145	2	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.0		ng/L		97	70 - 150	7	30
Perfluorooctanesulfonic acid (PFOS)	37.2	37.9		ng/L		102	55 - 150	4	30
Perfluorononanesulfonic acid (PFNS)	38.5	38.3		ng/L		99	65 - 145	0	30
Perfluorodecanesulfonic acid (PFDS)	38.6	38.8		ng/L		101	60 - 145	5	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	38.0		ng/L		98	50 - 145	6	30
4:2 FTS	75.0	74.2		ng/L		99	70 - 145	6	30
6:2 FTS	76.2	79.0		ng/L		104	65 - 155	3	30
8:2 FTS	76.8	77.3		ng/L		101	60 - 150	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	42.1		ng/L		105	70 - 145	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.7		ng/L		102	60 - 150	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	42.0		ng/L		105	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.4		ng/L		93	50 - 140	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.8		ng/L		99	70 - 145	0	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	210		ng/L		105	70 - 145	5	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	187		ng/L		93	70 - 135	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	27.3		ng/L		91	70 - 140	13	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	36.7		ng/L		97	65 - 145	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	40.1		ng/L		100	55 - 140	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	40.3		ng/L		101	60 - 150	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	38.1		ng/L		95	50 - 150	1	30
9Cl-PF3ONS	37.4	34.4		ng/L		92	70 - 155	7	30
11Cl-PF3OUdS	37.8	39.2		ng/L		104	55 - 160	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	38.9		ng/L		109	70 - 140	2	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	73.3		ng/L		92	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	159		ng/L		80	70 - 135	2	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	151		ng/L		75	50 - 145	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	95.7		5 - 130
13C5 PFPeA	108		40 - 130
13C5 PFHxA	110		40 - 130
13C4 PFHpA	107		40 - 130
13C8 PFOA	109		40 - 130
13C9 PFNA	105		40 - 130
13C6 PFDA	99.3		40 - 130
13C7 PFUnA	100		30 - 130
13C2 PFDoA	90.8		10 - 130
13C2 PFTeDA	106		10 - 130
13C3 PFBS	102		40 - 135
13C3 PFHxS	100		40 - 130
13C8 PFOS	96.0		40 - 130
13C8 FOSA	69.0		40 - 130
D3-NMeFOSAA	86.1		40 - 170
D5-NEtFOSAA	84.1		25 - 135
13C2 4:2 FTS	140		40 - 200
13C2 6:2 FTS	107		40 - 200
13C2 8:2 FTS	115		40 - 300
13C3 HFPO-DA	109		40 - 130
D7-NMeFOSE	77.3		10 - 130
D9-NEtFOSE	88.1		10 - 130
D5-NEtFOSA	62.0		10 - 130
D3-NMeFOSA	61.1		10 - 130

Lab Sample ID: LLCS 320-864704/2-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.80		ng/L		110	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.49		ng/L		112	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.46		ng/L		111	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.66		ng/L		116	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.12		ng/L		103	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.08		ng/L		102	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.24		ng/L		106	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.17		ng/L		104	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.49		ng/L		112	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.12		ng/L		103	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.06		ng/L		101	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	4.03		ng/L		113	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.94		ng/L		105	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.52		ng/L		96	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.01		ng/L		105	70 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-864704/2-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 864704

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	3.85		ng/L		103	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.98		ng/L		104	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.68		ng/L		95	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.12		ng/L		80	50 - 145
4:2 FTS	7.50	7.78		ng/L		104	70 - 145
6:2 FTS	7.62	8.74		ng/L		115	65 - 155
8:2 FTS	7.68	7.80		ng/L		102	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.39		ng/L		110	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.98		ng/L		99	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.67		ng/L		92	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.04		ng/L		101	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.87		ng/L		97	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.3		ng/L		97	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	18.3		ng/L		92	70 - 135
Hexafluoropropylene Oxide	3.00	3.14		ng/L		105	70 - 140
Dimer Acid (HFPO-DA/GenX)	3.78	4.11		ng/L		109	65 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.00	4.01		ng/L		100	55 - 140
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.99		ng/L		100	60 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.31		ng/L		108	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.74	3.80		ng/L		102	70 - 155
9CI-PF3ONS	3.78	4.01		ng/L		106	55 - 160
11CI-PF3OUdS	3.57	4.21		ng/L		118	70 - 140
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	8.00	7.77		ng/L		97	65 - 130
3-Perfluoropropylpropanoic acid (3:3 FTCA)	20.0	16.6		ng/L		83	70 - 135
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	14.8		ng/L		74	50 - 145
3-Perfluoroheptylpropanoic acid (7:3 FTCA)							

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	98.0		5 - 130
13C5 PFPeA	108		40 - 130
13C5 PFHxA	107		40 - 130
13C4 PFHpA	106		40 - 130
13C8 PFOA	117		40 - 130
13C9 PFNA	105		40 - 130
13C6 PFDA	103		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-864704/2-A

Matrix: Water

Analysis Batch: 865050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 864704

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C7 PFUnA	99.6		30 - 130
13C2 PFDoA	85.9		10 - 130
13C2 PFTeDA	94.7		10 - 130
13C3 PFBS	107		40 - 135
13C3 PFHxS	108		40 - 130
13C8 PFOS	95.3		40 - 130
13C8 FOSA	63.5		40 - 130
D3-NMeFOSAA	86.3		40 - 170
D5-NEtFOSAA	81.0		25 - 135
13C2 4:2 FTS	155		40 - 200
13C2 6:2 FTS	110		40 - 200
13C2 8:2 FTS	119		40 - 300
13C3 HFPO-DA	103		40 - 130
D7-NMeFOSE	68.7		10 - 130
D9-NEtFOSE	74.1		10 - 130
D5-NEtFOSA	53.4		10 - 130
D3-NMeFOSA	52.7		10 - 130

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-864413/1-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 864413

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	ND		1.0	0.23	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		07/20/25 20:21	07/24/25 12:14	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-864413/1-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 864413

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
4:2 FTS	ND		1.0	0.26	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
6:2 FTS	ND		1.0	0.14	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
8:2 FTS	ND		1.0	0.18	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		07/20/25 20:21	07/24/25 12:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		1.0	0.16	ug/Kg		07/20/25 20:21	07/24/25 12:14	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	69		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C4 PFBA	100		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C5 PFPeA	101		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 PFHxA	103		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C4 PFHpA	103		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C4 PFOA	96		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C5 PFNA	93		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 PFDA	75		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 PFUnA	69		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 PFDoA	62		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 PFTeDA	80		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C3 PFBS	107		25 - 150	07/20/25 20:21	07/24/25 12:14	1
18O2 PFHxS	100		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C4 PFOS	88		25 - 150	07/20/25 20:21	07/24/25 12:14	1
D3-NMeFOSAA	65		25 - 150	07/20/25 20:21	07/24/25 12:14	1
D5-NEtFOSAA	83		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 4:2 FTS	81		25 - 150	07/20/25 20:21	07/24/25 12:14	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-864413/1-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 864413

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 6:2 FTS	83		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C2 8:2 FTS	68		25 - 150	07/20/25 20:21	07/24/25 12:14	1
d-N-MeFOSA-M	57		25 - 150	07/20/25 20:21	07/24/25 12:14	1
d-N-EtFOSA-M	51		25 - 150	07/20/25 20:21	07/24/25 12:14	1
D7-NMeFOSE	67		25 - 150	07/20/25 20:21	07/24/25 12:14	1
D9-NEtFOSE	64		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C3 HFPO-DA	100		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C-6:2 FTCA	88		25 - 150	07/20/25 20:21	07/24/25 12:14	1
13C-8:2 FTCA	79		25 - 150	07/20/25 20:21	07/24/25 12:14	1

Lab Sample ID: LCS 320-864413/2-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 864413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	4.78		ug/Kg		119	76 - 136
Perfluoropentanoic acid (PFPeA)	4.00	3.76		ug/Kg		94	69 - 129
Perfluorohexanoic acid (PFHxA)	4.00	4.39		ug/Kg		110	71 - 131
Perfluoroheptanoic acid (PFHpA)	4.00	4.31		ug/Kg		108	71 - 131
Perfluorooctanoic acid (PFOA)	4.00	4.23		ug/Kg		106	72 - 132
Perfluorononanoic acid (PFNA)	4.00	4.37		ug/Kg		109	73 - 133
Perfluorodecanoic acid (PFDA)	4.00	4.53		ug/Kg		113	72 - 132
Perfluoroundecanoic acid (PFUnA)	4.00	3.80		ug/Kg		95	66 - 126
Perfluorododecanoic acid (PFDoA)	4.00	4.08		ug/Kg		102	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.13		ug/Kg		103	71 - 131
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.97		ug/Kg		99	67 - 127
Perfluorobutanesulfonic acid (PFBS)	3.55	3.99		ug/Kg		112	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.02		ug/Kg		107	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.10		ug/Kg		112	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.63		ug/Kg		121	76 - 136
Perfluorooctanesulfonic acid (PFOS)	3.72	3.87		ug/Kg		104	68 - 141
Perfluorononanesulfonic acid (PFNS)	3.85	3.94		ug/Kg		103	72 - 132
Perfluorodecanesulfonic acid (PFDS)	3.86	3.48		ug/Kg		90	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.54		ug/Kg		91	70 - 130
Perfluorooctanesulfonamide (PFOSA)	4.00	4.25		ug/Kg		106	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.59		ug/Kg		115	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.28		ug/Kg		82	72 - 132
4:2 FTS	3.75	2.84		ug/Kg		76	68 - 143

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-864413/2-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 864413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
6:2 FTS	3.81	4.23		ug/Kg		111	73 - 139
8:2 FTS	3.84	3.57		ug/Kg		93	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.70		ug/Kg		117	47 - 161
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.11		ug/Kg		103	63 - 148
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.25		ug/Kg		106	43 - 153
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.37		ug/Kg		109	44 - 155
9CI-PF3ONS	3.74	3.83		ug/Kg		103	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.72		ug/Kg		118	53 - 158
11CI-PF3OUdS	3.78	3.35		ug/Kg		89	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.60		ug/Kg		122	79 - 139
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	3.51		ug/Kg		88	50 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	3.77		ug/Kg		94	50 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	2.64		ug/Kg		66	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.35		ug/Kg		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.61		ug/Kg		115	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.98		ug/Kg		100	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.60		ug/Kg		101	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	64		25 - 150
13C4 PFBA	95		25 - 150
13C5 PFPeA	98		25 - 150
13C2 PFHxA	99		25 - 150
13C4 PFHpA	99		25 - 150
13C4 PFOA	93		25 - 150
13C5 PFNA	89		25 - 150
13C2 PFDA	76		25 - 150
13C2 PFUnA	76		25 - 150
13C2 PFDoA	75		25 - 150
13C2 PFTeDA	86		25 - 150
13C3 PFBS	103		25 - 150
18O2 PFHxS	96		25 - 150
13C4 PFOS	88		25 - 150
D3-NMeFOSAA	65		25 - 150
D5-NEtFOSAA	81		25 - 150
13C2 4:2 FTS	77		25 - 150
13C2 6:2 FTS	77		25 - 150
13C2 8:2 FTS	67		25 - 150
d-N-MeFOSA-M	60		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-864413/2-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 864413

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
d-N-EtFOSA-M	56		25 - 150
D7-NMeFOSE	65		25 - 150
D9-NEtFOSE	62		25 - 150
13C3 HFPO-DA	96		25 - 150
13C-6:2 FTCA	77		25 - 150
13C-8:2 FTCA	65		25 - 150

Lab Sample ID: LCSD 320-864413/3-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 864413

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Perfluorobutanoic acid (PFBA)	4.00	4.81		ug/Kg		120	76 - 136	1	30	
Perfluoropentanoic acid (PFPeA)	4.00	3.98		ug/Kg		100	69 - 129	6	30	
Perfluorohexanoic acid (PFHxA)	4.00	4.53		ug/Kg		113	71 - 131	3	30	
Perfluoroheptanoic acid (PFHpA)	4.00	4.39		ug/Kg		110	71 - 131	2	30	
Perfluorooctanoic acid (PFOA)	4.00	4.34		ug/Kg		108	72 - 132	3	30	
Perfluorononanoic acid (PFNA)	4.00	4.18		ug/Kg		104	73 - 133	4	30	
Perfluorodecanoic acid (PFDA)	4.00	4.56		ug/Kg		114	72 - 132	1	30	
Perfluoroundecanoic acid (PFUnA)	4.00	4.06		ug/Kg		101	66 - 126	7	30	
Perfluorododecanoic acid (PFDoA)	4.00	4.12		ug/Kg		103	71 - 131	1	30	
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.85		ug/Kg		96	71 - 131	7	30	
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.02		ug/Kg		101	67 - 127	1	30	
Perfluorobutanesulfonic acid (PFBS)	3.55	3.87		ug/Kg		109	69 - 129	3	30	
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.02		ug/Kg		107	66 - 126	0	30	
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.19		ug/Kg		115	62 - 122	2	30	
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.57		ug/Kg		120	76 - 136	1	30	
Perfluorooctanesulfonic acid (PFOS)	3.72	3.90		ug/Kg		105	68 - 141	1	30	
Perfluorononanesulfonic acid (PFNS)	3.85	3.96		ug/Kg		103	72 - 132	1	30	
Perfluorodecanesulfonic acid (PFDS)	3.86	3.55		ug/Kg		92	71 - 131	2	30	
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.75		ug/Kg		97	70 - 130	6	30	
Perfluorooctanesulfonamide (PFOSA)	4.00	4.24		ug/Kg		106	77 - 137	0	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.76		ug/Kg		119	72 - 132	4	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.65		ug/Kg		91	72 - 132	11	30	
4:2 FTS	3.75	3.39		ug/Kg		90	68 - 143	18	30	
6:2 FTS	3.81	3.67		ug/Kg		96	73 - 139	14	30	
8:2 FTS	3.84	3.81		ug/Kg		99	75 - 135	7	30	

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-864413/3-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 864413

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.98		ug/Kg		125	47 - 161	6	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.22		ug/Kg		105	63 - 148	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.37		ug/Kg		109	43 - 153	3	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.37		ug/Kg		109	44 - 155	0	30
9CI-PF3ONS	3.74	3.55		ug/Kg		95	74 - 134	8	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.75		ug/Kg		119	53 - 158	1	30
11CI-PF3OUdS	3.78	3.51		ug/Kg		93	66 - 136	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.77		ug/Kg		126	79 - 139	4	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	3.56		ug/Kg		89	50 - 150	2	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	4.19		ug/Kg		105	50 - 150	11	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	2.88		ug/Kg		72	50 - 150	9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.45		ug/Kg		111	50 - 150	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.48		ug/Kg		112	50 - 150	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.98		ug/Kg		99	50 - 150	0	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.78		ug/Kg		106	50 - 150	5	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C8 FOSA	73		25 - 150
13C4 PFBA	98		25 - 150
13C5 PFPeA	103		25 - 150
13C2 PFHxA	100		25 - 150
13C4 PFHpA	104		25 - 150
13C4 PFOA	96		25 - 150
13C5 PFNA	98		25 - 150
13C2 PFDA	85		25 - 150
13C2 PFUnA	88		25 - 150
13C2 PFDoA	86		25 - 150
13C2 PFTeDA	90		25 - 150
13C3 PFBS	108		25 - 150
18O2 PFHxS	98		25 - 150
13C4 PFOS	91		25 - 150
D3-NMeFOSAA	85		25 - 150
D5-NEtFOSAA	100		25 - 150
13C2 4:2 FTS	85		25 - 150
13C2 6:2 FTS	84		25 - 150
13C2 8:2 FTS	74		25 - 150
d-N-MeFOSA-M	63		25 - 150
d-N-EtFOSA-M	56		25 - 150
D7-NMeFOSE	77		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-864413/3-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 864413

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
D9-NEtFOSE	73		25 - 150
13C3 HFPO-DA	98		25 - 150
13C-6:2 FTCA	87		25 - 150
13C-8:2 FTCA	89		25 - 150

Lab Sample ID: MB 320-864414/1-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.623	J	1.0	0.23	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
4:2 FTS	ND		1.0	0.26	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
6:2 FTS	ND		1.0	0.14	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
8:2 FTS	ND		1.0	0.18	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		07/20/25 20:24	07/24/25 14:06	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-864414/1-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		07/20/25 20:24	07/24/25 14:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		07/20/25 20:24	07/24/25 14:06	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	50		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C4 PFBA	97		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C5 PFPeA	99		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 PFHxA	102		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C4 PFHpA	99		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C4 PFOA	93		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C5 PFNA	84		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 PFDA	63		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 PFUnA	64		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 PFDaA	55		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 PFTeDA	62		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C3 PFBS	107		25 - 150	07/20/25 20:24	07/24/25 14:06	1
18O2 PFHxS	96		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C4 PFOS	74		25 - 150	07/20/25 20:24	07/24/25 14:06	1
D3-NMeFOSAA	51		25 - 150	07/20/25 20:24	07/24/25 14:06	1
D5-NEtFOSAA	58		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 4:2 FTS	0		0 - 10	07/20/25 20:24	07/24/25 14:06	1
13C2 6:2 FTS	86		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C2 8:2 FTS	58		25 - 150	07/20/25 20:24	07/24/25 14:06	1
d-N-MeFOSA-M	40		25 - 150	07/20/25 20:24	07/24/25 14:06	1
d-N-EtFOSA-M	38		25 - 150	07/20/25 20:24	07/24/25 14:06	1
D7-NMeFOSE	45		25 - 150	07/20/25 20:24	07/24/25 14:06	1
D9-NEtFOSE	41		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C3 HFPO-DA	95		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C-6:2 FTCA	90		25 - 150	07/20/25 20:24	07/24/25 14:06	1
13C-8:2 FTCA	68		25 - 150	07/20/25 20:24	07/24/25 14:06	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-864414/2-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	10.2		ug/Kg		254	167 - 261
Perfluoropentanoic acid (PFPeA)	4.00	8.85		ug/Kg		221	159 - 221
Perfluorohexanoic acid (PFHxA)	4.00	11.8	*+	ug/Kg		295	208 - 257
Perfluoroheptanoic acid (PFHpA)	4.00	9.01		ug/Kg		225	189 - 267
Perfluorooctanoic acid (PFOA)	4.00	18.8		ug/Kg		471	372 - 496
Perfluorononanoic acid (PFNA)	4.00	8.07		ug/Kg		202	154 - 205
Perfluorodecanoic acid (PFDA)	4.00	6.94		ug/Kg		174	130 - 190
Perfluoroundecanoic acid (PFUnA)	4.00	3.76		ug/Kg		94	81 - 141
Perfluorododecanoic acid (PFDoA)	4.00	3.56		ug/Kg		89	84 - 144
Perfluorotridecanoic acid (PFTTrDA)	4.00	2.59	*-	ug/Kg		65	78 - 138
Perfluorotetradecanoic acid (PFTeDA)	4.00	2.53	*-	ug/Kg		63	72 - 132
Perfluorobutanesulfonic acid (PFBS)	3.55	3.77		ug/Kg		106	89 - 149
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.00		ug/Kg		106	94 - 154
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.26		ug/Kg		117	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.75		ug/Kg		125	68 - 128
Perfluorooctanesulfonic acid (PFOS)	3.72	3.81		ug/Kg		102	70 - 138
Perfluorononanesulfonic acid (PFNS)	3.85	3.50		ug/Kg		91	66 - 126
Perfluorodecanesulfonic acid (PFDS)	3.86	3.19		ug/Kg		83	66 - 126
Perfluorododecanesulfonic acid (PFDoS)	3.88	1.96		ug/Kg		50	47 - 107
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10
9CI-PF3ONS	3.74	3.18		ug/Kg		85	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.53		ug/Kg		113	53 - 158
11CI-PF3OUdS	3.78	1.60	*-	ug/Kg		42	46 - 106
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-864414/2-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.16		ug/Kg		104	60 - 138
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.44		ug/Kg		111	62 - 122
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	6.34		ug/Kg		158	112 - 172
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.67		ug/Kg		103	84 - 152

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	58		25 - 150
13C4 PFBA	93		25 - 150
13C5 PFPeA	99		25 - 150
13C2 PFHxA	97		25 - 150
13C4 PFHpA	100		25 - 150
13C4 PFOA	97		25 - 150
13C5 PFNA	85		25 - 150
13C2 PFDA	70		25 - 150
13C2 PFUnA	72		25 - 150
13C2 PFDoA	64		25 - 150
13C2 PFTeDA	65		25 - 150
13C3 PFBS	104		25 - 150
18O2 PFHxS	91		25 - 150
13C4 PFOS	78		25 - 150
D3-NMeFOSAA	55		25 - 150
D5-NEtFOSAA	65		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	84		25 - 150
13C2 8:2 FTS	67		25 - 150
d-N-MeFOSA-M	41		25 - 150
d-N-EtFOSA-M	39		25 - 150
D7-NMeFOSE	51		25 - 150
D9-NEtFOSE	44		25 - 150
13C3 HFPO-DA	94		25 - 150
13C-6:2 FTCA	93		25 - 150
13C-8:2 FTCA	71		25 - 150

Lab Sample ID: LCSD 320-864414/3-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	9.36		ug/Kg		234	167 - 261	8	30
Perfluoropentanoic acid (PFPeA)	4.00	9.38	*+	ug/Kg		234	159 - 221	6	30
Perfluorohexanoic acid (PFHxA)	4.00	10.8	*+	ug/Kg		270	208 - 257	9	30

Eurofins Sacramento

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-864414/3-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanoic acid (PFHpA)	4.00	8.87		ug/Kg		222	189 - 267	2	30
Perfluorooctanoic acid (PFOA)	4.00	19.7		ug/Kg		493	372 - 496	5	30
Perfluorononanoic acid (PFNA)	4.00	7.21		ug/Kg		180	154 - 205	11	30
Perfluorodecanoic acid (PFDA)	4.00	6.82		ug/Kg		170	130 - 190	2	30
Perfluoroundecanoic acid (PFUnA)	4.00	3.46		ug/Kg		87	81 - 141	8	30
Perfluorododecanoic acid (PFDoA)	4.00	3.43		ug/Kg		86	84 - 144	4	30
Perfluorotridecanoic acid (PFTrDA)	4.00	2.51	*-	ug/Kg		63	78 - 138	3	30
Perfluorotetradecanoic acid (PFTeDA)	4.00	2.31	*-	ug/Kg		58	72 - 132	9	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.70		ug/Kg		104	89 - 149	2	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.88		ug/Kg		103	94 - 154	3	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.03		ug/Kg		110	73 - 133	6	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	5.39	*+	ug/Kg		141	68 - 128	12	30
Perfluorooctanesulfonic acid (PFOS)	3.72	3.90		ug/Kg		105	70 - 138	2	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.25		ug/Kg		85	66 - 126	7	30
Perfluorodecanesulfonic acid (PFDS)	3.86	2.55		ug/Kg		66	66 - 126	22	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	1.70	*-	ug/Kg		44	47 - 107	14	30
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10	NC	30
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10	NC	30
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
9CI-PF3ONS	3.74	2.95		ug/Kg		79	74 - 134	8	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.52		ug/Kg		113	53 - 158	0	30
11CI-PF3OUdS	3.78	1.45	*-	ug/Kg		38	46 - 106	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-864414/3-A

Matrix: Solid

Analysis Batch: 865216

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 864414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.40		ug/Kg		110	60 - 138	6	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.65		ug/Kg		116	62 - 122	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	6.37		ug/Kg		159	112 - 172	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.74		ug/Kg		105	84 - 152	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C8 FOSA	49		25 - 150
13C4 PFBA	94		25 - 150
13C5 PFPeA	97		25 - 150
13C2 PFHxA	98		25 - 150
13C4 PFHpA	100		25 - 150
13C4 PFOA	92		25 - 150
13C5 PFNA	87		25 - 150
13C2 PFDA	63		25 - 150
13C2 PFUnA	59		25 - 150
13C2 PFDoA	53		25 - 150
13C2 PFTeDA	61		25 - 150
13C3 PFBS	102		25 - 150
18O2 PFHxS	93		25 - 150
13C4 PFOS	69		25 - 150
D3-NMeFOSAA	51		25 - 150
D5-NEtFOSAA	52		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	79		25 - 150
13C2 8:2 FTS	60		25 - 150
d-N-MeFOSA-M	40		25 - 150
d-N-EtFOSA-M	36		25 - 150
D7-NMeFOSE	42		25 - 150
D9-NEtFOSE	37		25 - 150
13C3 HFPO-DA	96		25 - 150
13C-6:2 FTCA	99		25 - 150
13C-8:2 FTCA	71		25 - 150

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

LCMS

Prep Batch: 864413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4	BIO-A-25-202507	Pre-Treatment	Solid	TOP Pre-Prep	
MB 320-864413/1-A	Method Blank	Pre-Treatment	Solid	TOP Pre-Prep	
LCS 320-864413/2-A	Lab Control Sample	Pre-Treatment	Solid	TOP Pre-Prep	
LCSD 320-864413/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	TOP Pre-Prep	

Prep Batch: 864414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4	BIO-A-25-202507	Post-Treatment	Solid	TOP Post-Prep	
MB 320-864414/1-A	Method Blank	Post-Treatment	Solid	TOP Post-Prep	
LCS 320-864414/2-A	Lab Control Sample	Post-Treatment	Solid	TOP Post-Prep	
LCSD 320-864414/3-A	Lab Control Sample Dup	Post-Treatment	Solid	TOP Post-Prep	

Prep Batch: 864704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-1 - RA	INF-COMP-202507	Total/NA	Water	1633	
320-123508-1	INF-COMP-202507	Total/NA	Water	1633	
320-123508-2 - RA	EFF-G-202507	Total/NA	Water	1633	
320-123508-2	EFF-G-202507	Total/NA	Water	1633	
320-123508-3 - RA	EB-01-202507	Total/NA	Water	1633	
320-123508-3	EB-01-202507	Total/NA	Water	1633	
MB 320-864704/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-864704/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-864704/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-864704/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 865050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-1	INF-COMP-202507	Total/NA	Water	1633A	864704
320-123508-2	EFF-G-202507	Total/NA	Water	1633A	864704
320-123508-3	EB-01-202507	Total/NA	Water	1633A	864704
MB 320-864704/1-A	Method Blank	Total/NA	Water	1633A	864704
LCS 320-864704/3-A	Lab Control Sample	Total/NA	Water	1633A	864704
LCSD 320-864704/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	864704
LLCS 320-864704/2-A	Lab Control Sample	Total/NA	Water	1633A	864704

Analysis Batch: 865216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4	BIO-A-25-202507	Post-Treatment	Solid	537 (modified)	864414
320-123508-4	BIO-A-25-202507	Pre-Treatment	Solid	537 (modified)	864413
MB 320-864413/1-A	Method Blank	Pre-Treatment	Solid	537 (modified)	864413
MB 320-864414/1-A	Method Blank	Post-Treatment	Solid	537 (modified)	864414
LCS 320-864413/2-A	Lab Control Sample	Pre-Treatment	Solid	537 (modified)	864413
LCS 320-864414/2-A	Lab Control Sample	Post-Treatment	Solid	537 (modified)	864414
LCSD 320-864413/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	537 (modified)	864413
LCSD 320-864414/3-A	Lab Control Sample Dup	Post-Treatment	Solid	537 (modified)	864414

Analysis Batch: 865565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-1 - RA	INF-COMP-202507	Total/NA	Water	1633A	864704
320-123508-2 - RA	EFF-G-202507	Total/NA	Water	1633A	864704
320-123508-3 - RA	EB-01-202507	Total/NA	Water	1633A	864704

Eurofins Sacramento

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

General Chemistry

Analysis Batch: 866321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4	BIO-A-25-202507	Total/NA	Solid	1633	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: INF-COMP-202507

Lab Sample ID: 320-123508-1

Date Collected: 07/14/25 23:59

Matrix: Water

Date Received: 07/17/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633	RA		145.9 mL	5.0 mL	864704	07/22/25 04:17	RMF	EET SAC
Total/NA	Analysis	1633A	RA	1			865565	07/24/25 19:04	C1P	EET SAC
Total/NA	Prep	1633			145.9 mL	5.0 mL	864704	07/22/25 04:17	RMF	EET SAC
Total/NA	Analysis	1633A		1			865050	07/23/25 23:42	P1P	EET SAC

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633	RA		157.2 mL	5.0 mL	864704	07/22/25 04:17	RMF	EET SAC
Total/NA	Analysis	1633A	RA	1			865565	07/24/25 19:21	C1P	EET SAC
Total/NA	Prep	1633			157.2 mL	5.0 mL	864704	07/22/25 04:17	RMF	EET SAC
Total/NA	Analysis	1633A		1			865050	07/23/25 23:59	P1P	EET SAC

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633	RA		152.2 mL	5.0 mL	864704	07/22/25 04:17	RMF	EET SAC
Total/NA	Analysis	1633A	RA	1			865565	07/24/25 19:37	C1P	EET SAC
Total/NA	Prep	1633			152.2 mL	5.0 mL	864704	07/22/25 04:17	RMF	EET SAC
Total/NA	Analysis	1633A		1			865050	07/24/25 00:15	P1P	EET SAC

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			866321	07/28/25 14:52	CFR	EET SAC

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.00 g	10.0 mL	864414	07/20/25 20:24	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	865216	07/24/25 14:48	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	864413	07/20/25 20:21	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	865216	07/24/25 12:56	P1P	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids
1633A	1633	Water	11CI-PF3OUdS
1633A	1633	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633	Water	4:2 FTS
1633A	1633	Water	6:2 FTS
1633A	1633	Water	8:2 FTS
1633A	1633	Water	9CI-PF3ONS
1633A	1633	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633	Water	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633	Water	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633	Water	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633	Water	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)
1633A	1633	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633	Water	Perfluorobutanesulfonic acid (PFBS)
1633A	1633	Water	Perfluorobutanoic acid (PFBA)
1633A	1633	Water	Perfluorodecanesulfonic acid (PFDS)
1633A	1633	Water	Perfluorodecanoic acid (PFDA)
1633A	1633	Water	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633	Water	Perfluorododecanoic acid (PFDoA)
1633A	1633	Water	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633	Water	Perfluoroheptanoic acid (PFHpA)
1633A	1633	Water	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633	Water	Perfluorohexanoic acid (PFHxA)
1633A	1633	Water	Perfluorononanesulfonic acid (PFNS)
1633A	1633	Water	Perfluorononanoic acid (PFNA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633	Water	Perfluorooctanesulfonamide (PFOSA)
1633A	1633	Water	Perfluorooctanesulfonic acid (PFOS)
1633A	1633	Water	Perfluorooctanoic acid (PFOA)
1633A	1633	Water	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633	Water	Perfluoropentanoic acid (PFPeA)
1633A	1633	Water	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633	Water	Perfluorotridecanoic acid (PFTrDA)
1633A	1633	Water	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids
537 (modified)	TOP Post-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
1633	Percent Moisture	EPA	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC
TOP Post-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC
TOP Pre-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-123508-1	INF-COMP-202507	Water	07/14/25 23:59	07/17/25 09:10
320-123508-2	EFF-G-202507	Water	07/15/25 10:53	07/17/25 09:10
320-123508-3	EB-01-202507	Water	07/15/25 13:50	07/17/25 09:10
320-123508-4	BIO-A-25-202507	Solid	07/15/25 14:10	07/17/25 09:10

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Environment Testing

[illegible]

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 9/4/2025 9:31:02 AM Revision 1

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-123508-2

Eurofins Sacramento

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-123508-2

Job ID: 320-123508-2

Eurofins Sacramento

Job Narrative 320-123508-2

REVISION

The report being provided is a revision of the original report sent on 8/15/2025. The report (revision 1) is being revised to include the missing QC data.

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 7/17/2025 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

PFAS

Method 1633_Final_WI: The following sample in preparation batch 320-868862 was discolored prior to extraction: BIO-A-25-202507 (320-123508-4).

Method 1633_Final_WI: The following sample in preparation batch 320-868862 was discolored following extraction: BIO-A-25-202507 (320-123508-4).

Method 1633_Final_WI: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: BIO-A-25-202507 (320-123508-4). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633_Final_WI: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-868862 and analytical batch 320-868956 recovered outside control limits for the following analytes: 11Cl-PF3OUdS.

Method 1633_Final_WI: The continuing calibration verification (CCV) associated with batch 320-868956 recovered above the upper control limit for one or more of the following isotope dilution analyte (IDA): 13C2 4:2 FTS and 13C2 6:2 FTS. The associated target analytes, 4:2 FTS and 6:2 FTS, were within control limits in the CCV. The method blank associated with this CCV was non-detect, the low level laboratory control sample (LLCS)/ laboratory control sample (LCS)/ laboratory control sample duplicate (LCSD) recoveries were in control for the associated target analyte; therefore, the data have been reported. The associated samples are impacted: (CCV 320-868956/8), (LCS 320-868862/3-A), (LCSD 320-868862/4-A), (LLCS 320-868862/2-A) and (MB 320-868862/1-A).

Method 1633_Final_WI: The continuing calibration verification (CCV) associated with batch 320-869175 recovered above the upper control limit for isotope dilution analyte (IDA) 13C2 6:2 FTS and 13C2 4:2 FTS. The associated target analytes were within control limits in the CCV. The samples and method blank (MB) associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported: BIO-A-25-202507 (320-123508-4), (CCV 320-869175/6) and (MB 320-868862/1-A).

Method 1633_Final_WI: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: BIO-A-25-202507 (320-123508-4). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.7		1.1	0.091	ug/Kg	1	✱	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	8.8		0.57	0.14	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	24		0.57	0.11	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.3		0.57	0.093	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	14		0.57	0.18	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.0		0.57	0.082	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	5.3		0.57	0.068	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.96		0.57	0.079	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	2.4		0.57	0.076	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.55	J	0.57	0.082	ug/Kg	1	✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.63		0.57	0.16	ug/Kg	1	✱	1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.57	0.071	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.81		0.57	0.057	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.0		0.57	0.071	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.60		0.57	0.059	ug/Kg	1	✱	1633A	Total/NA
8:2 FTS	1.5		1.1	0.12	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.2		0.57	0.18	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.14	J	0.57	0.10	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.17	J	0.57	0.059	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20		0.57	0.045	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.3		0.57	0.048	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		2.8	0.25	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.9		2.8	0.22	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42		2.8	0.69	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	21		2.8	0.61	ug/Kg	1	✱	1633A	Total/NA
6:2 FTS - RA	0.49	J	1.1	0.15	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.7		1.1	0.091	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoropentanoic acid (PFPeA)	8.8		0.57	0.14	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorohexanoic acid (PFHxA)	24		0.57	0.11	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoroheptanoic acid (PFHpA)	1.3		0.57	0.093	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorooctanoic acid (PFOA)	14		0.57	0.18	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorononanoic acid (PFNA)	1.0		0.57	0.082	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorodecanoic acid (PFDA)	5.3		0.57	0.068	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoroundecanoic acid (PFUnA)	0.96		0.57	0.079	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorododecanoic acid (PFDoA)	2.4		0.57	0.076	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorotridecanoic acid (PFTTrDA)	0.55	J	0.57	0.082	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorotetradecanoic acid (PFTeDA)	0.63		0.57	0.16	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.57	0.071	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.57	0.11	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorohexanesulfonic acid (PFHxS)	0.81		0.57	0.057	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.57	0.045	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorooctanesulfonic acid (PFOS)	8.0		0.57	0.071	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorononanesulfonic acid (PFNS)	ND		0.57	0.065	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorodecanesulfonic acid (PFDS)	0.60		0.57	0.059	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.57	0.10	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
8:2 FTS	1.5		1.1	0.12	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorooctanesulfonamide (PFOSA)	1.2		0.57	0.18	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.14	J	0.57	0.10	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.17	J	0.57	0.059	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20		0.57	0.045	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.3		0.57	0.048	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		2.8	0.25	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.9		2.8	0.22	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.57	0.082	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.57	0.071	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.57	0.062	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.57	0.10	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.57	0.18	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		0.57	0.11	ug/Kg	☼	08/08/25 12:15	08/09/25 19:36	1
11CI-PF3OUdS	ND	*1	0.57	0.21	ug/Kg	☼	08/08/25 12:15	08/09/25 19:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.57	0.11	ug/Kg	☼	08/08/25 12:15	08/09/25 19:36	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.1	0.21	ug/Kg	☼	08/08/25 12:15	08/09/25 19:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42		2.8	0.69	ug/Kg	☼	08/08/25 12:15	08/09/25 19:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	21		2.8	0.61	ug/Kg	☼	08/08/25 12:15	08/09/25 19:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	75.6		8 - 130	08/08/25 12:15	08/09/25 19:36	1
13C5 PFPeA	76.6		35 - 130	08/08/25 12:15	08/09/25 19:36	1
13C5 PFHxA	96.4		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C4 PFHpA	97.7		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C8 PFOA	86.6		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C9 PFNA	87.5		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C6 PFDA	90.2		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C7 PFUnA	65.1		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C2 PFDoA	50.4		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C2 PFTeDA	53.3		20 - 130	08/08/25 12:15	08/09/25 19:36	1
13C3 PFBS	90.2		40 - 135	08/08/25 12:15	08/09/25 19:36	1
13C3 PFHxS	96.3		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C8 PFOS	127		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C8 FOSA	39.0	*5-	40 - 130	08/08/25 12:15	08/09/25 19:36	1
D3-NMeFOSAA	72.3		40 - 135	08/08/25 12:15	08/09/25 19:36	1
D5-NEtFOSAA	91.1		40 - 150	08/08/25 12:15	08/09/25 19:36	1
13C2 8:2 FTS	261		40 - 275	08/08/25 12:15	08/09/25 19:36	1
13C3 HFPO-DA	118		40 - 130	08/08/25 12:15	08/09/25 19:36	1
D7-NMeFOSE	43.3		20 - 130	08/08/25 12:15	08/09/25 19:36	1
D9-NEtFOSE	39.0		15 - 130	08/08/25 12:15	08/09/25 19:36	1
D5-NEtFOSA	44.5		10 - 130	08/08/25 12:15	08/09/25 19:36	1
D3-NMeFOSA	44.9		10 - 130	08/08/25 12:15	08/09/25 19:36	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		1.1	0.18	ug/Kg	☼	08/08/25 12:15	08/11/25 17:16	1
6:2 FTS	0.49	J	1.1	0.15	ug/Kg	☼	08/08/25 12:15	08/11/25 17:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	256	*5+	40 - 165				08/08/25 12:15	08/11/25 17:16	1
13C2 6:2 FTS	267	*5+	40 - 215				08/08/25 12:15	08/11/25 17:16	1

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (8-130)	PFPeA (35-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (40-130)
320-123508-4	BIO-A-25-202507	75.6	76.6	96.4	97.7	86.6	87.5	90.2	65.1
320-123508-4 - RA	BIO-A-25-202507								
LCS 320-868862/3-A	Lab Control Sample	95.4	105	106	102	94.4	97.7	90.9	79.7
LCSD 320-868862/4-A	Lab Control Sample Dup	89.0	90.6	95.5	95.3	89.3	88.8	92.0	96.6
LLCS 320-868862/2-A	Lab Control Sample	98.9	109	108	108	101	103	105	111
MB 320-868862/1-A	Method Blank	87.6	96.6	100	98.6	91.4	96.5	95.0	100
MB 320-868862/1-A - RA	Method Blank								

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (40-130)	PFTDA (20-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-135)	d5NEFOS (40-150)
320-123508-4	BIO-A-25-202507	50.4	53.3	90.2	96.3	127	39.0 *5-	72.3	91.1
320-123508-4 - RA	BIO-A-25-202507								
LCS 320-868862/3-A	Lab Control Sample	61.8	94.1	96.2	103	94.8	72.0	74.6	79.4
LCSD 320-868862/4-A	Lab Control Sample Dup	78.2	94.7	89.4	93.1	95.7	79.2	89.7	99.8
LLCS 320-868862/2-A	Lab Control Sample	93.2	97.8	94.0	104	106	95.1	104	117
MB 320-868862/1-A	Method Blank	83.1	97.9	90.1	99.9	105	84.6	94.0	103
MB 320-868862/1-A - RA	Method Blank								

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-165)	M262FTS (40-215)	M282FTS (40-275)	HFPODA (40-130)	NMFM (20-130)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-123508-4	BIO-A-25-202507			261	118	43.3	39.0	44.5	44.9
320-123508-4 - RA	BIO-A-25-202507	256 *5+	267 *5+						
LCS 320-868862/3-A	Lab Control Sample	113	108	87.0	121	56.9	60.7	60.0	52.0
LCSD 320-868862/4-A	Lab Control Sample Dup	103	96.4	89.2	106	72.2	77.7	66.3	59.2
LLCS 320-868862/2-A	Lab Control Sample	119	106	102	129	81.9	90.3	73.3	64.2
MB 320-868862/1-A	Method Blank			87.4	119	79.2	84.5	73.7	63.4
MB 320-868862/1-A - RA	Method Blank	120	105						

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-123508-2

Project/Site: PFAS Sampling

NMFM = D7-NMeFOSE

NEFM = D9-NEtFOSE

d5NPFSA = D5-NEtFOSA

d3NMFSA = D3-NMeFOSA

1

2

3

4

5

6

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11

12

13

14

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-868862/1-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 868862

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.40	0.032	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.049	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.040	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.033	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.062	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.029	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.024	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.028	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.027	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.029	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.058	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.025	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.040	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.020	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.016	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.025	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.023	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.021	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.037	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
8:2 FTS	ND		0.40	0.044	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.063	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.20	0.036	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.20	0.021	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.20	0.016	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.20	0.017	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.088	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.077	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.20	0.029	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.025	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.20	0.022	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.20	0.036	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.20	0.062	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
9CI-PF3ONS	ND		0.20	0.038	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
11CI-PF3OUdS	ND		0.20	0.075	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.20	0.038	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.40	0.075	ug/Kg		08/08/25 12:15	08/09/25 18:30	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-868862/1-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 868862

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.25	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		08/08/25 12:15	08/09/25 18:30	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	87.6		8 - 130				08/08/25 12:15	08/09/25 18:30	1
13C5 PFPeA	96.6		35 - 130				08/08/25 12:15	08/09/25 18:30	1
13C5 PFHxA	100		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C4 PFHpA	98.6		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C8 PFOA	91.4		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C9 PFNA	96.5		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C6 PFDA	95.0		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C7 PFUnA	100		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C2 PFDoA	83.1		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C2 PFTeDA	97.9		20 - 130				08/08/25 12:15	08/09/25 18:30	1
13C3 PFBS	90.1		40 - 135				08/08/25 12:15	08/09/25 18:30	1
13C3 PFHxS	99.9		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C8 PFOS	105		40 - 130				08/08/25 12:15	08/09/25 18:30	1
13C8 FOSA	84.6		40 - 130				08/08/25 12:15	08/09/25 18:30	1
D3-NMeFOSAA	94.0		40 - 135				08/08/25 12:15	08/09/25 18:30	1
D5-NeFOSAA	103		40 - 150				08/08/25 12:15	08/09/25 18:30	1
13C2 8:2 FTS	87.4		40 - 275				08/08/25 12:15	08/09/25 18:30	1
13C3 HFPO-DA	119		40 - 130				08/08/25 12:15	08/09/25 18:30	1
D7-NMeFOSE	79.2		20 - 130				08/08/25 12:15	08/09/25 18:30	1
D9-NeFOSAE	84.5		15 - 130				08/08/25 12:15	08/09/25 18:30	1
D5-NeFOSA	73.7		10 - 130				08/08/25 12:15	08/09/25 18:30	1
D3-NMeFOSA	63.4		10 - 130				08/08/25 12:15	08/09/25 18:30	1

Lab Sample ID: LCS 320-868862/3-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 868862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	5.00	5.61		ug/Kg		112	70 - 140
Perfluoropentanoic acid (PFPeA)	2.50	2.65		ug/Kg		106	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.43		ug/Kg		97	65 - 140
Perfluoroheptanoic acid (PFHpA)	2.50	2.75		ug/Kg		110	65 - 145
Perfluorooctanoic acid (PFOA)	2.50	2.51		ug/Kg		100	70 - 150
Perfluorononanoic acid (PFNA)	2.50	2.56		ug/Kg		102	70 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.60		ug/Kg		104	70 - 155
Perfluoroundecanoic acid (PFUnA)	2.50	2.55		ug/Kg		102	70 - 155
Perfluorododecanoic acid (PFDoA)	2.50	3.00		ug/Kg		120	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.05		ug/Kg		82	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.29		ug/Kg		92	65 - 150
Perfluorobutanesulfonic acid (PFBS)	2.22	2.22		ug/Kg		100	65 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-868862/3-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 868862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.33		ug/Kg		99	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	2.28	1.98		ug/Kg		87	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.62		ug/Kg		110	65 - 155
Perfluorooctanesulfonic acid (PFOS)	2.33	2.24		ug/Kg		97	65 - 160
Perfluorononanesulfonic acid (PFNS)	2.41	2.22		ug/Kg		92	55 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	1.94		ug/Kg		80	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	2.43	1.99		ug/Kg		82	25 - 160
4:2 FTS	4.69	4.49		ug/Kg		96	60 - 150
6:2 FTS	4.76	5.04		ug/Kg		106	55 - 200
8:2 FTS	4.80	5.08		ug/Kg		106	70 - 150
Perfluorooctanesulfonamide (PFOSA)	2.50	2.69		ug/Kg		108	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.79		ug/Kg		112	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.53		ug/Kg		101	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.65		ug/Kg		106	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.38		ug/Kg		95	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	14.0		ug/Kg		112	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.4		ug/Kg		107	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.88	1.93		ug/Kg		103	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.17		ug/Kg		92	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.66		ug/Kg		106	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.63		ug/Kg		105	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.14		ug/Kg		86	60 - 155
9CI-PF3ONS	2.34	1.86		ug/Kg		80	70 - 150
11CI-PF3OUdS	2.36	1.28		ug/Kg		54	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.14		ug/Kg		96	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.49		ug/Kg		90	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	11.6		ug/Kg		93	60 - 130
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	10.6		ug/Kg		85	60 - 150
Isotope Dilution	%Recovery	LCS Qualifier	Limits				
13C4 PFBA	95.4		8 - 130				

Eurofins Sacramento

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-868862/3-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 868862

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C5 PFPeA	105		35 - 130
13C5 PFHxA	106		40 - 130
13C4 PFHpA	102		40 - 130
13C8 PFOA	94.4		40 - 130
13C9 PFNA	97.7		40 - 130
13C6 PFDA	90.9		40 - 130
13C7 PFUnA	79.7		40 - 130
13C2 PFDoA	61.8		40 - 130
13C2 PFTeDA	94.1		20 - 130
13C3 PFBS	96.2		40 - 135
13C3 PFHxS	103		40 - 130
13C8 PFOS	94.8		40 - 130
13C8 FOSA	72.0		40 - 130
D3-NMeFOSAA	74.6		40 - 135
D5-NEtFOSAA	79.4		40 - 150
13C2 4:2 FTS	113		40 - 165
13C2 6:2 FTS	108		40 - 215
13C2 8:2 FTS	87.0		40 - 275
13C3 HFPO-DA	121		40 - 130
D7-NMeFOSE	56.9		20 - 130
D9-NEtFOSE	60.7		15 - 130
D5-NEtFOSA	60.0		10 - 130
D3-NMeFOSA	52.0		10 - 130

Lab Sample ID: LCSD 320-868862/4-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 868862

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	5.00	5.44		ug/Kg		109	70 - 140	3	30
Perfluoropentanoic acid (PFPeA)	2.50	2.61		ug/Kg		104	60 - 150	2	30
Perfluorohexanoic acid (PFHxA)	2.50	2.44		ug/Kg		98	65 - 140	0	30
Perfluoroheptanoic acid (PFHpA)	2.50	2.60		ug/Kg		104	65 - 145	5	30
Perfluorooctanoic acid (PFOA)	2.50	2.50		ug/Kg		100	70 - 150	0	30
Perfluorononanoic acid (PFNA)	2.50	2.49		ug/Kg		100	70 - 155	2	30
Perfluorodecanoic acid (PFDA)	2.50	2.66		ug/Kg		106	70 - 155	2	30
Perfluoroundecanoic acid (PFUnA)	2.50	2.43		ug/Kg		97	70 - 155	5	30
Perfluorododecanoic acid (PFDoA)	2.50	2.81		ug/Kg		112	70 - 150	7	30
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.32		ug/Kg		93	65 - 150	12	30
Perfluorotetradecanoic acid (PFTTeDA)	2.50	2.17		ug/Kg		87	65 - 150	6	30
Perfluorobutanesulfonic acid (PFBS)	2.22	2.23		ug/Kg		100	65 - 145	1	30
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.27		ug/Kg		97	55 - 160	3	30
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.11		ug/Kg		92	60 - 150	6	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-868862/4-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 868862

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.42		ug/Kg		102	65 - 155	8	30
Perfluorooctanesulfonic acid (PFOS)	2.33	2.18		ug/Kg		94	65 - 160	3	30
Perfluorononanesulfonic acid (PFNS)	2.41	2.33		ug/Kg		97	55 - 140	5	30
Perfluorodecanesulfonic acid (PFDS)	2.41	2.27		ug/Kg		94	30 - 140	16	30
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.27		ug/Kg		94	25 - 160	13	30
4:2 FTS	4.69	4.66		ug/Kg		99	60 - 150	4	30
6:2 FTS	4.76	5.10		ug/Kg		107	55 - 200	1	30
8:2 FTS	4.80	5.07		ug/Kg		106	70 - 150	0	30
Perfluorooctanesulfonamide (PFOSA)	2.50	2.72		ug/Kg		109	70 - 140	1	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.73		ug/Kg		109	70 - 155	2	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.50		ug/Kg		100	70 - 140	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.65		ug/Kg		106	65 - 155	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.27		ug/Kg		91	65 - 165	4	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	13.9		ug/Kg		111	70 - 140	1	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	12.8		ug/Kg		102	70 - 135	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.88	1.91		ug/Kg		102	70 - 145	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.07		ug/Kg		87	70 - 160	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.63		ug/Kg		105	30 - 140	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.50		ug/Kg		100	60 - 150	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.10		ug/Kg		84	60 - 155	2	30
9Cl-PF3ONS	2.34	2.19		ug/Kg		94	70 - 150	16	30
11Cl-PF3OUdS	2.36	1.82	*1	ug/Kg		77	45 - 160	34	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.23	2.00		ug/Kg		90	70 - 140	7	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	4.34		ug/Kg		87	45 - 130	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	11.4		ug/Kg		91	60 - 130	2	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	11.0		ug/Kg		88	60 - 150	4	30

Isotope Dilution	%Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	89.0		8 - 130
13C5 PFPeA	90.6		35 - 130
13C5 PFHxA	95.5		40 - 130
13C4 PFHpA	95.3		40 - 130
13C8 PFOA	89.3		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-868862/4-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 868862

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C9 PFNA	88.8		40 - 130
13C6 PFDA	92.0		40 - 130
13C7 PFUnA	96.6		40 - 130
13C2 PFDoA	78.2		40 - 130
13C2 PFTeDA	94.7		20 - 130
13C3 PFBS	89.4		40 - 135
13C3 PFHxS	93.1		40 - 130
13C8 PFOS	95.7		40 - 130
13C8 FOSA	79.2		40 - 130
D3-NMeFOSAA	89.7		40 - 135
D5-NEtFOSAA	99.8		40 - 150
13C2 4:2 FTS	103		40 - 165
13C2 6:2 FTS	96.4		40 - 215
13C2 8:2 FTS	89.2		40 - 275
13C3 HFPO-DA	106		40 - 130
D7-NMeFOSE	72.2		20 - 130
D9-NEtFOSE	77.7		15 - 130
D5-NEtFOSA	66.3		10 - 130
D3-NMeFOSA	59.2		10 - 130

Lab Sample ID: LLCS 320-868862/2-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 868862

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.800	0.948		ug/Kg		119	70 - 140
Perfluoropentanoic acid (PFPeA)	0.400	0.454		ug/Kg		113	60 - 150
Perfluorohexanoic acid (PFHxA)	0.400	0.424		ug/Kg		106	65 - 140
Perfluoroheptanoic acid (PFHpA)	0.400	0.458		ug/Kg		114	65 - 145
Perfluorooctanoic acid (PFOA)	0.400	0.429		ug/Kg		107	70 - 150
Perfluorononanoic acid (PFNA)	0.400	0.458		ug/Kg		114	70 - 155
Perfluorodecanoic acid (PFDA)	0.400	0.440		ug/Kg		110	70 - 155
Perfluoroundecanoic acid (PFUnA)	0.400	0.430		ug/Kg		107	70 - 155
Perfluorododecanoic acid (PFDoA)	0.400	0.492		ug/Kg		123	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.400	0.419		ug/Kg		105	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.400	0.435		ug/Kg		109	65 - 150
Perfluorobutanesulfonic acid (PFBS)	0.355	0.401		ug/Kg		113	65 - 145
Perfluoropentanesulfonic acid (PFPeS)	0.376	0.416		ug/Kg		111	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	0.365	0.366		ug/Kg		100	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.382	0.425		ug/Kg		111	65 - 155
Perfluorooctanesulfonic acid (PFOS)	0.372	0.412		ug/Kg		111	65 - 160

Eurofins Sacramento

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-868862/2-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 868862

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanesulfonic acid (PFNS)	0.385	0.394		ug/Kg		102	55 - 140
Perfluorodecanesulfonic acid (PFDS)	0.386	0.400		ug/Kg		104	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	0.388	0.391		ug/Kg		101	25 - 160
4:2 FTS	0.750	0.743		ug/Kg		99	60 - 150
6:2 FTS	0.762	1.09		ug/Kg		143	55 - 200
8:2 FTS	0.768	0.872		ug/Kg		114	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.400	0.442		ug/Kg		110	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.400	0.466		ug/Kg		116	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.400	0.415		ug/Kg		104	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.400	0.437		ug/Kg		109	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.400	0.404		ug/Kg		101	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.00	2.30		ug/Kg		115	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.00	2.16		ug/Kg		108	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	0.300	0.329		ug/Kg		110	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.378	0.354		ug/Kg		94	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.400	0.439		ug/Kg		110	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.400	0.430		ug/Kg		107	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.400	0.401		ug/Kg		100	60 - 155
9Cl-PF3ONS	0.374	0.344		ug/Kg		92	70 - 150
11Cl-PF3OUdS	0.378	0.309		ug/Kg		82	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.357	0.351		ug/Kg		98	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.800	0.727		ug/Kg		91	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.00	1.99		ug/Kg		100	60 - 130
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.00	2.06		ug/Kg		103	60 - 150

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	98.9		8 - 130
13C5 PFPeA	109		35 - 130
13C5 PFHxA	108		40 - 130
13C4 PFHpA	108		40 - 130
13C8 PFOA	101		40 - 130
13C9 PFNA	103		40 - 130
13C6 PFDA	105		40 - 130
13C7 PFUnA	111		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-868862/2-A

Matrix: Solid

Analysis Batch: 868956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 868862

Isotope Dilution	LLCS LLCS		Limits
	%Recovery	Qualifier	
13C2 PFD ₂ O ₂ A	93.2		40 - 130
13C2 PFTeDA	97.8		20 - 130
13C3 PFBS	94.0		40 - 135
13C3 PFHxS	104		40 - 130
13C8 PFOS	106		40 - 130
13C8 FOSA	95.1		40 - 130
D3-NMeFOSAA	104		40 - 135
D5-NEtFOSAA	117		40 - 150
13C2 4:2 FTS	119		40 - 165
13C2 6:2 FTS	106		40 - 215
13C2 8:2 FTS	102		40 - 275
13C3 HFPO-DA	129		40 - 130
D7-NMeFOSE	81.9		20 - 130
D9-NEtFOSE	90.3		15 - 130
D5-NEtFOSA	73.3		10 - 130
D3-NMeFOSA	64.2		10 - 130

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: MB 320-868862/1-A

Matrix: Solid

Analysis Batch: 869175

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 868862

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4:2 FTS - RA	ND		0.40	0.065	ug/Kg		08/08/25 12:15	08/11/25 16:59	1
6:2 FTS - RA	ND		0.40	0.054	ug/Kg		08/08/25 12:15	08/11/25 16:59	1
Isotope Dilution	MB MB		Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
13C2 4:2 FTS - RA	120		40 - 165				08/08/25 12:15	08/11/25 16:59	1
13C2 6:2 FTS - RA	105		40 - 215				08/08/25 12:15	08/11/25 16:59	1

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

LCMS

Prep Batch: 868862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4	BIO-A-25-202507	Total/NA	Solid	1633 Shake	
320-123508-4 - RA	BIO-A-25-202507	Total/NA	Solid	1633 Shake	
MB 320-868862/1-A	Method Blank	Total/NA	Solid	1633 Shake	
MB 320-868862/1-A - RA	Method Blank	Total/NA	Solid	1633 Shake	
LCS 320-868862/3-A	Lab Control Sample	Total/NA	Solid	1633 Shake	
LCSD 320-868862/4-A	Lab Control Sample Dup	Total/NA	Solid	1633 Shake	
LLCS 320-868862/2-A	Lab Control Sample	Total/NA	Solid	1633 Shake	

Analysis Batch: 868956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4	BIO-A-25-202507	Total/NA	Solid	1633A	868862
MB 320-868862/1-A	Method Blank	Total/NA	Solid	1633A	868862
LCS 320-868862/3-A	Lab Control Sample	Total/NA	Solid	1633A	868862
LCSD 320-868862/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	868862
LLCS 320-868862/2-A	Lab Control Sample	Total/NA	Solid	1633A	868862

Analysis Batch: 869175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-123508-4 - RA	BIO-A-25-202507	Total/NA	Solid	1633A	868862
MB 320-868862/1-A - RA	Method Blank	Total/NA	Solid	1633A	868862

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Client Sample ID: BIO-A-25-202507
Date Collected: 07/15/25 14:10
Date Received: 07/17/25 09:10

Lab Sample ID: 320-123508-4
Matrix: Solid
Percent Solids: 26.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633 Shake			2.68 g	5.00 mL	868862	08/08/25 12:15	ATB	EET SAC
Total/NA	Analysis	1633A		1			868956	08/09/25 19:36	C1P	EET SAC
Total/NA	Prep	1633 Shake	RA		2.68 g	5.00 mL	868862	08/08/25 12:15	ATB	EET SAC
Total/NA	Analysis	1633A	RA	1			869175	08/11/25 17:16	S1M	EET SAC

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633A	1633 Shake	Solid	11CI-PF3OUdS
1633A	1633 Shake	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
1633A	1633 Shake	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
1633A	1633 Shake	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
1633A	1633 Shake	Solid	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
1633A	1633 Shake	Solid	4:2 FTS
1633A	1633 Shake	Solid	6:2 FTS
1633A	1633 Shake	Solid	8:2 FTS
1633A	1633 Shake	Solid	9CI-PF3ONS
1633A	1633 Shake	Solid	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
1633A	1633 Shake	Solid	N-ethylperfluorooctane sulfonamide (NEtFOSA)
1633A	1633 Shake	Solid	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)
1633A	1633 Shake	Solid	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
1633A	1633 Shake	Solid	N-methylperfluorooctane sulfonamide (NMeFOSA)
1633A	1633 Shake	Solid	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)
1633A	1633 Shake	Solid	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
1633A	1633 Shake	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
1633A	1633 Shake	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
1633A	1633 Shake	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
1633A	1633 Shake	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
1633A	1633 Shake	Solid	Perfluorobutanesulfonic acid (PFBS)
1633A	1633 Shake	Solid	Perfluorobutanoic acid (PFBA)
1633A	1633 Shake	Solid	Perfluorodecanesulfonic acid (PFDS)
1633A	1633 Shake	Solid	Perfluorodecanoic acid (PFDA)
1633A	1633 Shake	Solid	Perfluorododecanesulfonic acid (PFDoS)
1633A	1633 Shake	Solid	Perfluorododecanoic acid (PFDoA)
1633A	1633 Shake	Solid	Perfluoroheptanesulfonic acid (PFHpS)
1633A	1633 Shake	Solid	Perfluoroheptanoic acid (PFHpA)
1633A	1633 Shake	Solid	Perfluorohexanesulfonic acid (PFHxS)
1633A	1633 Shake	Solid	Perfluorohexanoic acid (PFHxA)
1633A	1633 Shake	Solid	Perfluorononanesulfonic acid (PFNS)
1633A	1633 Shake	Solid	Perfluorononanoic acid (PFNA)
1633A	1633 Shake	Solid	Perfluorooctanesulfonamide (PFOSA)
1633A	1633 Shake	Solid	Perfluorooctanesulfonic acid (PFOS)

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Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633A	1633 Shake	Solid	Perfluorooctanoic acid (PFOA)
1633A	1633 Shake	Solid	Perfluoropentanesulfonic acid (PFPeS)
1633A	1633 Shake	Solid	Perfluoropentanoic acid (PFPeA)
1633A	1633 Shake	Solid	Perfluorotetradecanoic acid (PFTeDA)
1633A	1633 Shake	Solid	Perfluorotridecanoic acid (PFTrDA)
1633A	1633 Shake	Solid	Perfluoroundecanoic acid (PFUnA)
Wisconsin	State	998204680	08-31-25

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633 Shake	Shake Extraction with SPE	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-123508-4	BIO-A-25-202507	Solid	07/15/25 14:10	07/17/25 09:10	Wisconsin

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Environment Testing



320-123508 Chain of Custody

August 2025



ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 8/22/2025 10:15:31 AM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-124294-1

Eurofins Sacramento

Job Notes

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Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-124294-1

Job ID: 320-124294-1

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Job Narrative 320-124294-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 8/13/2025 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C.

PFAS

Method 1633_Final_WI: Due to the excess amount of sediment and particulates, the following sample was fortified with Extracted Internal Standards (EIS), then centrifuged and decanted into a new container: INF-COMP-202508 (320-124294-1). The sediment in the centrifuge tubes was rinsed with methanol and the methanol was combined with the original aqueous fraction to generate a combined extract to be used for the analysis. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method 1633_Final_WI: The following samples in preparation batch 320-870773 were discolored prior to extraction: INF-COMP-202508 (320-124294-1) and EFF-G-202508 (320-124294-2).

Method 1633_Final_WI: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: INF-COMP-202508 (320-124294-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633_Final_WI: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: EFF-G-202508 (320-124294-2).

Method 1633_Final_WI: The transition mass ratio was outside of the established ratio limit for Perfluorooctanesulfonamide (PFOSA) in (CCVL 320-870786/2) associated to this data set. This is indicated by the "R" flag in the raw data. As the flagged data is in control in the low level continuing calibration verification (CCVL), there is no adverse impact to the data.

Method 1633_Final_WI: The following sample has chromatographic interferences that could adversely impact the identification and quantitation of Perfluoroheptanoic acid (PFHpA): INF-COMP-202508 (320-124294-1). These interferences could cause false positive results.

Method 1633_Final_WI: The following sample has chromatographic interferences that could adversely impact the identification and quantitation of Perfluoropentanesulfonic acid (PFPeS): EFF-G-202508 (320-124294-2). These interferences could cause false positive results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: INF-COMP-202508

Lab Sample ID: 320-124294-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	20		3.4	0.31	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	13		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.7	CI	1.7	0.29	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.7		1.7	0.33	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.81	J	1.7	0.38	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.68	J	1.7	0.37	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	10		1.7	0.45	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.3		1.7	0.21	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.7		1.7	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	1.9	J	3.4	0.34	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.26	J	1.7	0.19	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.4		1.7	0.29	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.1	J	1.7	0.37	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	3.1	J	8.4	1.9	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	56		8.4	1.4	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.9	J	8.4	1.0	ng/L	1		1633A	Total/NA

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	17		3.3	0.31	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	18		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.0		1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	9.4		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J I	1.6	0.37	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.57	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	8.3		1.6	0.44	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.59	J CI	1.6	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.4		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.5		1.6	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	1.1	J	3.3	0.33	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.36	J I	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	J	1.6	0.29	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.37	J	1.6	0.36	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.0	J	8.2	1.4	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: INF-COMP-202508

Lab Sample ID: 320-124294-1

Date Collected: 08/11/25 23:59

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	20		3.4	0.31	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorohexanoic acid (PFHxA)	13		1.7	0.23	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoroheptanoic acid (PFHpA)	1.7	CI	1.7	0.29	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorooctanoic acid (PFOA)	7.7		1.7	0.33	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorononanoic acid (PFNA)	0.81	J	1.7	0.38	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorodecanoic acid (PFDA)	0.68	J	1.7	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.48	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorobutanesulfonic acid (PFBS)	10		1.7	0.45	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorohexanesulfonic acid (PFHxS)	7.3		1.7	0.21	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorooctanesulfonic acid (PFOS)	7.7		1.7	0.23	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		08/20/25 04:45	08/20/25 19:05	1
4:2 FTS	ND		3.4	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
6:2 FTS	1.9	J	3.4	0.34	ng/L		08/20/25 04:45	08/20/25 19:05	1
8:2 FTS	ND		3.4	0.75	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorooctanesulfonamide (PFOSA)	0.26	J	1.7	0.19	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.4		1.7	0.29	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.1	J	1.7	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.1	J	8.4	1.9	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.4	2.0	ng/L		08/20/25 04:45	08/20/25 19:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		08/20/25 04:45	08/20/25 19:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.16	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		08/20/25 04:45	08/20/25 19:05	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.60	ng/L		08/20/25 04:45	08/20/25 19:05	1
9CI-PF3ONS	ND		1.7	0.49	ng/L		08/20/25 04:45	08/20/25 19:05	1
11CI-PF3OUdS	ND		1.7	0.25	ng/L		08/20/25 04:45	08/20/25 19:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: INF-COMP-202508

Lab Sample ID: 320-124294-1

Date Collected: 08/11/25 23:59

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	ND		1.7	0.21	ng/L		08/20/25 04:45	08/20/25 19:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.60	ng/L		08/20/25 04:45	08/20/25 19:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	56		8.4	1.4	ng/L		08/20/25 04:45	08/20/25 19:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.9 J		8.4	1.0	ng/L		08/20/25 04:45	08/20/25 19:05	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	67.2		5 - 130				08/20/25 04:45	08/20/25 19:05	1
13C5 PFPeA	49.6		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C5 PFHxA	65.6		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C4 PFHpA	66.2		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C8 PFOA	105		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C9 PFNA	91.8		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C6 PFDA	90.2		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C7 PFUnA	62.6		30 - 130				08/20/25 04:45	08/20/25 19:05	1
13C2 PFDoA	47.7		10 - 130				08/20/25 04:45	08/20/25 19:05	1
13C2 PFTeDA	58.6		10 - 130				08/20/25 04:45	08/20/25 19:05	1
13C3 PFBS	102		40 - 135				08/20/25 04:45	08/20/25 19:05	1
13C3 PFHxS	107		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C8 PFOS	93.1		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C8 FOSA	86.1		40 - 130				08/20/25 04:45	08/20/25 19:05	1
D3-NMeFOSAA	55.6		40 - 170				08/20/25 04:45	08/20/25 19:05	1
D5-NEtFOSAA	45.5		25 - 135				08/20/25 04:45	08/20/25 19:05	1
13C2 4:2 FTS	204 *5+		40 - 200				08/20/25 04:45	08/20/25 19:05	1
13C2 6:2 FTS	248 *5+		40 - 200				08/20/25 04:45	08/20/25 19:05	1
13C2 8:2 FTS	165		40 - 300				08/20/25 04:45	08/20/25 19:05	1
13C3 HFPO-DA	62.0		40 - 130				08/20/25 04:45	08/20/25 19:05	1
D7-NMeFOSE	32.0		10 - 130				08/20/25 04:45	08/20/25 19:05	1
D9-NEtFOSE	49.2		10 - 130				08/20/25 04:45	08/20/25 19:05	1
D5-NEtFOSA	29.7		10 - 130				08/20/25 04:45	08/20/25 19:05	1
D3-NMeFOSA	50.0		10 - 130				08/20/25 04:45	08/20/25 19:05	1

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	17		3.3	0.31	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorohexanoic acid (PFHxA)	18		1.6	0.22	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoroheptanoic acid (PFHpA)	3.0		1.6	0.28	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorooctanoic acid (PFOA)	9.4		1.6	0.32	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorononanoic acid (PFNA)	1.1 J I		1.6	0.37	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorodecanoic acid (PFDA)	0.57 J		1.6	0.36	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.19	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.46	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		08/20/25 04:45	08/20/25 19:21	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	8.3		1.6	0.44	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoropentanesulfonic acid (PFPeS)	0.59	J CI	1.6	0.18	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorohexanesulfonic acid (PFHxS)	8.4		1.6	0.20	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorooctanesulfonic acid (PFOS)	5.5		1.6	0.23	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.26	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		08/20/25 04:45	08/20/25 19:21	1
4:2 FTS	ND		3.3	0.36	ng/L		08/20/25 04:45	08/20/25 19:21	1
6:2 FTS	1.1	J	3.3	0.33	ng/L		08/20/25 04:45	08/20/25 19:21	1
8:2 FTS	ND		3.3	0.74	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorooctanesulfonamide (PFOSA)	0.36	J I	1.6	0.18	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.32	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.37	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	J	1.6	0.29	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.37	J	1.6	0.36	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.2	1.9	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		08/20/25 04:45	08/20/25 19:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		08/20/25 04:45	08/20/25 19:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		08/20/25 04:45	08/20/25 19:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		08/20/25 04:45	08/20/25 19:21	1
9Cl-PF3ONS	ND		1.6	0.48	ng/L		08/20/25 04:45	08/20/25 19:21	1
11Cl-PF3OUdS	ND		1.6	0.24	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		08/20/25 04:45	08/20/25 19:21	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		08/20/25 04:45	08/20/25 19:21	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.0	J	8.2	1.4	ng/L		08/20/25 04:45	08/20/25 19:21	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		08/20/25 04:45	08/20/25 19:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	85.1		5 - 130				08/20/25 04:45	08/20/25 19:21	1
13C5 PFPeA	85.8		40 - 130				08/20/25 04:45	08/20/25 19:21	1
13C5 PFHxA	95.9		40 - 130				08/20/25 04:45	08/20/25 19:21	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	91.0		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C8 PFOA	99.1		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C9 PFNA	92.0		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C6 PFDA	101		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C7 PFUnA	87.3		30 - 130	08/20/25 04:45	08/20/25 19:21	1
13C2 PFDoA	90.5		10 - 130	08/20/25 04:45	08/20/25 19:21	1
13C2 PFTeDA	70.4		10 - 130	08/20/25 04:45	08/20/25 19:21	1
13C3 PFBS	103		40 - 135	08/20/25 04:45	08/20/25 19:21	1
13C3 PFHxS	102		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C8 PFOS	103		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C8 FOSA	85.3		40 - 130	08/20/25 04:45	08/20/25 19:21	1
D3-NMeFOSAA	95.7		40 - 170	08/20/25 04:45	08/20/25 19:21	1
D5-NEtFOSAA	98.6		25 - 135	08/20/25 04:45	08/20/25 19:21	1
13C2 4:2 FTS	188		40 - 200	08/20/25 04:45	08/20/25 19:21	1
13C2 6:2 FTS	156		40 - 200	08/20/25 04:45	08/20/25 19:21	1
13C2 8:2 FTS	125		40 - 300	08/20/25 04:45	08/20/25 19:21	1
13C3 HFPO-DA	89.2		40 - 130	08/20/25 04:45	08/20/25 19:21	1
D7-NMeFOSE	69.7		10 - 130	08/20/25 04:45	08/20/25 19:21	1
D9-NEtFOSE	72.9		10 - 130	08/20/25 04:45	08/20/25 19:21	1
D5-NEtFOSA	76.7		10 - 130	08/20/25 04:45	08/20/25 19:21	1
D3-NMeFOSA	76.1		10 - 130	08/20/25 04:45	08/20/25 19:21	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-124294-1	INF-COMP-202508	67.2	49.6	65.6	66.2	105	91.8	90.2	62.6
320-124294-2	EFF-G-202508	85.1	85.8	95.9	91.0	99.1	92.0	101	87.3
LCS 320-870773/3-A	Lab Control Sample	88.8	101	106	107	105	101	102	92.7
LCSD 320-870773/4-A	Lab Control Sample Dup	87.6	102	111	108	100	94.6	103	99.9
LLCS 320-870773/2-A	Lab Control Sample	86.5	98.6	108	103	99.0	94.5	97.5	89.3
MB 320-870773/1-A	Method Blank	91.2	96.7	105	106	110	98.3	103	96.4

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-124294-1	INF-COMP-202508	47.7	58.6	102	107	93.1	86.1	55.6	45.5
320-124294-2	EFF-G-202508	90.5	70.4	103	102	103	85.3	95.7	98.6
LCS 320-870773/3-A	Lab Control Sample	92.1	77.4	104	105	101	81.0	94.1	95.4
LCSD 320-870773/4-A	Lab Control Sample Dup	90.9	87.4	94.5	101	100	80.0	97.2	94.6
LLCS 320-870773/2-A	Lab Control Sample	92.0	84.1	98.5	100	101	80.0	93.7	93.6
MB 320-870773/1-A	Method Blank	102	87.7	104	103	99.6	81.2	95.2	97.7

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-124294-1	INF-COMP-202508	204 *5+	248 *5+	165	62.0	32.0	49.2	29.7	50.0
320-124294-2	EFF-G-202508	188	156	125	89.2	69.7	72.9	76.7	76.1
LCS 320-870773/3-A	Lab Control Sample	113	110	106	101	67.9	73.2	69.8	72.0
LCSD 320-870773/4-A	Lab Control Sample Dup	117	110	105	101	72.9	76.3	70.6	70.4
LLCS 320-870773/2-A	Lab Control Sample	116	104	106	96.4	69.6	71.3	70.3	69.1
MB 320-870773/1-A	Method Blank	123	110	107	97.0	74.6	78.5	71.4	71.2

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Project/Site: PFAS Sampling

d3NMFSA = D3-NMeFOSA

Job ID: 320-124294-1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-870773/1-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 870773

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.54	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		08/20/25 04:45	08/20/25 17:59	1
4:2 FTS	ND		4.0	0.44	ng/L		08/20/25 04:45	08/20/25 17:59	1
6:2 FTS	ND		4.0	0.41	ng/L		08/20/25 04:45	08/20/25 17:59	1
8:2 FTS	ND		4.0	0.90	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		08/20/25 04:45	08/20/25 17:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		08/20/25 04:45	08/20/25 17:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		08/20/25 04:45	08/20/25 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		08/20/25 04:45	08/20/25 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		08/20/25 04:45	08/20/25 17:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		08/20/25 04:45	08/20/25 17:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		08/20/25 04:45	08/20/25 17:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		08/20/25 04:45	08/20/25 17:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		08/20/25 04:45	08/20/25 17:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		08/20/25 04:45	08/20/25 17:59	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		08/20/25 04:45	08/20/25 17:59	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		08/20/25 04:45	08/20/25 17:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		08/20/25 04:45	08/20/25 17:59	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-870773/1-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 870773

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		08/20/25 04:45	08/20/25 17:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		08/20/25 04:45	08/20/25 17:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		08/20/25 04:45	08/20/25 17:59	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	91.2		5 - 130	08/20/25 04:45	08/20/25 17:59	1
13C5 PFPeA	96.7		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C5 PFHxA	105		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C4 PFHpA	106		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C8 PFOA	110		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C9 PFNA	98.3		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C6 PFDA	103		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C7 PFUnA	96.4		30 - 130	08/20/25 04:45	08/20/25 17:59	1
13C2 PFDaA	102		10 - 130	08/20/25 04:45	08/20/25 17:59	1
13C2 PFTeDA	87.7		10 - 130	08/20/25 04:45	08/20/25 17:59	1
13C3 PFBS	104		40 - 135	08/20/25 04:45	08/20/25 17:59	1
13C3 PFHxS	103		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C8 PFOS	99.6		40 - 130	08/20/25 04:45	08/20/25 17:59	1
13C8 FOSA	81.2		40 - 130	08/20/25 04:45	08/20/25 17:59	1
D3-NMeFOSAA	95.2		40 - 170	08/20/25 04:45	08/20/25 17:59	1
D5-NEtFOSAA	97.7		25 - 135	08/20/25 04:45	08/20/25 17:59	1
13C2 4:2 FTS	123		40 - 200	08/20/25 04:45	08/20/25 17:59	1
13C2 6:2 FTS	110		40 - 200	08/20/25 04:45	08/20/25 17:59	1
13C2 8:2 FTS	107		40 - 300	08/20/25 04:45	08/20/25 17:59	1
13C3 HFPO-DA	97.0		40 - 130	08/20/25 04:45	08/20/25 17:59	1
D7-NMeFOSE	74.6		10 - 130	08/20/25 04:45	08/20/25 17:59	1
D9-NEtFOSE	78.5		10 - 130	08/20/25 04:45	08/20/25 17:59	1
D5-NEtFOSA	71.4		10 - 130	08/20/25 04:45	08/20/25 17:59	1
D3-NMeFOSA	71.2		10 - 130	08/20/25 04:45	08/20/25 17:59	1

Lab Sample ID: LCS 320-870773/3-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	85.2		ng/L		106	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	47.1		ng/L		118	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	41.0		ng/L		103	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	39.1		ng/L		98	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	37.7		ng/L		94	70 - 150
Perfluorononanoic acid (PFNA)	40.0	36.9		ng/L		92	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	35.4		ng/L		89	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	38.5		ng/L		96	70 - 145
Perfluorododecanoic acid (PFDaA)	40.0	39.4		ng/L		99	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-870773/3-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	42.1		ng/L		105	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	44.6		ng/L		111	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	35.2		ng/L		99	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.5		ng/L		102	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.4		ng/L		94	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.9		ng/L		105	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.6		ng/L		98	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	39.1		ng/L		102	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.0		ng/L		91	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.1		ng/L		93	50 - 145
4:2 FTS	75.0	76.6		ng/L		102	70 - 145
6:2 FTS	76.2	76.7		ng/L		101	65 - 155
8:2 FTS	76.8	78.9		ng/L		103	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	39.7		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	44.1		ng/L		110	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	43.4		ng/L		108	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.7		ng/L		107	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.4		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	212		ng/L		106	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	197		ng/L		98	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	33.2		ng/L		111	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.0		ng/L		114	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.9		ng/L		112	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	44.3		ng/L		111	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	41.3		ng/L		103	50 - 150
9Cl-PF3ONS	37.4	43.2		ng/L		116	70 - 155
11Cl-PF3OUdS	37.8	40.9		ng/L		108	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	37.2		ng/L		104	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	87.7		ng/L		110	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	179		ng/L		89	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-870773/3-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	174		ng/L		87	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	88.8		5 - 130
13C5 PFPeA	101		40 - 130
13C5 PFHxA	106		40 - 130
13C4 PFHpA	107		40 - 130
13C8 PFOA	105		40 - 130
13C9 PFNA	101		40 - 130
13C6 PFDA	102		40 - 130
13C7 PFUnA	92.7		30 - 130
13C2 PFDoA	92.1		10 - 130
13C2 PFTeDA	77.4		10 - 130
13C3 PFBS	104		40 - 135
13C3 PFHxS	105		40 - 130
13C8 PFOS	101		40 - 130
13C8 FOSA	81.0		40 - 130
D3-NMeFOSAA	94.1		40 - 170
D5-NEtFOSAA	95.4		25 - 135
13C2 4:2 FTS	113		40 - 200
13C2 6:2 FTS	110		40 - 200
13C2 8:2 FTS	106		40 - 300
13C3 HFPO-DA	101		40 - 130
D7-NMeFOSE	67.9		10 - 130
D9-NEtFOSE	73.2		10 - 130
D5-NEtFOSA	69.8		10 - 130
D3-NMeFOSA	72.0		10 - 130

Lab Sample ID: LCSD 320-870773/4-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	87.5		ng/L		109	70 - 140	3	30
Perfluoropentanoic acid (PFPeA)	40.0	48.6		ng/L		121	65 - 135	3	30
Perfluorohexanoic acid (PFHxA)	40.0	40.6		ng/L		101	70 - 145	1	30
Perfluoroheptanoic acid (PFHpA)	40.0	37.6		ng/L		94	70 - 150	4	30
Perfluorooctanoic acid (PFOA)	40.0	37.5		ng/L		94	70 - 150	0	30
Perfluorononanoic acid (PFNA)	40.0	37.5		ng/L		94	70 - 150	2	30
Perfluorodecanoic acid (PFDA)	40.0	35.5		ng/L		89	70 - 140	0	30
Perfluoroundecanoic acid (PFUnA)	40.0	36.9		ng/L		92	70 - 145	4	30
Perfluorododecanoic acid (PFDoA)	40.0	43.0		ng/L		107	70 - 140	9	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.4		ng/L		99	65 - 140	7	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	45.7		ng/L		114	60 - 140	2	30

Eurofins Sacramento

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-870773/4-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	35.5	39.4		ng/L		111	60 - 145	11	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.9		ng/L		103	65 - 140	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.1		ng/L		93	65 - 145	1	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	40.2		ng/L		105	70 - 150	1	30
Perfluorooctanesulfonic acid (PFOS)	37.2	37.2		ng/L		100	55 - 150	2	30
Perfluorononanesulfonic acid (PFNS)	38.5	39.7		ng/L		103	65 - 145	2	30
Perfluorodecanesulfonic acid (PFDS)	38.6	36.0		ng/L		93	60 - 145	3	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	34.7		ng/L		89	50 - 145	4	30
4:2 FTS	75.0	76.0		ng/L		101	70 - 145	1	30
6:2 FTS	76.2	77.6		ng/L		102	65 - 155	1	30
8:2 FTS	76.8	80.1		ng/L		104	60 - 150	2	30
Perfluorooctanesulfonamide (PFOSA)	40.0	40.6		ng/L		101	70 - 145	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.4		ng/L		114	60 - 150	3	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	43.5		ng/L		109	65 - 145	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.6		ng/L		106	50 - 140	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.8		ng/L		104	70 - 145	6	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	207		ng/L		104	70 - 145	3	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	204		ng/L		102	70 - 135	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	32.3		ng/L		108	70 - 140	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	42.1		ng/L		111	65 - 145	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	46.9		ng/L		117	55 - 140	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	46.4		ng/L		116	60 - 150	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	31.0		ng/L		77	50 - 150	29	30
9Cl-PF3ONS	37.4	43.4		ng/L		116	70 - 155	0	30
11Cl-PF3OUdS	37.8	40.0		ng/L		106	55 - 160	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	36.6		ng/L		103	70 - 140	1	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	87.2		ng/L		109	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	176		ng/L		88	70 - 135	2	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	167		ng/L		84	50 - 145	4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	87.6		5 - 130
13C5 PFPeA	102		40 - 130
13C5 PFHxA	111		40 - 130
13C4 PFHpA	108		40 - 130
13C8 PFOA	100		40 - 130
13C9 PFNA	94.6		40 - 130
13C6 PFDA	103		40 - 130
13C7 PFUnA	99.9		30 - 130
13C2 PFDoA	90.9		10 - 130
13C2 PFTeDA	87.4		10 - 130
13C3 PFBS	94.5		40 - 135
13C3 PFHxS	101		40 - 130
13C8 PFOS	100		40 - 130
13C8 FOSA	80.0		40 - 130
D3-NMeFOSAA	97.2		40 - 170
D5-NEtFOSAA	94.6		25 - 135
13C2 4:2 FTS	117		40 - 200
13C2 6:2 FTS	110		40 - 200
13C2 8:2 FTS	105		40 - 300
13C3 HFPO-DA	101		40 - 130
D7-NMeFOSE	72.9		10 - 130
D9-NEtFOSE	76.3		10 - 130
D5-NEtFOSA	70.6		10 - 130
D3-NMeFOSA	70.4		10 - 130

Lab Sample ID: LLCS 320-870773/2-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Perfluorobutanoic acid (PFBA)	8.00	9.45		ng/L		118	70 - 140	
Perfluoropentanoic acid (PFPeA)	4.00	4.75		ng/L		119	65 - 135	
Perfluorohexanoic acid (PFHxA)	4.00	4.01		ng/L		100	70 - 145	
Perfluoroheptanoic acid (PFHpA)	4.00	3.93		ng/L		98	70 - 150	
Perfluorooctanoic acid (PFOA)	4.00	3.72		ng/L		93	70 - 150	
Perfluorononanoic acid (PFNA)	4.00	3.88		ng/L		97	70 - 150	
Perfluorodecanoic acid (PFDA)	4.00	3.53		ng/L		88	70 - 140	
Perfluoroundecanoic acid (PFUnA)	4.00	3.98		ng/L		100	70 - 145	
Perfluorododecanoic acid (PFDoA)	4.00	3.86		ng/L		96	70 - 140	
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.72		ng/L		93	65 - 140	
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.97		ng/L		99	60 - 140	
Perfluorobutanesulfonic acid (PFBS)	3.55	3.74		ng/L		105	60 - 145	
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.88		ng/L		103	65 - 140	
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.84		ng/L		105	65 - 145	
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.62		ng/L		95	70 - 150	

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-870773/2-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 870773

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	3.89		ng/L		105	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.79		ng/L		98	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.56		ng/L		92	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	4.52		ng/L		116	50 - 145
4:2 FTS	7.50	6.80		ng/L		91	70 - 145
6:2 FTS	7.62	8.11		ng/L		106	65 - 155
8:2 FTS	7.68	8.16		ng/L		106	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.97		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.34		ng/L		108	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.19		ng/L		105	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.18		ng/L		104	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.13		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	20.7		ng/L		104	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.2		ng/L		106	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	3.08		ng/L		103	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.34		ng/L		115	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.48		ng/L		112	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.45		ng/L		111	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.47		ng/L		112	50 - 150
9CI-PF3ONS	3.74	4.30		ng/L		115	70 - 155
11CI-PF3OUdS	3.78	4.12		ng/L		109	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.70		ng/L		104	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.39		ng/L		105	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	16.7		ng/L		83	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	15.5		ng/L		78	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	86.5		5 - 130
13C5 PFPeA	98.6		40 - 130
13C5 PFHxA	108		40 - 130
13C4 PFHpA	103		40 - 130
13C8 PFOA	99.0		40 - 130
13C9 PFNA	94.5		40 - 130
13C6 PFDA	97.5		40 - 130

Eurofins Sacramento

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-870773/2-A

Matrix: Water

Analysis Batch: 870898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 870773

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C7 PFUnA	89.3		30 - 130
13C2 PFDoA	92.0		10 - 130
13C2 PFTeDA	84.1		10 - 130
13C3 PFBS	98.5		40 - 135
13C3 PFHxS	100		40 - 130
13C8 PFOS	101		40 - 130
13C8 FOSA	80.0		40 - 130
D3-NMeFOSAA	93.7		40 - 170
D5-NEtFOSAA	93.6		25 - 135
13C2 4:2 FTS	116		40 - 200
13C2 6:2 FTS	104		40 - 200
13C2 8:2 FTS	106		40 - 300
13C3 HFPO-DA	96.4		40 - 130
D7-NMeFOSE	69.6		10 - 130
D9-NEtFOSE	71.3		10 - 130
D5-NEtFOSA	70.3		10 - 130
D3-NMeFOSA	69.1		10 - 130

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

LCMS

Prep Batch: 870773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-124294-1	INF-COMP-202508	Total/NA	Water	1633	
320-124294-2	EFF-G-202508	Total/NA	Water	1633	
MB 320-870773/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-870773/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-870773/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-870773/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 870898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-124294-1	INF-COMP-202508	Total/NA	Water	1633A	870773
320-124294-2	EFF-G-202508	Total/NA	Water	1633A	870773
MB 320-870773/1-A	Method Blank	Total/NA	Water	1633A	870773
LCS 320-870773/3-A	Lab Control Sample	Total/NA	Water	1633A	870773
LCSD 320-870773/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	870773
LLCS 320-870773/2-A	Lab Control Sample	Total/NA	Water	1633A	870773

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: INF-COMP-202508

Lab Sample ID: 320-124294-1

Date Collected: 08/11/25 23:59

Matrix: Water

Date Received: 08/13/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			149 mL	5.0 mL	870773	08/20/25 04:45	BMS	EET SAC
Total/NA	Analysis	1633A		1			870898	08/20/25 19:05	C1P	EET SAC

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633			152.1 mL	5.0 mL	870773	08/20/25 04:45	BMS	EET SAC
Total/NA	Analysis	1633A		1			870898	08/20/25 19:21	C1P	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-25

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-124294-1	INF-COMP-202508	Water	08/11/25 23:59	08/13/25 09:20	Wisconsin
320-124294-2	EFF-G-202508	Water	08/12/25 07:25	08/13/25 09:20	Wisconsin

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Environment Testing

Client Information		Sampler: <u>Jennifer Faust</u>		Lab PM: <u>Jessica McCommon</u>		Carrier Tracking No(s): <u>449335672813</u>		COC No:			
Client Contact: <u>Mike Ursin</u>		Phone:		E-Mail: <u>jess.com@madsewer.org</u>		State of Origin: <u>WI</u>		Page: <u>1</u> of <u>1</u>			
Company: <u>TRC 999 Fourier Dr Suite 101 Madison, WI 53717</u>				PWSID:		Job #:					
Address: <u>Madison Metro. Sewerage District</u>		Due Date Requested: <u>20 business days / contract</u>		Analysis Requested							
City: <u>1610 Moorland</u>		TAT Requested (days):									
State, Zip: <u>Madison, WI 53713</u>		Compliance Project: ☐ Yes ☒ No									
Phone: <u>608 222-1201</u>		PO #: <u>2400419</u>									
Email: <u>mursin@trccompanies.com</u>		WO #:									
Project Name: <u>PFAS Study</u>		Project #:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <u>PFAS</u>							
Site: <u>MMSD</u>		SSOW#:									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil/sediment, T=Tissue, A=Air)	Total Number of containers					
						Special Instructions/Note:					
						Barcode: 320-124294 Chain of Custody					
						Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					
						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months					
						Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>8/12/25 08:00</u>		Company: <u>MMSD</u>		Received by: <u>DSM</u>		Date/Time: <u>8/13/25 09:20</u>			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No: <u>1723614, 2723615, 2723618, 2723619</u>		Cooler Temperature(s) °C and Other Remarks: <u>1.5°C</u>							

September 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 9/29/2025 5:39:45 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-125031-1

Eurofins Sacramento

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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9/29/2025 5:39:45 PM

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-125031-1

Job ID: 320-125031-1

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Job Narrative 320-125031-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/10/2025 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C.

Comment

The requested TOPs analysis will be reported in a separate report.

PFAS

Method 1633_Final_WI: The following samples in preparation batch 320-877204 were discolored following extraction: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12) and BIO-B-202509 (320-125031-13).

Method 1633_Final_WI: The continuing calibration verification (CCV) associated with batch 320-877619 recovered above the upper control limit for Nonfluoro-3,6-dioxaheptanoic acid (NFDHA). The samples and method blank (MB) associated with this CCV were non-detects, the low level laboratory control sample/ laboratory control sample/ laboratory control sample duplicate (LLCS/LCS/LCSD) recoveries were in control for the associated target analytes; therefore, the data have been reported. The associated samples are impacted: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12), BIO-B-202509 (320-125031-13), (CCV 320-877619/13), (LCS 320-877204/3-A), (LCSD 320-877204/4-A), (LLCS 320-877204/2-A) and (MB 320-877204/1-A).

Method 1633_Final_WI: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12) and BIO-B-202509 (320-125031-13). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633_Final_WI: The following samples in preparation batch 320-877226 were observed to have a thin layer of sediment present in the bottom of the bottle and were discolored prior to extraction: INF-02-202509 (320-125031-1), INF-07-202509 (320-125031-2), INF-08-202509 (320-125031-3), INF-11-202509 (320-125031-4), INF-18-202509 (320-125031-5), INF-COMP-202509 (320-125031-6) and EFF-G-202509 (320-125031-7).

Method 1633_Final_WI: The following samples in preparation batch 320-877226 were discolored following extraction: INF-02-202509 (320-125031-1), INF-07-202509 (320-125031-2), INF-08-202509 (320-125031-3), INF-11-202509 (320-125031-4), INF-18-202509 (320-125031-5), INF-COMP-202509 (320-125031-6) and EFF-G-202509 (320-125031-7).

Method 1633_Final_WI: Per client request, the following with elevated total suspended solids (TSS) in the sample containers were fortified with Extracted Internal Standards (EIS), equilibrated, and centrifuged. Per the project directive, the centrifuged liquid was decanted back into the original containers: samples INF-02-202509 (320-125031-1), INF-07-202509 (320-125031-2), INF-08-202509 (320-125031-3), INF-11-202509 (320-125031-4), INF-18-202509 (320-125031-5) and INF-COMP-202509 (320-125031-6). The residual particulates were then rinsed with basic methanol. The basic methanol fractions from the rinse of the particulate matter were then decanted again, into the original containers then extracted using Solid Phase Extraction (SPE). Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Eurofins Sacramento

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-125031-1

Job ID: 320-125031-1 (Continued)

Eurofins Sacramento

Method 1633_Final_WI: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: INF-02-202509 (320-125031-1), INF-11-202509 (320-125031-4) and INF-COMP-202509 (320-125031-6).

Method 1633_Final_WI: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: INF-08-202509 (320-125031-3), INF-11-202509 (320-125031-4), INF-18-202509 (320-125031-5) and INF-COMP-202509 (320-125031-6). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633_Final_WI: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: INF-02-202509 (320-125031-1), INF-07-202509 (320-125031-2), INF-08-202509 (320-125031-3), INF-11-202509 (320-125031-4), INF-18-202509 (320-125031-5) and INF-COMP-202509 (320-125031-6). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-02-202509

Lab Sample ID: 320-125031-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.0		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.90	J	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.5		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.43	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.6	0.42	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.8	I	1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	0.41	J	3.1	0.32	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.27	J I	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.58	J	1.6	0.30	ng/L	1		1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.38	J	1.6	0.35	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.31	J	1.6	0.27	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.41	J	1.6	0.35	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.7	J	7.9	1.8	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.4	J	7.9	1.4	ng/L	1		1633A	Total/NA

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	10		1.7	0.23	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.2		1.7	0.29	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.5		1.7	0.33	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.62	J	1.7	0.38	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.46	J	1.7	0.37	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	11		1.7	0.45	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.7	0.21	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.4		1.7	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	1.2	J	3.4	0.34	ng/L	1		1633A	Total/NA
8:2 FTS	1.1	J	3.4	0.75	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.98	J	1.7	0.29	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.92	J	1.7	0.37	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.7	J	8.4	1.9	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	60		8.4	1.4	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.0	J	8.4	1.0	ng/L	1		1633A	Total/NA

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.4		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.72	J	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.2		1.6	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.42	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.38	J	1.6	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		1.6	0.42	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-08-202509 (Continued)

Lab Sample ID: 320-125031-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.8		1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	3.2		3.1	0.32	ng/L	1		1633A	Total/NA
8:2 FTS	1.1	J	3.1	0.70	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.58	J	1.6	0.27	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.95	J	1.6	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.9	J	7.8	1.8	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.9	J	7.8	1.3	ng/L	1		1633A	Total/NA

Client Sample ID: INF-11-202509

Lab Sample ID: 320-125031-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	2.3		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.64	J	1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.0		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.38	J	1.6	0.37	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.7		1.6	0.44	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.7		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.6	I	1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	0.52	J	3.2	0.33	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.50	J	1.6	0.28	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.0	J	1.6	0.36	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.1	J	8.1	1.4	ng/L	1		1633A	Total/NA

Client Sample ID: INF-18-202509

Lab Sample ID: 320-125031-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	6.3		1.6	0.22	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		1.6	0.28	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	8.1		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.50	J	1.6	0.37	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.6	0.44	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.0	J	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	17		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.3		1.6	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	2.6	J	3.3	0.33	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.66	J	1.6	0.29	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.67	J	1.6	0.36	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.9	J	8.2	1.9	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.2	J	8.2	1.4	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	4.3		1.5	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	5.1		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.5		1.5	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.7		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.50	J	1.5	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.8		1.5	0.42	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.2		1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	1.2	J	3.1	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.19	J I	1.5	0.17	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.62	J	1.5	0.27	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.93	J	1.5	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	2.2	J	7.7	1.8	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		7.7	1.3	ng/L	1		1633A	Total/NA

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	10		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	20		1.5	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	12		1.5	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6		1.5	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.1		1.5	0.30	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.54	J	1.5	0.35	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.56	J	1.5	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.3		1.5	0.41	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.58	J	1.5	0.16	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.5		1.5	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.1		1.5	0.21	ng/L	1		1633A	Total/NA
6:2 FTS	0.65	J	3.1	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.53	J	1.5	0.17	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.70	J	1.5	0.27	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	J	1.5	0.34	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.2	J	7.7	1.3	ng/L	1		1633A	Total/NA

Client Sample ID: EB01-202509

Lab Sample ID: 320-125031-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.33	J	1.5	0.21	ng/L	1		1633A	Total/NA

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.5		3.4	0.27	ug/Kg	1	☆	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	11		1.7	0.41	ug/Kg	1	☆	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	15		1.7	0.34	ug/Kg	1	☆	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-25-202509 (Continued)

Lab Sample ID: 320-125031-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.88	J	1.7	0.28	ug/Kg	1	✱		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	10		1.7	0.52	ug/Kg	1	✱		1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.4	J	1.7	0.25	ug/Kg	1	✱		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	4.8		1.7	0.20	ug/Kg	1	✱		1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.0	J	1.7	0.24	ug/Kg	1	✱		1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	2.8		1.7	0.23	ug/Kg	1	✱		1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.74	J	1.7	0.25	ug/Kg	1	✱		1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	1.2	J	1.7	0.49	ug/Kg	1	✱		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.95	J	1.7	0.17	ug/Kg	1	✱		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11		1.7	0.21	ug/Kg	1	✱		1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	1.2	J	1.7	0.18	ug/Kg	1	✱		1633A	Total/NA
8:2 FTS	1.4	J	3.4	0.37	ug/Kg	1	✱		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.3	J	1.7	0.53	ug/Kg	1	✱		1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.42	J	1.7	0.30	ug/Kg	1	✱		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24		1.7	0.14	ug/Kg	1	✱		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.7		1.7	0.14	ug/Kg	1	✱		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	18		8.4	0.74	ug/Kg	1	✱		1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.8	J	8.4	0.65	ug/Kg	1	✱		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		8.4	2.1	ug/Kg	1	✱		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	29		8.4	1.8	ug/Kg	1	✱		1633A	Total/NA

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.7		3.0	0.24	ug/Kg	1	✱		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	34		1.5	0.37	ug/Kg	1	✱		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	40		1.5	0.30	ug/Kg	1	✱		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.9		1.5	0.25	ug/Kg	1	✱		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	23		1.5	0.46	ug/Kg	1	✱		1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.8		1.5	0.22	ug/Kg	1	✱		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	8.3		1.5	0.18	ug/Kg	1	✱		1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.2	J	1.5	0.21	ug/Kg	1	✱		1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	3.9		1.5	0.20	ug/Kg	1	✱		1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.71	J	1.5	0.22	ug/Kg	1	✱		1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	1.2	J	1.5	0.43	ug/Kg	1	✱		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		1.5	0.50	ug/Kg	1	✱		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.5	0.15	ug/Kg	1	✱		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11		1.5	0.19	ug/Kg	1	✱		1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	2.5		1.5	0.16	ug/Kg	1	✱		1633A	Total/NA
6:2 FTS	1.4	J	3.0	0.40	ug/Kg	1	✱		1633A	Total/NA
8:2 FTS	0.90	J	3.0	0.33	ug/Kg	1	✱		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.2	J	1.5	0.47	ug/Kg	1	✱		1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.34	J	1.5	0.16	ug/Kg	1	✱		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	28		1.5	0.12	ug/Kg	1	✱		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-24-202509 (Continued)

Lab Sample ID: 320-125031-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	7.9		1.5	0.13	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	17		7.5	0.66	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NETFOSE)	4.8	J	7.5	0.58	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42		7.5	1.8	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	21		7.5	1.6	ug/Kg	1	✱	1633A	Total/NA

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

No Detections.

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.7		1.8	0.15	ug/Kg	1	✱	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	33		0.92	0.22	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	46		0.92	0.18	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	4.3		0.92	0.15	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	45		0.92	0.28	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	2.4		0.92	0.13	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	17		0.92	0.11	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.3		0.92	0.13	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	4.8		0.92	0.12	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.87	J	0.92	0.13	ug/Kg	1	✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	1.6		0.92	0.27	ug/Kg	1	✱	1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.0		0.92	0.31	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4		0.92	0.092	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	13		0.92	0.11	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	1.9		0.92	0.096	ug/Kg	1	✱	1633A	Total/NA
6:2 FTS	3.4		1.8	0.25	ug/Kg	1	✱	1633A	Total/NA
8:2 FTS	1.6	J	1.8	0.20	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.7		0.92	0.29	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.25	J	0.92	0.17	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NETFOSA)	0.22	J	0.92	0.096	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	32		0.92	0.073	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	9.1		0.92	0.078	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	11		4.6	0.40	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NETFOSE)	4.6		4.6	0.35	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	37		4.6	1.1	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	18		4.6	0.98	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	1.7	J	6.8	1.4	ug/Kg	1	✳		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	2.0	J	6.8	0.82	ug/Kg	1	✳		1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	1.6	J	6.8	0.92	ug/Kg	1	✳		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.0	J	6.8	0.68	ug/Kg	1	✳		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.5		6.8	0.85	ug/Kg	1	✳		1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.91	J	6.8	0.71	ug/Kg	1	✳		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		6.8	0.54	ug/Kg	1	✳		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7	J	6.8	0.58	ug/Kg	1	✳		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12	J	34	3.0	ug/Kg	1	✳		1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.1	J	34	2.6	ug/Kg	1	✳		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		34	8.3	ug/Kg	1	✳		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11	J	34	7.3	ug/Kg	1	✳		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-02-202509

Lab Sample ID: 320-125031-1

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorohexanoic acid (PFHxA)	3.0		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoroheptanoic acid (PFHpA)	0.90	J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorooctanoic acid (PFOA)	2.5		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorononanoic acid (PFNA)	0.43	J	1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.6	0.42	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorooctanesulfonic acid (PFOS)	4.8	I	1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		09/24/25 06:47	09/26/25 10:08	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 10:08	1
6:2 FTS	0.41	J	3.1	0.32	ng/L		09/24/25 06:47	09/26/25 10:08	1
8:2 FTS	ND		3.1	0.70	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorooctanesulfonamide (PFOSA)	0.27	J I	1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.58	J	1.6	0.30	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.38	J	1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.31	J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.41	J	1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.7	J	7.9	1.8	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		09/24/25 06:47	09/26/25 10:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		09/24/25 06:47	09/26/25 10:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:08	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		09/24/25 06:47	09/26/25 10:08	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:08	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		09/24/25 06:47	09/26/25 10:08	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-02-202509

Lab Sample ID: 320-125031-1

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		09/24/25 06:47	09/26/25 10:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.4	J	7.9	1.4	ng/L		09/24/25 06:47	09/26/25 10:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.97	ng/L		09/24/25 06:47	09/26/25 10:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	1.02	*5-	5 - 130				09/24/25 06:47	09/26/25 10:08	1
13C5 PFPeA	21.4	*5-	40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C5 PFHxA	84.2		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C4 PFHpA	81.1		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C8 PFOA	80.2		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C9 PFNA	63.0		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C6 PFDA	72.6		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C7 PFUnA	65.3		30 - 130				09/24/25 06:47	09/26/25 10:08	1
13C2 PFDoA	54.0		10 - 130				09/24/25 06:47	09/26/25 10:08	1
13C2 PFTeDA	57.9		10 - 130				09/24/25 06:47	09/26/25 10:08	1
13C3 PFBS	76.4		40 - 135				09/24/25 06:47	09/26/25 10:08	1
13C3 PFHxS	73.8		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C8 PFOS	79.5		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C8 FOSA	63.0		40 - 130				09/24/25 06:47	09/26/25 10:08	1
D3-NMeFOSAA	46.0		40 - 170				09/24/25 06:47	09/26/25 10:08	1
D5-NEtFOSAA	56.9		25 - 135				09/24/25 06:47	09/26/25 10:08	1
13C2 4:2 FTS	193		40 - 200				09/24/25 06:47	09/26/25 10:08	1
13C2 6:2 FTS	184		40 - 200				09/24/25 06:47	09/26/25 10:08	1
13C2 8:2 FTS	128		40 - 300				09/24/25 06:47	09/26/25 10:08	1
13C3 HFPO-DA	98.9		40 - 130				09/24/25 06:47	09/26/25 10:08	1
D7-NMeFOSE	38.9		10 - 130				09/24/25 06:47	09/26/25 10:08	1
D9-NEtFOSE	72.0		10 - 130				09/24/25 06:47	09/26/25 10:08	1
D5-NEtFOSA	67.3		10 - 130				09/24/25 06:47	09/26/25 10:08	1
D3-NMeFOSA	69.5		10 - 130				09/24/25 06:47	09/26/25 10:08	1

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.4	0.31	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorohexanoic acid (PFHxA)	10		1.7	0.23	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoroheptanoic acid (PFHpA)	2.2		1.7	0.29	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorooctanoic acid (PFOA)	5.5		1.7	0.33	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorononanoic acid (PFNA)	0.62	J	1.7	0.38	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorodecanoic acid (PFDA)	0.46	J	1.7	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.48	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		09/24/25 06:47	09/26/25 10:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	11		1.7	0.45	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.7	0.21	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorooctanesulfonic acid (PFOS)	5.4		1.7	0.23	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		09/24/25 06:47	09/26/25 10:25	1
4:2 FTS	ND		3.4	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
6:2 FTS	1.2	J	3.4	0.34	ng/L		09/24/25 06:47	09/26/25 10:25	1
8:2 FTS	1.1	J	3.4	0.75	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.98	J	1.7	0.29	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.92	J	1.7	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.7	J	8.4	1.9	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.4	2.0	ng/L		09/24/25 06:47	09/26/25 10:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		09/24/25 06:47	09/26/25 10:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.16	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		09/24/25 06:47	09/26/25 10:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.60	ng/L		09/24/25 06:47	09/26/25 10:25	1
9CI-PF3ONS	ND		1.7	0.49	ng/L		09/24/25 06:47	09/26/25 10:25	1
11CI-PF3OUdS	ND		1.7	0.25	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		09/24/25 06:47	09/26/25 10:25	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.60	ng/L		09/24/25 06:47	09/26/25 10:25	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	60		8.4	1.4	ng/L		09/24/25 06:47	09/26/25 10:25	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.0	J	8.4	1.0	ng/L		09/24/25 06:47	09/26/25 10:25	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	1.12	*5-	5 - 130				09/24/25 06:47	09/26/25 10:25	1
13C5 PFPeA	23.8	*5-	40 - 130				09/24/25 06:47	09/26/25 10:25	1
13C5 PFHxA	79.2		40 - 130				09/24/25 06:47	09/26/25 10:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	83.8		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C8 PFOA	83.4		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C9 PFNA	72.6		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C6 PFDA	84.3		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C7 PFUnA	73.4		30 - 130	09/24/25 06:47	09/26/25 10:25	1
13C2 PFDoA	63.1		10 - 130	09/24/25 06:47	09/26/25 10:25	1
13C2 PFTeDA	65.8		10 - 130	09/24/25 06:47	09/26/25 10:25	1
13C3 PFBS	74.3		40 - 135	09/24/25 06:47	09/26/25 10:25	1
13C3 PFHxS	86.7		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C8 PFOS	87.1		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C8 FOSA	68.4		40 - 130	09/24/25 06:47	09/26/25 10:25	1
D3-NMeFOSAA	50.1		40 - 170	09/24/25 06:47	09/26/25 10:25	1
D5-NEtFOSAA	68.7		25 - 135	09/24/25 06:47	09/26/25 10:25	1
13C2 4:2 FTS	167		40 - 200	09/24/25 06:47	09/26/25 10:25	1
13C2 6:2 FTS	161		40 - 200	09/24/25 06:47	09/26/25 10:25	1
13C2 8:2 FTS	144		40 - 300	09/24/25 06:47	09/26/25 10:25	1
13C3 HFPO-DA	89.2		40 - 130	09/24/25 06:47	09/26/25 10:25	1
D7-NMeFOSE	46.9		10 - 130	09/24/25 06:47	09/26/25 10:25	1
D9-NEtFOSE	75.1		10 - 130	09/24/25 06:47	09/26/25 10:25	1
D5-NEtFOSA	74.6		10 - 130	09/24/25 06:47	09/26/25 10:25	1
D3-NMeFOSA	77.3		10 - 130	09/24/25 06:47	09/26/25 10:25	1

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorohexanoic acid (PFHxA)	3.4		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoroheptanoic acid (PFHpA)	0.72 J		1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorooctanoic acid (PFOA)	2.2		1.6	0.30	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorononanoic acid (PFNA)	0.42 J		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorodecanoic acid (PFDA)	0.38 J		1.6	0.34	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorobutanesulfonic acid (PFBS)	2.1		1.6	0.42	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorooctanesulfonic acid (PFOS)	2.8		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:41	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		09/24/25 06:47	09/26/25 10:41	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 10:41	1
6:2 FTS	3.2		3.1	0.32	ng/L		09/24/25 06:47	09/26/25 10:41	1
8:2 FTS	1.1	J	3.1	0.70	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.58	J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.95	J	1.6	0.34	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	1.9	J	7.8	1.8	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		09/24/25 06:47	09/26/25 10:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 10:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		09/24/25 06:47	09/26/25 10:41	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:41	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:41	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		09/24/25 06:47	09/26/25 10:41	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.9	J	7.8	1.3	ng/L		09/24/25 06:47	09/26/25 10:41	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		09/24/25 06:47	09/26/25 10:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	1.61	*5-	5 - 130	09/24/25 06:47	09/26/25 10:41	1
13C5 PFPeA	36.4	*5-	40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C5 PFHxA	101		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C4 PFHpA	119		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C8 PFOA	98.2		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C9 PFNA	84.9		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C6 PFDA	88.3		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C7 PFUnA	88.4		30 - 130	09/24/25 06:47	09/26/25 10:41	1
13C2 PFDoA	70.6		10 - 130	09/24/25 06:47	09/26/25 10:41	1
13C2 PFTeDA	76.2		10 - 130	09/24/25 06:47	09/26/25 10:41	1
13C3 PFBS	85.2		40 - 135	09/24/25 06:47	09/26/25 10:41	1
13C3 PFHxS	94.9		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C8 PFOS	103		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C8 FOSA	81.1		40 - 130	09/24/25 06:47	09/26/25 10:41	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	52.6		40 - 170	09/24/25 06:47	09/26/25 10:41	1
D5-NEtFOSAA	69.5		25 - 135	09/24/25 06:47	09/26/25 10:41	1
13C2 4:2 FTS	208	*5+	40 - 200	09/24/25 06:47	09/26/25 10:41	1
13C2 6:2 FTS	195		40 - 200	09/24/25 06:47	09/26/25 10:41	1
13C2 8:2 FTS	168		40 - 300	09/24/25 06:47	09/26/25 10:41	1
13C3 HFPO-DA	119		40 - 130	09/24/25 06:47	09/26/25 10:41	1
D7-NMeFOSE	55.8		10 - 130	09/24/25 06:47	09/26/25 10:41	1
D9-NEtFOSE	88.9		10 - 130	09/24/25 06:47	09/26/25 10:41	1
D5-NEtFOSA	86.7		10 - 130	09/24/25 06:47	09/26/25 10:41	1
D3-NMeFOSA	89.8		10 - 130	09/24/25 06:47	09/26/25 10:41	1

Client Sample ID: INF-11-202509

Lab Sample ID: 320-125031-4

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.2	0.30	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorohexanoic acid (PFHxA)	2.3		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoroheptanoic acid (PFHpA)	0.64	J	1.6	0.28	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorooctanoic acid (PFOA)	2.0		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorononanoic acid (PFNA)	0.38	J	1.6	0.37	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.65	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorobutanesulfonic acid (PFBS)	1.7		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorohexanesulfonic acid (PFHxS)	1.7		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorooctanesulfonic acid (PFOS)	2.6	I	1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 10:58	1
4:2 FTS	ND		3.2	0.35	ng/L		09/24/25 06:47	09/26/25 10:58	1
6:2 FTS	0.52	J	3.2	0.33	ng/L		09/24/25 06:47	09/26/25 10:58	1
8:2 FTS	ND		3.2	0.72	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.50	J	1.6	0.28	ng/L		09/24/25 06:47	09/26/25 10:58	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-11-202509

Lab Sample ID: 320-125031-4

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.0	J	1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.1	1.8	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.1	2.0	ng/L		09/24/25 06:47	09/26/25 10:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		09/24/25 06:47	09/26/25 10:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 10:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.58	ng/L		09/24/25 06:47	09/26/25 10:58	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 10:58	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.58	ng/L		09/24/25 06:47	09/26/25 10:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.1	J	8.1	1.4	ng/L		09/24/25 06:47	09/26/25 10:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	1.0	ng/L		09/24/25 06:47	09/26/25 10:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	0.973	*5-	5 - 130	09/24/25 06:47	09/26/25 10:58	1
13C5 PFPeA	11.4	*5-	40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C5 PFHxA	94.8		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C4 PFHpA	101		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C8 PFOA	97.1		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C9 PFNA	91.0		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C6 PFDA	99.6		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C7 PFUnA	78.6		30 - 130	09/24/25 06:47	09/26/25 10:58	1
13C2 PFDoA	60.7		10 - 130	09/24/25 06:47	09/26/25 10:58	1
13C2 PFTeDA	71.6		10 - 130	09/24/25 06:47	09/26/25 10:58	1
13C3 PFBS	81.5		40 - 135	09/24/25 06:47	09/26/25 10:58	1
13C3 PFHxS	92.8		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C8 PFOS	95.5		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C8 FOSA	71.5		40 - 130	09/24/25 06:47	09/26/25 10:58	1
D3-NMeFOSAA	43.8		40 - 170	09/24/25 06:47	09/26/25 10:58	1
D5-NEtFOSAA	54.6		25 - 135	09/24/25 06:47	09/26/25 10:58	1
13C2 4:2 FTS	225	*5+	40 - 200	09/24/25 06:47	09/26/25 10:58	1
13C2 6:2 FTS	212	*5+	40 - 200	09/24/25 06:47	09/26/25 10:58	1
13C2 8:2 FTS	185		40 - 300	09/24/25 06:47	09/26/25 10:58	1
13C3 HFPO-DA	119		40 - 130	09/24/25 06:47	09/26/25 10:58	1
D7-NMeFOSE	43.7		10 - 130	09/24/25 06:47	09/26/25 10:58	1
D9-NEtFOSE	89.1		10 - 130	09/24/25 06:47	09/26/25 10:58	1
D5-NEtFOSA	76.3		10 - 130	09/24/25 06:47	09/26/25 10:58	1
D3-NMeFOSA	80.1		10 - 130	09/24/25 06:47	09/26/25 10:58	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-18-202509

Lab Sample ID: 320-125031-5

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.3	0.30	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorohexanoic acid (PFHxA)	6.3		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoroheptanoic acid (PFHpA)	2.0		1.6	0.28	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorooctanoic acid (PFOA)	8.1		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorononanoic acid (PFNA)	0.50	J	1.6	0.37	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorobutanesulfonic acid (PFBS)	3.7		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoropentanesulfonic acid (PFPeS)	1.0	J	1.6	0.17	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorohexanesulfonic acid (PFHxS)	17		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorooctanesulfonic acid (PFOS)	7.3		1.6	0.23	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 11:14	1
4:2 FTS	ND		3.3	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
6:2 FTS	2.6	J	3.3	0.33	ng/L		09/24/25 06:47	09/26/25 11:14	1
8:2 FTS	ND		3.3	0.73	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.66	J	1.6	0.29	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.67	J	1.6	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.9	J	8.2	1.9	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		09/24/25 06:47	09/26/25 11:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		09/24/25 06:47	09/26/25 11:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 11:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		09/24/25 06:47	09/26/25 11:14	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 11:14	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 11:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-18-202509

Lab Sample ID: 320-125031-5

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 11:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		09/24/25 06:47	09/26/25 11:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.2	J	8.2	1.4	ng/L		09/24/25 06:47	09/26/25 11:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		09/24/25 06:47	09/26/25 11:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	0.977	*5-	5 - 130				09/24/25 06:47	09/26/25 11:14	1
13C5 PFPeA	11.2	*5-	40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C5 PFHxA	103		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C4 PFHpA	102		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C8 PFOA	97.5		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C9 PFNA	85.2		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C6 PFDA	90.1		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C7 PFUnA	83.6		30 - 130				09/24/25 06:47	09/26/25 11:14	1
13C2 PFDoA	67.6		10 - 130				09/24/25 06:47	09/26/25 11:14	1
13C2 PFTeDA	54.3		10 - 130				09/24/25 06:47	09/26/25 11:14	1
13C3 PFBS	88.6		40 - 135				09/24/25 06:47	09/26/25 11:14	1
13C3 PFHxS	86.3		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C8 PFOS	96.4		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C8 FOSA	88.4		40 - 130				09/24/25 06:47	09/26/25 11:14	1
D3-NMeFOSAA	58.0		40 - 170				09/24/25 06:47	09/26/25 11:14	1
D5-NEtFOSAA	68.3		25 - 135				09/24/25 06:47	09/26/25 11:14	1
13C2 4:2 FTS	250	*5+	40 - 200				09/24/25 06:47	09/26/25 11:14	1
13C2 6:2 FTS	205	*5+	40 - 200				09/24/25 06:47	09/26/25 11:14	1
13C2 8:2 FTS	183		40 - 300				09/24/25 06:47	09/26/25 11:14	1
13C3 HFPO-DA	115		40 - 130				09/24/25 06:47	09/26/25 11:14	1
D7-NMeFOSE	34.9		10 - 130				09/24/25 06:47	09/26/25 11:14	1
D9-NEtFOSE	47.3		10 - 130				09/24/25 06:47	09/26/25 11:14	1
D5-NEtFOSA	67.2		10 - 130				09/24/25 06:47	09/26/25 11:14	1
D3-NMeFOSA	77.9		10 - 130				09/24/25 06:47	09/26/25 11:14	1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoropentanoic acid (PFPeA)	4.3		1.5	0.18	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorohexanoic acid (PFHxA)	5.1		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoroheptanoic acid (PFHpA)	1.5		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorooctanoic acid (PFOA)	4.7		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorononanoic acid (PFNA)	0.50	J	1.5	0.35	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.43	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		09/24/25 06:47	09/26/25 11:30	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	3.8		1.5	0.42	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.14	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorooctanesulfonic acid (PFOS)	5.2		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 11:30	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
6:2 FTS	1.2	J	3.1	0.31	ng/L		09/24/25 06:47	09/26/25 11:30	1
8:2 FTS	ND		3.1	0.69	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorooctanesulfonamide (PFOSA)	0.19	J I	1.5	0.17	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.62	J	1.5	0.27	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.93	J	1.5	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.2	J	7.7	1.8	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		09/24/25 06:47	09/26/25 11:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 11:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		09/24/25 06:47	09/26/25 11:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.56	ng/L		09/24/25 06:47	09/26/25 11:30	1
9Cl-PF3ONS	ND		1.5	0.45	ng/L		09/24/25 06:47	09/26/25 11:30	1
11Cl-PF3OUdS	ND		1.5	0.23	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 11:30	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		09/24/25 06:47	09/26/25 11:30	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		7.7	1.3	ng/L		09/24/25 06:47	09/26/25 11:30	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.96	ng/L		09/24/25 06:47	09/26/25 11:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	2.27	*5-	5 - 130	09/24/25 06:47	09/26/25 11:30	1
13C5 PFPeA	38.1	*5-	40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C5 PFHxA	103		40 - 130	09/24/25 06:47	09/26/25 11:30	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	117		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C8 PFOA	96.9		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C9 PFNA	87.3		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C6 PFDA	96.5		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C7 PFUnA	86.2		30 - 130	09/24/25 06:47	09/26/25 11:30	1
13C2 PFDoA	70.8		10 - 130	09/24/25 06:47	09/26/25 11:30	1
13C2 PFTeDA	70.6		10 - 130	09/24/25 06:47	09/26/25 11:30	1
13C3 PFBS	89.4		40 - 135	09/24/25 06:47	09/26/25 11:30	1
13C3 PFHxS	90.1		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C8 PFOS	87.9		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C8 FOSA	79.3		40 - 130	09/24/25 06:47	09/26/25 11:30	1
D3-NMeFOSAA	51.1		40 - 170	09/24/25 06:47	09/26/25 11:30	1
D5-NEtFOSAA	66.1		25 - 135	09/24/25 06:47	09/26/25 11:30	1
13C2 4:2 FTS	262	*5+	40 - 200	09/24/25 06:47	09/26/25 11:30	1
13C2 6:2 FTS	198		40 - 200	09/24/25 06:47	09/26/25 11:30	1
13C2 8:2 FTS	179		40 - 300	09/24/25 06:47	09/26/25 11:30	1
13C3 HFPO-DA	124		40 - 130	09/24/25 06:47	09/26/25 11:30	1
D7-NMeFOSE	45.9		10 - 130	09/24/25 06:47	09/26/25 11:30	1
D9-NEtFOSE	68.2		10 - 130	09/24/25 06:47	09/26/25 11:30	1
D5-NEtFOSA	71.2		10 - 130	09/24/25 06:47	09/26/25 11:30	1
D3-NMeFOSA	74.4		10 - 130	09/24/25 06:47	09/26/25 11:30	1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoropentanoic acid (PFPeA)	20		1.5	0.18	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorohexanoic acid (PFHxA)	12		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoroheptanoic acid (PFHpA)	1.6		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorooctanoic acid (PFOA)	7.1		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorononanoic acid (PFNA)	0.54 J		1.5	0.35	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorodecanoic acid (PFDA)	0.56 J		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorobutanesulfonic acid (PFBS)	4.3		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoropentanesulfonic acid (PFPeS)	0.58 J		1.5	0.16	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorohexanesulfonic acid (PFHxS)	7.5		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorooctanesulfonic acid (PFOS)	6.1		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:20	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:20	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
6:2 FTS	0.65	J	3.1	0.31	ng/L		09/24/25 06:47	09/26/25 12:20	1
8:2 FTS	ND		3.1	0.69	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorooctanesulfonamide (PFOSA)	0.53	J	1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.70	J	1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	J	1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.7	1.7	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		09/24/25 06:47	09/26/25 12:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 12:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		09/24/25 06:47	09/26/25 12:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		09/24/25 06:47	09/26/25 12:20	1
9CI-PF3ONS	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 12:20	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:20	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		09/24/25 06:47	09/26/25 12:20	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.2	J	7.7	1.3	ng/L		09/24/25 06:47	09/26/25 12:20	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.95	ng/L		09/24/25 06:47	09/26/25 12:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79.7		5 - 130	09/24/25 06:47	09/26/25 12:20	1
13C5 PFPeA	98.0		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C5 PFHxA	102		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C4 PFHpA	114		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C8 PFOA	91.4		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C9 PFNA	81.5		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C6 PFDA	93.3		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C7 PFUnA	93.7		30 - 130	09/24/25 06:47	09/26/25 12:20	1
13C2 PFDoA	77.7		10 - 130	09/24/25 06:47	09/26/25 12:20	1
13C2 PFTeDA	51.7		10 - 130	09/24/25 06:47	09/26/25 12:20	1
13C3 PFBS	97.7		40 - 135	09/24/25 06:47	09/26/25 12:20	1
13C3 PFHxS	90.7		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C8 PFOS	98.2		40 - 130	09/24/25 06:47	09/26/25 12:20	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	82.6		40 - 130	09/24/25 06:47	09/26/25 12:20	1
D3-NMeFOSAA	84.1		40 - 170	09/24/25 06:47	09/26/25 12:20	1
D5-NEtFOSAA	81.5		25 - 135	09/24/25 06:47	09/26/25 12:20	1
13C2 4:2 FTS	186		40 - 200	09/24/25 06:47	09/26/25 12:20	1
13C2 6:2 FTS	86.0		40 - 200	09/24/25 06:47	09/26/25 12:20	1
13C2 8:2 FTS	85.5		40 - 300	09/24/25 06:47	09/26/25 12:20	1
13C3 HFPO-DA	115		40 - 130	09/24/25 06:47	09/26/25 12:20	1
D7-NMeFOSE	66.1		10 - 130	09/24/25 06:47	09/26/25 12:20	1
D9-NEtFOSE	64.1		10 - 130	09/24/25 06:47	09/26/25 12:20	1
D5-NEtFOSA	65.2		10 - 130	09/24/25 06:47	09/26/25 12:20	1
D3-NMeFOSA	66.8		10 - 130	09/24/25 06:47	09/26/25 12:20	1

Client Sample ID: EB01-202509

Lab Sample ID: 320-125031-8

Date Collected: 09/08/25 13:40

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.18	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorohexanoic acid (PFHxA)	0.33	J	1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoroheptanoic acid (PFHpA)	ND		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorooctanoic acid (PFOA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorononanoic acid (PFNA)	ND		1.5	0.35	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.43	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:36	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1
6:2 FTS	ND		3.1	0.31	ng/L		09/24/25 06:47	09/26/25 12:36	1
8:2 FTS	ND		3.1	0.69	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB01-202509

Lab Sample ID: 320-125031-8

Date Collected: 09/08/25 13:40

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.7	1.8	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		09/24/25 06:47	09/26/25 12:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 12:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		09/24/25 06:47	09/26/25 12:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		09/24/25 06:47	09/26/25 12:36	1
9CI-PF3ONS	ND		1.5	0.45	ng/L		09/24/25 06:47	09/26/25 12:36	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:36	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		09/24/25 06:47	09/26/25 12:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.7	1.3	ng/L		09/24/25 06:47	09/26/25 12:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.95	ng/L		09/24/25 06:47	09/26/25 12:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	87.8		5 - 130	09/24/25 06:47	09/26/25 12:36	1
13C5 PFPeA	102		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C5 PFHxA	114		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C4 PFHpA	102		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C8 PFOA	99.8		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C9 PFNA	82.9		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C6 PFDA	104		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C7 PFUnA	107		30 - 130	09/24/25 06:47	09/26/25 12:36	1
13C2 PFDoA	92.6		10 - 130	09/24/25 06:47	09/26/25 12:36	1
13C2 PFTeDA	76.9		10 - 130	09/24/25 06:47	09/26/25 12:36	1
13C3 PFBS	93.9		40 - 135	09/24/25 06:47	09/26/25 12:36	1
13C3 PFHxS	92.4		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C8 PFOS	98.1		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C8 FOSA	87.6		40 - 130	09/24/25 06:47	09/26/25 12:36	1
D3-NMeFOSAA	92.0		40 - 170	09/24/25 06:47	09/26/25 12:36	1
D5-NEtFOSAA	86.1		25 - 135	09/24/25 06:47	09/26/25 12:36	1
13C2 4:2 FTS	111		40 - 200	09/24/25 06:47	09/26/25 12:36	1
13C2 6:2 FTS	98.3		40 - 200	09/24/25 06:47	09/26/25 12:36	1
13C2 8:2 FTS	83.3		40 - 300	09/24/25 06:47	09/26/25 12:36	1
13C3 HFPO-DA	106		40 - 130	09/24/25 06:47	09/26/25 12:36	1
D7-NMeFOSE	78.1		10 - 130	09/24/25 06:47	09/26/25 12:36	1
D9-NEtFOSE	82.9		10 - 130	09/24/25 06:47	09/26/25 12:36	1
D5-NEtFOSA	72.4		10 - 130	09/24/25 06:47	09/26/25 12:36	1
D3-NMeFOSA	76.4		10 - 130	09/24/25 06:47	09/26/25 12:36	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.5		3.4	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoropentanoic acid (PFPeA)	11		1.7	0.41	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorohexanoic acid (PFHxA)	15		1.7	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoroheptanoic acid (PFHpA)	0.88	J	1.7	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorooctanoic acid (PFOA)	10		1.7	0.52	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorononanoic acid (PFNA)	1.4	J	1.7	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorodecanoic acid (PFDA)	4.8		1.7	0.20	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoroundecanoic acid (PFUnA)	1.0	J	1.7	0.24	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorododecanoic acid (PFDoA)	2.8		1.7	0.23	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorotridecanoic acid (PFTTrDA)	0.74	J	1.7	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorotetradecanoic acid (PFTeDA)	1.2	J	1.7	0.49	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.57	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.95	J	1.7	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.14	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorooctanesulfonic acid (PFOS)	11		1.7	0.21	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorodecanesulfonic acid (PFDS)	1.2	J	1.7	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.31	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
4:2 FTS	ND		3.4	0.55	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
6:2 FTS	ND		3.4	0.46	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
8:2 FTS	1.4	J	3.4	0.37	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorooctanesulfonamide (PFOSA)	1.3	J	1.7	0.53	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.42	J	1.7	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24		1.7	0.14	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.7		1.7	0.14	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	18		8.4	0.74	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.8	J	8.4	0.65	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.7	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.21	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.52	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
9CI-PF3ONS	ND		1.7	0.32	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
11CI-PF3OUdS	ND		1.7	0.63	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.32	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.63	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		8.4	2.1	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	29		8.4	1.8	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	73.1		8 - 130	09/23/25 20:55	09/26/25 00:19	1
13C5 PFPeA	76.7		35 - 130	09/23/25 20:55	09/26/25 00:19	1
13C5 PFHxA	89.0		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C4 PFHpA	82.8		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C8 PFOA	82.6		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C9 PFNA	84.2		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C6 PFDA	85.3		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C7 PFUnA	71.5		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C2 PFDoA	45.8		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C2 PFTeDA	55.6		20 - 130	09/23/25 20:55	09/26/25 00:19	1
13C3 PFBS	79.5		40 - 135	09/23/25 20:55	09/26/25 00:19	1
13C3 PFHxS	82.3		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C8 PFOS	98.3		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C8 FOSA	52.8		40 - 130	09/23/25 20:55	09/26/25 00:19	1
D3-NMeFOSAA	57.4		40 - 135	09/23/25 20:55	09/26/25 00:19	1
D5-NEtFOSAA	80.1		40 - 150	09/23/25 20:55	09/26/25 00:19	1
13C2 4:2 FTS	199	*5+	40 - 165	09/23/25 20:55	09/26/25 00:19	1
13C2 6:2 FTS	150		40 - 215	09/23/25 20:55	09/26/25 00:19	1
13C2 8:2 FTS	184		40 - 275	09/23/25 20:55	09/26/25 00:19	1
13C3 HFPO-DA	90.7		40 - 130	09/23/25 20:55	09/26/25 00:19	1
D7-NMeFOSE	63.2		20 - 130	09/23/25 20:55	09/26/25 00:19	1
D9-NEtFOSE	62.1		15 - 130	09/23/25 20:55	09/26/25 00:19	1
D5-NEtFOSA	63.5		10 - 130	09/23/25 20:55	09/26/25 00:19	1
D3-NMeFOSA	57.5		10 - 130	09/23/25 20:55	09/26/25 00:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	77		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	23		0.10	0.10	%			09/11/25 14:11	1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.7		3.0	0.24	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
Perfluoropentanoic acid (PFPeA)	34		1.5	0.37	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	40		1.5	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoroheptanoic acid (PFHpA)	2.9		1.5	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorooctanoic acid (PFOA)	23		1.5	0.46	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorononanoic acid (PFNA)	1.8		1.5	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorodecanoic acid (PFDA)	8.3		1.5	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoroundecanoic acid (PFUnA)	1.2	J	1.5	0.21	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorododecanoic acid (PFDoA)	3.9		1.5	0.20	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorotridecanoic acid (PFTTrDA)	0.71	J	1.5	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorotetradecanoic acid (PFTeDA)	1.2	J	1.5	0.43	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.5	0.50	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.5	0.15	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.12	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorooctanesulfonic acid (PFOS)	11		1.5	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorodecanesulfonic acid (PFDS)	2.5		1.5	0.16	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
4:2 FTS	ND		3.0	0.49	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
6:2 FTS	1.4	J	3.0	0.40	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
8:2 FTS	0.90	J	3.0	0.33	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorooctanesulfonamide (PFOSA)	1.2	J	1.5	0.47	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.34	J	1.5	0.16	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	28		1.5	0.12	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.9		1.5	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	17		7.5	0.66	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.8	J	7.5	0.58	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.16	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.46	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		1.5	0.28	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
11CI-PF3OUdS	ND		1.5	0.56	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.28	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.56	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42		7.5	1.8	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	21		7.5	1.6	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	82.1		8 - 130	09/23/25 20:55	09/26/25 00:35	1
13C5 PFPeA	81.9		35 - 130	09/23/25 20:55	09/26/25 00:35	1
13C5 PFHxA	90.3		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C4 PFHpA	91.4		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C8 PFOA	90.2		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C9 PFNA	83.2		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C6 PFDA	91.1		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C7 PFUnA	79.7		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C2 PFDoA	58.3		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C2 PFTeDA	73.4		20 - 130	09/23/25 20:55	09/26/25 00:35	1
13C3 PFBS	81.6		40 - 135	09/23/25 20:55	09/26/25 00:35	1
13C3 PFHxS	85.3		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C8 PFOS	88.4		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C8 FOSA	60.6		40 - 130	09/23/25 20:55	09/26/25 00:35	1
D3-NMeFOSAA	59.0		40 - 135	09/23/25 20:55	09/26/25 00:35	1
D5-NEtFOSAA	81.7		40 - 150	09/23/25 20:55	09/26/25 00:35	1
13C2 4:2 FTS	211	*5+	40 - 165	09/23/25 20:55	09/26/25 00:35	1
13C2 6:2 FTS	133		40 - 215	09/23/25 20:55	09/26/25 00:35	1
13C2 8:2 FTS	146		40 - 275	09/23/25 20:55	09/26/25 00:35	1
13C3 HFPO-DA	95.4		40 - 130	09/23/25 20:55	09/26/25 00:35	1
D7-NMeFOSE	74.6		20 - 130	09/23/25 20:55	09/26/25 00:35	1
D9-NEtFOSE	82.4		15 - 130	09/23/25 20:55	09/26/25 00:35	1
D5-NEtFOSA	74.9		10 - 130	09/23/25 20:55	09/26/25 00:35	1
D3-NMeFOSA	64.8		10 - 130	09/23/25 20:55	09/26/25 00:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	76		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	24		0.10	0.10	%			09/11/25 14:11	1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.2	0.30	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		09/24/25 06:47	09/26/25 12:52	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.46	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		09/24/25 06:47	09/26/25 12:52	1
4:2 FTS	ND		3.2	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
6:2 FTS	ND		3.2	0.32	ng/L		09/24/25 06:47	09/26/25 12:52	1
8:2 FTS	ND		3.2	0.71	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.28	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.0	1.8	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.0	1.9	ng/L		09/24/25 06:47	09/26/25 12:52	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		09/24/25 06:47	09/26/25 12:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 12:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		09/24/25 06:47	09/26/25 12:52	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		09/24/25 06:47	09/26/25 12:52	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 12:52	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		09/24/25 06:47	09/26/25 12:52	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.0	1.4	ng/L		09/24/25 06:47	09/26/25 12:52	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.0	0.99	ng/L		09/24/25 06:47	09/26/25 12:52	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	89.8		5 - 130	09/24/25 06:47	09/26/25 12:52	1
13C5 PFPeA	91.0		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C5 PFHxA	94.5		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C4 PFHpA	96.5		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C8 PFOA	92.0		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C9 PFNA	80.3		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C6 PFDA	98.9		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C7 PFUnA	111		30 - 130	09/24/25 06:47	09/26/25 12:52	1
13C2 PFDoA	106		10 - 130	09/24/25 06:47	09/26/25 12:52	1
13C2 PFTeDA	78.4		10 - 130	09/24/25 06:47	09/26/25 12:52	1
13C3 PFBS	87.7		40 - 135	09/24/25 06:47	09/26/25 12:52	1
13C3 PFHxS	91.2		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C8 PFOS	92.5		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C8 FOSA	87.7		40 - 130	09/24/25 06:47	09/26/25 12:52	1
D3-NMeFOSAA	86.5		40 - 170	09/24/25 06:47	09/26/25 12:52	1
D5-NEtFOSAA	88.2		25 - 135	09/24/25 06:47	09/26/25 12:52	1
13C2 4:2 FTS	105		40 - 200	09/24/25 06:47	09/26/25 12:52	1
13C2 6:2 FTS	90.7		40 - 200	09/24/25 06:47	09/26/25 12:52	1
13C2 8:2 FTS	94.9		40 - 300	09/24/25 06:47	09/26/25 12:52	1
13C3 HFPO-DA	107		40 - 130	09/24/25 06:47	09/26/25 12:52	1
D7-NMeFOSE	79.4		10 - 130	09/24/25 06:47	09/26/25 12:52	1
D9-NEtFOSE	82.6		10 - 130	09/24/25 06:47	09/26/25 12:52	1
D5-NEtFOSA	70.4		10 - 130	09/24/25 06:47	09/26/25 12:52	1
D3-NMeFOSA	71.1		10 - 130	09/24/25 06:47	09/26/25 12:52	1

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.7		1.8	0.15	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoropentanoic acid (PFPeA)	33		0.92	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorohexanoic acid (PFHxA)	46		0.92	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoroheptanoic acid (PFHpA)	4.3		0.92	0.15	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorooctanoic acid (PFOA)	45		0.92	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorononanoic acid (PFNA)	2.4		0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorodecanoic acid (PFDA)	17		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoroundecanoic acid (PFUnA)	1.3		0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorododecanoic acid (PFDoA)	4.8		0.92	0.12	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorotridecanoic acid (PFTTrDA)	0.87	J	0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorotetradecanoic acid (PFTeDA)	1.6		0.92	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorobutanesulfonic acid (PFBS)	3.0		0.92	0.31	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.92	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorohexanesulfonic acid (PFHxS)	1.4		0.92	0.092	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.92	0.073	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorooctanesulfonic acid (PFOS)	13		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorononanesulfonic acid (PFNS)	ND		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorodecanesulfonic acid (PFDS)	1.9		0.92	0.096	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
4:2 FTS	ND		1.8	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
6:2 FTS	3.4		1.8	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
8:2 FTS	1.6	J	1.8	0.20	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorooctanesulfonamide (PFOSA)	1.7		0.92	0.29	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.25	J	0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.22	J	0.92	0.096	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	32		0.92	0.073	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.1		0.92	0.078	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	11		4.6	0.40	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.6		4.6	0.35	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.92	0.10	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.92	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
9Cl-PF3ONS	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
11Cl-PF3OUdS	ND		0.92	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.8	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	37		4.6	1.1	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	18		4.6	0.98	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	75.3		8 - 130	09/23/25 20:55	09/26/25 00:51	1
13C5 PFPeA	70.3		35 - 130	09/23/25 20:55	09/26/25 00:51	1
13C5 PFHxA	94.4		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C4 PFHpA	91.7		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C8 PFOA	77.5		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C9 PFNA	88.3		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C6 PFDA	83.8		40 - 130	09/23/25 20:55	09/26/25 00:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C7 PFUnA	81.0		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C2 PFDoA	59.9		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C2 PFTeDA	65.5		20 - 130	09/23/25 20:55	09/26/25 00:51	1
13C3 PFBS	86.4		40 - 135	09/23/25 20:55	09/26/25 00:51	1
13C3 PFHxS	86.2		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C8 PFOS	86.2		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C8 FOSA	59.4		40 - 130	09/23/25 20:55	09/26/25 00:51	1
D3-NMeFOSAA	60.9		40 - 135	09/23/25 20:55	09/26/25 00:51	1
D5-NEtFOSAA	76.4		40 - 150	09/23/25 20:55	09/26/25 00:51	1
13C2 4:2 FTS	204	*5+	40 - 165	09/23/25 20:55	09/26/25 00:51	1
13C2 6:2 FTS	140		40 - 215	09/23/25 20:55	09/26/25 00:51	1
13C2 8:2 FTS	156		40 - 275	09/23/25 20:55	09/26/25 00:51	1
13C3 HFPO-DA	96.7		40 - 130	09/23/25 20:55	09/26/25 00:51	1
D7-NMeFOSE	65.0		20 - 130	09/23/25 20:55	09/26/25 00:51	1
D9-NEtFOSE	66.5		15 - 130	09/23/25 20:55	09/26/25 00:51	1
D5-NEtFOSA	65.1		10 - 130	09/23/25 20:55	09/26/25 00:51	1
D3-NMeFOSA	57.9		10 - 130	09/23/25 20:55	09/26/25 00:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	58		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	42		0.10	0.10	%			09/11/25 14:11	1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		14	1.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoropentanoic acid (PFPeA)	ND		6.8	1.7	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorohexanoic acid (PFHxA)	1.7	J	6.8	1.4	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoroheptanoic acid (PFHpA)	ND		6.8	1.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorooctanoic acid (PFOA)	ND		6.8	2.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorononanoic acid (PFNA)	ND		6.8	0.99	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorodecanoic acid (PFDA)	2.0	J	6.8	0.82	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoroundecanoic acid (PFUnA)	ND		6.8	0.95	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorododecanoic acid (PFDoA)	1.6	J	6.8	0.92	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorotridecanoic acid (PFTTrDA)	ND		6.8	0.99	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorotetradecanoic acid (PFTeDA)	ND		6.8	2.0	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		6.8	2.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		6.8	1.4	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	J	6.8	0.68	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		6.8	0.54	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorooctanesulfonic acid (PFOS)	7.5		6.8	0.85	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorononanesulfonic acid (PFNS)	ND		6.8	0.78	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	0.91	J	6.8	0.71	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		6.8	1.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
4:2 FTS	ND		14	2.2	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
6:2 FTS	ND		14	1.8	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
8:2 FTS	ND		14	1.5	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorooctanesulfonamide (PFOSA)	ND		6.8	2.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		6.8	1.2	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		6.8	0.71	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		6.8	0.54	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7	J	6.8	0.58	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12	J	34	3.0	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.1	J	34	2.6	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		6.8	0.99	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		6.8	0.85	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		6.8	0.75	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		6.8	1.2	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		6.8	2.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
9CI-PF3ONS	ND		6.8	1.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
11CI-PF3OUdS	ND		6.8	2.6	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		6.8	1.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		14	2.6	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		34	8.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11	J	34	7.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	83.5		8 - 130	09/23/25 20:55	09/26/25 01:08	1
13C5 PFPeA	83.0		35 - 130	09/23/25 20:55	09/26/25 01:08	1
13C5 PFHxA	108		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C4 PFHpA	104		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C8 PFOA	106		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C9 PFNA	93.1		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C6 PFDA	81.6		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C7 PFUnA	101		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C2 PFDoA	72.6		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C2 PFTeDA	73.7		20 - 130	09/23/25 20:55	09/26/25 01:08	1
13C3 PFBS	92.9		40 - 135	09/23/25 20:55	09/26/25 01:08	1
13C3 PFHxS	93.6		40 - 130	09/23/25 20:55	09/26/25 01:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	91.3		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C8 FOSA	79.5		40 - 130	09/23/25 20:55	09/26/25 01:08	1
D3-NMeFOSAA	71.5		40 - 135	09/23/25 20:55	09/26/25 01:08	1
D5-NEtFOSAA	83.0		40 - 150	09/23/25 20:55	09/26/25 01:08	1
13C2 4:2 FTS	204	*5+	40 - 165	09/23/25 20:55	09/26/25 01:08	1
13C2 6:2 FTS	138		40 - 215	09/23/25 20:55	09/26/25 01:08	1
13C2 8:2 FTS	182		40 - 275	09/23/25 20:55	09/26/25 01:08	1
13C3 HFPO-DA	105		40 - 130	09/23/25 20:55	09/26/25 01:08	1
D7-NMeFOSE	70.6		20 - 130	09/23/25 20:55	09/26/25 01:08	1
D9-NEtFOSE	80.5		15 - 130	09/23/25 20:55	09/26/25 01:08	1
D5-NEtFOSA	75.1		10 - 130	09/23/25 20:55	09/26/25 01:08	1
D3-NMeFOSA	73.0		10 - 130	09/23/25 20:55	09/26/25 01:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	94		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	5.6		0.10	0.10	%			09/11/25 14:11	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (8-130)	PFPeA (35-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (40-130)
320-125031-9	BIO-A-25-202509	73.1	76.7	89.0	82.8	82.6	84.2	85.3	71.5
320-125031-10	BIO-A-24-202509	82.1	81.9	90.3	91.4	90.2	83.2	91.1	79.7
320-125031-12	BIO-A-23-202509	75.3	70.3	94.4	91.7	77.5	88.3	83.8	81.0
320-125031-13	BIO-B-202509	83.5	83.0	108	104	106	93.1	81.6	101
LCS 320-877204/3-A	Lab Control Sample	95.4	82.5	84.7	94.5	86.5	93.7	90.4	92.6
LCSD 320-877204/4-A	Lab Control Sample Dup	88.1	85.6	85.2	90.8	96.4	95.0	92.3	92.6
LLCS 320-877204/2-A	Lab Control Sample	90.7	87.7	93.3	92.8	93.8	93.3	88.9	82.4
MB 320-877204/1-A	Method Blank	95.1	88.1	101	87.3	97.2	94.8	93.1	83.8
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (40-130)	PFTDA (20-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-135)	d5NEFOS (40-150)
320-125031-9	BIO-A-25-202509	45.8	55.6	79.5	82.3	98.3	52.8	57.4	80.1
320-125031-10	BIO-A-24-202509	58.3	73.4	81.6	85.3	88.4	60.6	59.0	81.7
320-125031-12	BIO-A-23-202509	59.9	65.5	86.4	86.2	86.2	59.4	60.9	76.4
320-125031-13	BIO-B-202509	72.6	73.7	92.9	93.6	91.3	79.5	71.5	83.0
LCS 320-877204/3-A	Lab Control Sample	90.2	73.5	93.3	101	102	86.1	94.8	89.9
LCSD 320-877204/4-A	Lab Control Sample Dup	88.4	76.3	94.3	100	96.1	90.6	90.1	88.7
LLCS 320-877204/2-A	Lab Control Sample	79.3	62.8	91.5	91.2	97.1	81.4	84.1	83.7
MB 320-877204/1-A	Method Blank	83.4	73.6	90.8	100	105	87.3	83.7	89.8
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (40-165)	M262FTS (40-215)	M282FTS (40-275)	HFPODA (40-130)	NMFM (20-130)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-125031-9	BIO-A-25-202509	199 *5+	150	184	90.7	63.2	62.1	63.5	57.5
320-125031-10	BIO-A-24-202509	211 *5+	133	146	95.4	74.6	82.4	74.9	64.8
320-125031-12	BIO-A-23-202509	204 *5+	140	156	96.7	65.0	66.5	65.1	57.9
320-125031-13	BIO-B-202509	204 *5+	138	182	105	70.6	80.5	75.1	73.0
LCS 320-877204/3-A	Lab Control Sample	98.0	93.0	99.8	92.3	73.7	77.2	66.4	67.8
LCSD 320-877204/4-A	Lab Control Sample Dup	105	99.4	102	100	74.8	77.0	67.1	68.2
LLCS 320-877204/2-A	Lab Control Sample	117	89.8	93.6	90.8	70.9	76.1	61.9	63.3
MB 320-877204/1-A	Method Blank	121	93.9	87.3	93.9	80.0	80.5	68.5	67.7

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-125031-1	INF-02-202509	1.02 *5-	21.4 *5-	84.2	81.1	80.2	63.0	72.6	65.3
320-125031-2	INF-07-202509	1.12 *5-	23.8 *5-	79.2	83.8	83.4	72.6	84.3	73.4
320-125031-3	INF-08-202509	1.61 *5-	36.4 *5-	101	119	98.2	84.9	88.3	88.4
320-125031-4	INF-11-202509	0.973 *5-	11.4 *5-	94.8	101	97.1	91.0	99.6	78.6
320-125031-5	INF-18-202509	0.977 *5-	11.2 *5-	103	102	97.5	85.2	90.1	83.6
320-125031-6	INF-COMP-202509	2.27 *5-	38.1 *5-	103	117	96.9	87.3	96.5	86.2
320-125031-7	EFF-G-202509	79.7	98.0	102	114	91.4	81.5	93.3	93.7
320-125031-8	EB01-202509	87.8	102	114	102	99.8	82.9	104	107
320-125031-11	EB02-202509	89.8	91.0	94.5	96.5	92.0	80.3	98.9	111
LCS 320-877226/3-A	Lab Control Sample	87.9	93.7	106	92.3	90.3	88.0	95.0	92.8
LCSD 320-877226/4-A	Lab Control Sample Dup	86.4	84.5	92.3	93.4	87.3	81.1	102	100
LLCS 320-877226/2-A	Lab Control Sample	89.2	114	114	120	92.6	85.6	95.6	89.0
MB 320-877226/1-A	Method Blank	88.3	87.1	96.6	101	88.7	80.6	95.4	95.0

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-125031-1	INF-02-202509	54.0	57.9	76.4	73.8	79.5	63.0	46.0	56.9
320-125031-2	INF-07-202509	63.1	65.8	74.3	86.7	87.1	68.4	50.1	68.7
320-125031-3	INF-08-202509	70.6	76.2	85.2	94.9	103	81.1	52.6	69.5
320-125031-4	INF-11-202509	60.7	71.6	81.5	92.8	95.5	71.5	43.8	54.6
320-125031-5	INF-18-202509	67.6	54.3	88.6	86.3	96.4	88.4	58.0	68.3
320-125031-6	INF-COMP-202509	70.8	70.6	89.4	90.1	87.9	79.3	51.1	66.1
320-125031-7	EFF-G-202509	77.7	51.7	97.7	90.7	98.2	82.6	84.1	81.5
320-125031-8	EB01-202509	92.6	76.9	93.9	92.4	98.1	87.6	92.0	86.1
320-125031-11	EB02-202509	106	78.4	87.7	91.2	92.5	87.7	86.5	88.2
LCS 320-877226/3-A	Lab Control Sample	88.4	67.3	95.9	93.9	104	90.0	95.6	88.5
LCSD 320-877226/4-A	Lab Control Sample Dup	79.9	72.1	84.9	90.1	94.9	90.3	91.3	93.3
LLCS 320-877226/2-A	Lab Control Sample	82.0	62.5	88.2	91.2	95.7	78.7	85.5	85.1
MB 320-877226/1-A	Method Blank	79.0	60.3	95.1	96.5	99.8	85.8	88.3	91.0

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-125031-1	INF-02-202509	193	184	128	98.9	38.9	72.0	67.3	69.5
320-125031-2	INF-07-202509	167	161	144	89.2	46.9	75.1	74.6	77.3
320-125031-3	INF-08-202509	208 *5+	195	168	119	55.8	88.9	86.7	89.8
320-125031-4	INF-11-202509	225 *5+	212 *5+	185	119	43.7	89.1	76.3	80.1
320-125031-5	INF-18-202509	250 *5+	205 *5+	183	115	34.9	47.3	67.2	77.9
320-125031-6	INF-COMP-202509	262 *5+	198	179	124	45.9	68.2	71.2	74.4
320-125031-7	EFF-G-202509	186	86.0	85.5	115	66.1	64.1	65.2	66.8
320-125031-8	EB01-202509	111	98.3	83.3	106	78.1	82.9	72.4	76.4
320-125031-11	EB02-202509	105	90.7	94.9	107	79.4	82.6	70.4	71.1
LCS 320-877226/3-A	Lab Control Sample	110	81.8	95.6	99.4	81.1	82.9	76.0	72.4

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSa (10-130)
LCSD 320-877226/4-A	Lab Control Sample Dup	111	88.1	88.0	94.6	79.9	85.7	70.4	72.8
LLCS 320-877226/2-A	Lab Control Sample	104	95.4	93.1	115	69.4	66.2	63.3	62.7
MB 320-877226/1-A	Method Blank	97.3	95.1	95.4	95.0	77.8	80.2	69.9	73.3

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOA = D3-NMeFOA
d5NEFOA = D5-NEtFOA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSa = D3-NMeFOSA

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-877204/1-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 877204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.40	0.032	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.049	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.040	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.033	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.062	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.029	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.024	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.028	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.027	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.029	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.058	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.067	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.040	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.020	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.016	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.025	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.023	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.021	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.037	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
4:2 FTS	ND		0.40	0.065	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
6:2 FTS	ND		0.40	0.054	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
8:2 FTS	ND		0.40	0.044	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.063	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.20	0.036	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.20	0.021	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.20	0.016	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.20	0.017	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.088	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.077	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.20	0.029	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.025	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.20	0.022	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.20	0.036	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.20	0.062	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
9CI-PF3ONS	ND		0.20	0.038	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
11CI-PF3OUdS	ND		0.20	0.075	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.20	0.038	ug/Kg		09/23/25 20:55	09/25/25 23:13	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-877204/1-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 877204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.40	0.075	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.25	ug/Kg		09/23/25 20:55	09/25/25 23:13	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		09/23/25 20:55	09/25/25 23:13	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	95.1		8 - 130	09/23/25 20:55	09/25/25 23:13	1
13C5 PFPeA	88.1		35 - 130	09/23/25 20:55	09/25/25 23:13	1
13C5 PFHxA	101		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C4 PFHpA	87.3		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C8 PFOA	97.2		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C9 PFNA	94.8		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C6 PFDA	93.1		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C7 PFUnA	83.8		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C2 PFDoA	83.4		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C2 PFTeDA	73.6		20 - 130	09/23/25 20:55	09/25/25 23:13	1
13C3 PFBS	90.8		40 - 135	09/23/25 20:55	09/25/25 23:13	1
13C3 PFHxS	100		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C8 PFOS	105		40 - 130	09/23/25 20:55	09/25/25 23:13	1
13C8 FOSA	87.3		40 - 130	09/23/25 20:55	09/25/25 23:13	1
D3-NMeFOSAA	83.7		40 - 135	09/23/25 20:55	09/25/25 23:13	1
D5-NEtFOSAA	89.8		40 - 150	09/23/25 20:55	09/25/25 23:13	1
13C2 4:2 FTS	121		40 - 165	09/23/25 20:55	09/25/25 23:13	1
13C2 6:2 FTS	93.9		40 - 215	09/23/25 20:55	09/25/25 23:13	1
13C2 8:2 FTS	87.3		40 - 275	09/23/25 20:55	09/25/25 23:13	1
13C3 HFPO-DA	93.9		40 - 130	09/23/25 20:55	09/25/25 23:13	1
D7-NMeFOSE	80.0		20 - 130	09/23/25 20:55	09/25/25 23:13	1
D9-NEtFOSE	80.5		15 - 130	09/23/25 20:55	09/25/25 23:13	1
D5-NEtFOSA	68.5		10 - 130	09/23/25 20:55	09/25/25 23:13	1
D3-NMeFOSA	67.7		10 - 130	09/23/25 20:55	09/25/25 23:13	1

Lab Sample ID: LCS 320-877204/3-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	5.00	5.39		ug/Kg		108	70 - 140
Perfluoropentanoic acid (PFPeA)	2.50	3.12		ug/Kg		125	60 - 150
Perfluorohexanoic acid (PFHxA)	2.50	2.74		ug/Kg		110	65 - 140
Perfluoroheptanoic acid (PFHpA)	2.50	2.44		ug/Kg		97	65 - 145
Perfluorooctanoic acid (PFOA)	2.50	3.03		ug/Kg		121	70 - 150
Perfluorononanoic acid (PFNA)	2.50	2.34		ug/Kg		94	70 - 155
Perfluorodecanoic acid (PFDA)	2.50	2.80		ug/Kg		112	70 - 155
Perfluoroundecanoic acid (PFUnA)	2.50	2.69		ug/Kg		108	70 - 155
Perfluorododecanoic acid (PFDoA)	2.50	2.90		ug/Kg		116	70 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-877204/3-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.91		ug/Kg		117	65 - 150
Perfluorotetradecanoic acid (PFTTeDA)	2.50	2.89		ug/Kg		116	65 - 150
Perfluorobutanesulfonic acid (PFBS)	2.22	2.18		ug/Kg		98	65 - 145
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.44		ug/Kg		104	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.31		ug/Kg		101	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.30		ug/Kg		97	65 - 155
Perfluorooctanesulfonic acid (PFOS)	2.33	2.33		ug/Kg		100	65 - 160
Perfluorononanesulfonic acid (PFNS)	2.41	2.06		ug/Kg		86	55 - 140
Perfluorodecanesulfonic acid (PFDS)	2.41	2.28		ug/Kg		95	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.06		ug/Kg		85	25 - 160
4:2 FTS	4.69	4.89		ug/Kg		104	60 - 150
6:2 FTS	4.76	4.81		ug/Kg		101	55 - 200
8:2 FTS	4.80	4.56		ug/Kg		95	70 - 150
Perfluorooctanesulfonamide (PFOSA)	2.50	2.61		ug/Kg		105	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.82		ug/Kg		113	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.68		ug/Kg		107	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.38		ug/Kg		95	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.55		ug/Kg		102	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	13.2		ug/Kg		106	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.0		ug/Kg		104	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.88	1.75		ug/Kg		93	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.64		ug/Kg		112	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.98		ug/Kg		119	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	3.14		ug/Kg		126	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	2.87		ug/Kg		115	60 - 155
9Cl-PF3ONS	2.34	2.36		ug/Kg		101	70 - 150
11Cl-PF3OUdS	2.36	2.26		ug/Kg		96	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23	2.38		ug/Kg		107	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	5.93		ug/Kg		119	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	14.6		ug/Kg		117	60 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-877204/3-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	13.9		ug/Kg		111	60 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	95.4		8 - 130
13C5 PFPeA	82.5		35 - 130
13C5 PFHxA	84.7		40 - 130
13C4 PFHpA	94.5		40 - 130
13C8 PFOA	86.5		40 - 130
13C9 PFNA	93.7		40 - 130
13C6 PFDA	90.4		40 - 130
13C7 PFUnA	92.6		40 - 130
13C2 PFDoA	90.2		40 - 130
13C2 PFTeDA	73.5		20 - 130
13C3 PFBS	93.3		40 - 135
13C3 PFHxS	101		40 - 130
13C8 PFOS	102		40 - 130
13C8 FOSA	86.1		40 - 130
D3-NMeFOSAA	94.8		40 - 135
D5-NEtFOSAA	89.9		40 - 150
13C2 4:2 FTS	98.0		40 - 165
13C2 6:2 FTS	93.0		40 - 215
13C2 8:2 FTS	99.8		40 - 275
13C3 HFPO-DA	92.3		40 - 130
D7-NMeFOSE	73.7		20 - 130
D9-NEtFOSE	77.2		15 - 130
D5-NEtFOSA	66.4		10 - 130
D3-NMeFOSA	67.8		10 - 130

Lab Sample ID: LCSD 320-877204/4-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 877204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	5.00	5.73		ug/Kg		115	70 - 140	6	30
Perfluoropentanoic acid (PFPeA)	2.50	2.87		ug/Kg		115	60 - 150	8	30
Perfluorohexanoic acid (PFHxA)	2.50	2.96		ug/Kg		119	65 - 140	8	30
Perfluoroheptanoic acid (PFHpA)	2.50	2.51		ug/Kg		101	65 - 145	3	30
Perfluorooctanoic acid (PFOA)	2.50	2.73		ug/Kg		109	70 - 150	10	30
Perfluorononanoic acid (PFNA)	2.50	2.60		ug/Kg		104	70 - 155	10	30
Perfluorodecanoic acid (PFDA)	2.50	2.65		ug/Kg		106	70 - 155	5	30
Perfluoroundecanoic acid (PFUnA)	2.50	2.45		ug/Kg		98	70 - 155	9	30
Perfluorododecanoic acid (PFDoA)	2.50	2.55		ug/Kg		102	70 - 150	13	30
Perfluorotridecanoic acid (PFTTrDA)	2.50	2.57		ug/Kg		103	65 - 150	13	30
Perfluorotetradecanoic acid (PFTeDA)	2.50	2.89		ug/Kg		116	65 - 150	0	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-877204/4-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 877204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	2.22	2.39		ug/Kg		108	65 - 145	9	30
Perfluoropentanesulfonic acid (PFPeS)	2.35	2.43		ug/Kg		103	55 - 160	1	30
Perfluorohexanesulfonic acid (PFHxS)	2.28	2.43		ug/Kg		106	60 - 150	5	30
Perfluoroheptanesulfonic acid (PFHpS)	2.39	2.37		ug/Kg		100	65 - 155	3	30
Perfluorooctanesulfonic acid (PFOS)	2.33	2.45		ug/Kg		105	65 - 160	5	30
Perfluorononanesulfonic acid (PFNS)	2.41	2.48		ug/Kg		103	55 - 140	19	30
Perfluorodecanesulfonic acid (PFDS)	2.41	2.34		ug/Kg		97	30 - 140	3	30
Perfluorododecanesulfonic acid (PFDoS)	2.43	2.22		ug/Kg		91	25 - 160	7	30
4:2 FTS	4.69	4.58		ug/Kg		98	60 - 150	7	30
6:2 FTS	4.76	4.93		ug/Kg		104	55 - 200	2	30
8:2 FTS	4.80	4.06		ug/Kg		84	70 - 150	12	30
Perfluorooctanesulfonamide (PFOSA)	2.50	2.52		ug/Kg		101	70 - 140	3	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.50	2.86		ug/Kg		114	70 - 155	1	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.50	2.68		ug/Kg		107	70 - 140	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.50	2.57		ug/Kg		103	65 - 155	8	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.50	2.51		ug/Kg		100	65 - 165	1	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5	13.2		ug/Kg		106	70 - 140	0	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5	13.1		ug/Kg		105	70 - 135	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.88	1.67		ug/Kg		89	70 - 145	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.37	2.42		ug/Kg		102	70 - 160	9	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.50	2.96		ug/Kg		118	30 - 140	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.50	2.87		ug/Kg		115	60 - 150	9	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.50	3.51		ug/Kg		140	60 - 155	20	30
9Cl-PF3ONS	2.34	2.13		ug/Kg		91	70 - 150	10	30
11Cl-PF3OUdS	2.36	2.16		ug/Kg		92	45 - 160	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.23	2.52		ug/Kg		113	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	5.00	5.83		ug/Kg		117	45 - 130	2	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5	14.3		ug/Kg		115	60 - 130	2	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5	14.0		ug/Kg		112	60 - 150	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	88.1		8 - 130
13C5 PFPeA	85.6		35 - 130
13C5 PFHxA	85.2		40 - 130
13C4 PFHpA	90.8		40 - 130
13C8 PFOA	96.4		40 - 130
13C9 PFNA	95.0		40 - 130
13C6 PFDA	92.3		40 - 130
13C7 PFUnA	92.6		40 - 130
13C2 PFDoA	88.4		40 - 130
13C2 PFTeDA	76.3		20 - 130
13C3 PFBS	94.3		40 - 135
13C3 PFHxS	100		40 - 130
13C8 PFOS	96.1		40 - 130
13C8 FOSA	90.6		40 - 130
D3-NMeFOSAA	90.1		40 - 135
D5-NEtFOSAA	88.7		40 - 150
13C2 4:2 FTS	105		40 - 165
13C2 6:2 FTS	99.4		40 - 215
13C2 8:2 FTS	102		40 - 275
13C3 HFPO-DA	100		40 - 130
D7-NMeFOSE	74.8		20 - 130
D9-NEtFOSE	77.0		15 - 130
D5-NEtFOSA	67.1		10 - 130
D3-NMeFOSA	68.2		10 - 130

Lab Sample ID: LLCS 320-877204/2-A
Matrix: Solid
Analysis Batch: 877619

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 877204

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	
Perfluorobutanoic acid (PFBA)	0.800	1.03		ug/Kg		129	70 - 140	
Perfluoropentanoic acid (PFPeA)	0.400	0.537		ug/Kg		134	60 - 150	
Perfluorohexanoic acid (PFHxA)	0.400	0.454		ug/Kg		114	65 - 140	
Perfluoroheptanoic acid (PFHpA)	0.400	0.458		ug/Kg		115	65 - 145	
Perfluorooctanoic acid (PFOA)	0.400	0.439		ug/Kg		110	70 - 150	
Perfluorononanoic acid (PFNA)	0.400	0.447		ug/Kg		112	70 - 155	
Perfluorodecanoic acid (PFDA)	0.400	0.442		ug/Kg		110	70 - 155	
Perfluoroundecanoic acid (PFUnA)	0.400	0.446		ug/Kg		112	70 - 155	
Perfluorododecanoic acid (PFDoA)	0.400	0.466		ug/Kg		117	70 - 150	
Perfluorotridecanoic acid (PFTTrDA)	0.400	0.501		ug/Kg		125	65 - 150	
Perfluorotetradecanoic acid (PFTeDA)	0.400	0.553		ug/Kg		138	65 - 150	
Perfluorobutanesulfonic acid (PFBS)	0.355	0.400		ug/Kg		113	65 - 145	
Perfluoropentanesulfonic acid (PFPeS)	0.376	0.459		ug/Kg		122	55 - 160	
Perfluorohexanesulfonic acid (PFHxS)	0.365	0.442		ug/Kg		121	60 - 150	
Perfluoroheptanesulfonic acid (PFHpS)	0.382	0.383		ug/Kg		100	65 - 155	

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-877204/2-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877204

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	0.372	0.431		ug/Kg		116	65 - 160
Perfluorononanesulfonic acid (PFNS)	0.385	0.423		ug/Kg		110	55 - 140
Perfluorodecanesulfonic acid (PFDS)	0.386	0.374		ug/Kg		97	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	0.388	0.370		ug/Kg		95	25 - 160
4:2 FTS	0.750	0.800		ug/Kg		107	60 - 150
6:2 FTS	0.762	0.897		ug/Kg		118	55 - 200
8:2 FTS	0.768	0.782		ug/Kg		102	70 - 150
Perfluorooctanesulfonamide (PFOSA)	0.400	0.458		ug/Kg		115	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.400	0.463		ug/Kg		116	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.400	0.453		ug/Kg		113	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.400	0.462		ug/Kg		115	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.400	0.483		ug/Kg		121	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.00	2.19		ug/Kg		110	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.00	2.12		ug/Kg		106	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	0.300	0.316		ug/Kg		105	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.378	0.474		ug/Kg		125	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.400	0.509		ug/Kg		127	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.400	0.541		ug/Kg		135	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.400	0.417		ug/Kg		104	60 - 155
9CI-PF3ONS	0.374	0.401		ug/Kg		107	70 - 150
11CI-PF3OUdS	0.378	0.434		ug/Kg		115	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.357	0.382		ug/Kg		107	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.800	0.873		ug/Kg		109	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.00	2.15		ug/Kg		108	60 - 130
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.00	2.12		ug/Kg		106	60 - 150

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	90.7		8 - 130
13C5 PFPeA	87.7		35 - 130
13C5 PFHxA	93.3		40 - 130
13C4 PFHpA	92.8		40 - 130
13C8 PFOA	93.8		40 - 130
13C9 PFNA	93.3		40 - 130
13C6 PFDA	88.9		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-877204/2-A

Matrix: Solid

Analysis Batch: 877619

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877204

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C7 PFUnA	82.4		40 - 130
13C2 PFDoA	79.3		40 - 130
13C2 PFTeDA	62.8		20 - 130
13C3 PFBS	91.5		40 - 135
13C3 PFHxS	91.2		40 - 130
13C8 PFOS	97.1		40 - 130
13C8 FOSA	81.4		40 - 130
D3-NMeFOSAA	84.1		40 - 135
D5-NEtFOSAA	83.7		40 - 150
13C2 4:2 FTS	117		40 - 165
13C2 6:2 FTS	89.8		40 - 215
13C2 8:2 FTS	93.6		40 - 275
13C3 HFPO-DA	90.8		40 - 130
D7-NMeFOSE	70.9		20 - 130
D9-NEtFOSE	76.1		15 - 130
D5-NEtFOSA	61.9		10 - 130
D3-NMeFOSA	63.3		10 - 130

Lab Sample ID: MB 320-877226/1-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 877226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	0.58	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.54	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		09/24/25 06:47	09/26/25 08:47	1
4:2 FTS	ND		4.0	0.44	ng/L		09/24/25 06:47	09/26/25 08:47	1
6:2 FTS	ND		4.0	0.41	ng/L		09/24/25 06:47	09/26/25 08:47	1
8:2 FTS	ND		4.0	0.90	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		09/24/25 06:47	09/26/25 08:47	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-877226/1-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 877226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		09/24/25 06:47	09/26/25 08:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		09/24/25 06:47	09/26/25 08:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		09/24/25 06:47	09/26/25 08:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		09/24/25 06:47	09/26/25 08:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		09/24/25 06:47	09/26/25 08:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		09/24/25 06:47	09/26/25 08:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		09/24/25 06:47	09/26/25 08:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		09/24/25 06:47	09/26/25 08:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		09/24/25 06:47	09/26/25 08:47	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		09/24/25 06:47	09/26/25 08:47	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		09/24/25 06:47	09/26/25 08:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		09/24/25 06:47	09/26/25 08:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		09/24/25 06:47	09/26/25 08:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		09/24/25 06:47	09/26/25 08:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		09/24/25 06:47	09/26/25 08:47	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	88.3		5 - 130				09/24/25 06:47	09/26/25 08:47	1
13C5 PFPeA	87.1		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C5 PFHxA	96.6		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C4 PFHpA	101		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C8 PFOA	88.7		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C9 PFNA	80.6		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C6 PFDA	95.4		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C7 PFUnA	95.0		30 - 130				09/24/25 06:47	09/26/25 08:47	1
13C2 PFDoA	79.0		10 - 130				09/24/25 06:47	09/26/25 08:47	1
13C2 PFTeDA	60.3		10 - 130				09/24/25 06:47	09/26/25 08:47	1
13C3 PFBS	95.1		40 - 135				09/24/25 06:47	09/26/25 08:47	1
13C3 PFHxS	96.5		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C8 PFOS	99.8		40 - 130				09/24/25 06:47	09/26/25 08:47	1
13C8 FOSA	85.8		40 - 130				09/24/25 06:47	09/26/25 08:47	1
D3-NMeFOSAA	88.3		40 - 170				09/24/25 06:47	09/26/25 08:47	1
D5-NEtFOSAA	91.0		25 - 135				09/24/25 06:47	09/26/25 08:47	1
13C2 4:2 FTS	97.3		40 - 200				09/24/25 06:47	09/26/25 08:47	1
13C2 6:2 FTS	95.1		40 - 200				09/24/25 06:47	09/26/25 08:47	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-877226/1-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 877226

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 8:2 FTS	95.4		40 - 300	09/24/25 06:47	09/26/25 08:47	1
13C3 HFPO-DA	95.0		40 - 130	09/24/25 06:47	09/26/25 08:47	1
D7-NMeFOSE	77.8		10 - 130	09/24/25 06:47	09/26/25 08:47	1
D9-NEtFOSE	80.2		10 - 130	09/24/25 06:47	09/26/25 08:47	1
D5-NEtFOSA	69.9		10 - 130	09/24/25 06:47	09/26/25 08:47	1
D3-NMeFOSA	73.3		10 - 130	09/24/25 06:47	09/26/25 08:47	1

Lab Sample ID: LCS 320-877226/3-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	91.1		ng/L		114	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	52.1		ng/L		130	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	37.3		ng/L		93	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	43.4		ng/L		109	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	40.2		ng/L		100	70 - 150
Perfluorononanoic acid (PFNA)	40.0	37.8		ng/L		95	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	39.0		ng/L		97	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	40.5		ng/L		101	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	42.2		ng/L		105	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	40.0	45.4		ng/L		114	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	48.2		ng/L		121	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	34.8		ng/L		98	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	40.8		ng/L		108	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	41.3		ng/L		113	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	34.6		ng/L		91	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	38.8		ng/L		104	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	36.7		ng/L		95	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	34.5		ng/L		89	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	31.0		ng/L		80	50 - 145
4:2 FTS	75.0	74.6		ng/L		99	70 - 145
6:2 FTS	76.2	85.5		ng/L		112	65 - 155
8:2 FTS	76.8	70.0		ng/L		91	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	41.3		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.4		ng/L		114	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	41.3		ng/L		103	65 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-877226/3-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.9		ng/L		100	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.0		ng/L		105	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	201		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	199		ng/L		99	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	29.1		ng/L		97	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	41.2		ng/L		109	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	45.0		ng/L		112	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.2		ng/L		113	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	41.3		ng/L		103	50 - 150
9CI-PF3ONS	37.4	36.4		ng/L		97	70 - 155
11CI-PF3OUdS	37.8	38.8		ng/L		103	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	33.4		ng/L		94	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	91.0		ng/L		114	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	196		ng/L		98	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	180		ng/L		90	50 - 145

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	87.9		5 - 130
13C5 PFPeA	93.7		40 - 130
13C5 PFHxA	106		40 - 130
13C4 PFHpA	92.3		40 - 130
13C8 PFOA	90.3		40 - 130
13C9 PFNA	88.0		40 - 130
13C6 PFDA	95.0		40 - 130
13C7 PFUnA	92.8		30 - 130
13C2 PFDoA	88.4		10 - 130
13C2 PFTeDA	67.3		10 - 130
13C3 PFBS	95.9		40 - 135
13C3 PFHxS	93.9		40 - 130
13C8 PFOS	104		40 - 130
13C8 FOSA	90.0		40 - 130
D3-NMeFOSAA	95.6		40 - 170
D5-NEtFOSAA	88.5		25 - 135
13C2 4:2 FTS	110		40 - 200
13C2 6:2 FTS	81.8		40 - 200
13C2 8:2 FTS	95.6		40 - 300
13C3 HFPO-DA	99.4		40 - 130
D7-NMeFOSE	81.1		10 - 130
D9-NEtFOSE	82.9		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-877226/3-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877226

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
D5-NEtFOSA	76.0		10 - 130
D3-NMeFOSA	72.4		10 - 130

Lab Sample ID: LCSD 320-877226/4-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 877226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	93.6		ng/L		117	70 - 140	3	30
Perfluoropentanoic acid (PFPeA)	40.0	47.9		ng/L		120	65 - 135	8	30
Perfluorohexanoic acid (PFHxA)	40.0	38.9		ng/L		97	70 - 145	4	30
Perfluoroheptanoic acid (PFHpA)	40.0	38.0		ng/L		95	70 - 150	13	30
Perfluorooctanoic acid (PFOA)	40.0	47.4		ng/L		119	70 - 150	17	30
Perfluorononanoic acid (PFNA)	40.0	46.1		ng/L		115	70 - 150	20	30
Perfluorodecanoic acid (PFDA)	40.0	39.2		ng/L		98	70 - 140	1	30
Perfluoroundecanoic acid (PFUnA)	40.0	41.8		ng/L		104	70 - 145	3	30
Perfluorododecanoic acid (PFDoA)	40.0	47.2		ng/L		118	70 - 140	11	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	41.8		ng/L		104	65 - 140	8	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	49.6		ng/L		124	60 - 140	3	30
Perfluorobutanesulfonic acid (PFBS)	35.5	41.5		ng/L		117	60 - 145	18	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	42.3		ng/L		113	65 - 140	4	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	40.9		ng/L		112	65 - 145	1	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	38.5		ng/L		101	70 - 150	11	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.2		ng/L		103	55 - 150	1	30
Perfluorononanesulfonic acid (PFNS)	38.5	40.7		ng/L		106	65 - 145	11	30
Perfluorodecanesulfonic acid (PFDS)	38.6	40.5		ng/L		105	60 - 145	16	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.4		ng/L		91	50 - 145	13	30
4:2 FTS	75.0	68.0		ng/L		91	70 - 145	9	30
6:2 FTS	76.2	77.6		ng/L		102	65 - 155	10	30
8:2 FTS	76.8	71.3		ng/L		93	60 - 150	2	30
Perfluorooctanesulfonamide (PFOSA)	40.0	42.0		ng/L		105	70 - 145	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.6		ng/L		106	60 - 150	6	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	43.8		ng/L		110	65 - 145	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.6		ng/L		104	50 - 140	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	43.7		ng/L		109	70 - 145	4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-877226/4-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 877226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	215		ng/L		107	70 - 145	7	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	210		ng/L		105	70 - 135	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	27.8		ng/L		93	70 - 140	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	39.5		ng/L		104	65 - 145	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	47.1		ng/L		118	55 - 140	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	50.9		ng/L		127	60 - 150	12	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	39.3		ng/L		98	50 - 150	5	30
9CI-PF3ONS	37.4	38.6		ng/L		103	70 - 155	6	30
11CI-PF3OUdS	37.8	37.0		ng/L		98	55 - 160	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	37.1		ng/L		104	70 - 140	11	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	95.8		ng/L		120	65 - 130	5	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	213		ng/L		107	70 - 135	8	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	201		ng/L		100	50 - 145	11	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	86.4		5 - 130
13C5 PFPeA	84.5		40 - 130
13C5 PFHxA	92.3		40 - 130
13C4 PFHpA	93.4		40 - 130
13C8 PFOA	87.3		40 - 130
13C9 PFNA	81.1		40 - 130
13C6 PFDA	102		40 - 130
13C7 PFUnA	100		30 - 130
13C2 PFDoA	79.9		10 - 130
13C2 PFTeDA	72.1		10 - 130
13C3 PFBS	84.9		40 - 135
13C3 PFHxS	90.1		40 - 130
13C8 PFOS	94.9		40 - 130
13C8 FOSA	90.3		40 - 130
D3-NMeFOSAA	91.3		40 - 170
D5-NEtFOSAA	93.3		25 - 135
13C2 4:2 FTS	111		40 - 200
13C2 6:2 FTS	88.1		40 - 200
13C2 8:2 FTS	88.0		40 - 300
13C3 HFPO-DA	94.6		40 - 130
D7-NMeFOSE	79.9		10 - 130
D9-NEtFOSE	85.7		10 - 130
D5-NEtFOSA	70.4		10 - 130
D3-NMeFOSA	72.8		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-877226/2-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877226

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	9.34		ng/L		117	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.63		ng/L		116	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.33		ng/L		108	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.69		ng/L		92	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.43		ng/L		111	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.12		ng/L		103	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	3.75		ng/L		94	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	3.71		ng/L		93	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.73		ng/L		118	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.71		ng/L		118	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	5.04		ng/L		126	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	4.22		ng/L		119	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.21		ng/L		112	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.34		ng/L		119	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.69		ng/L		97	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	4.21		ng/L		113	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.65		ng/L		95	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	4.00		ng/L		104	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.09		ng/L		80	50 - 145
4:2 FTS	7.50	7.28		ng/L		97	70 - 145
6:2 FTS	7.62	8.25		ng/L		108	65 - 155
8:2 FTS	7.68	6.63		ng/L		86	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.39		ng/L		110	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.20		ng/L		105	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.20		ng/L		105	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.76		ng/L		119	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.06		ng/L		102	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.4		ng/L		107	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.5		ng/L		107	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.90		ng/L		97	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.90		ng/L		103	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.52		ng/L		113	55 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-877226/2-A

Matrix: Water

Analysis Batch: 877634

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 877226

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.60		ng/L		115	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	5.16		ng/L		129	50 - 150
9CI-PF3ONS	3.74	3.97		ng/L		106	70 - 155
11CI-PF3OUdS	3.78	3.36		ng/L		89	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.99		ng/L		112	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.23		ng/L		103	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.9		ng/L		105	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	18.2		ng/L		91	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	89.2		5 - 130
13C5 PFPeA	114		40 - 130
13C5 PFHxA	114		40 - 130
13C4 PFHpA	120		40 - 130
13C8 PFOA	92.6		40 - 130
13C9 PFNA	85.6		40 - 130
13C6 PFDA	95.6		40 - 130
13C7 PFUnA	89.0		30 - 130
13C2 PFDoA	82.0		10 - 130
13C2 PFTeDA	62.5		10 - 130
13C3 PFBS	88.2		40 - 135
13C3 PFHxS	91.2		40 - 130
13C8 PFOS	95.7		40 - 130
13C8 FOSA	78.7		40 - 130
D3-NMeFOSAA	85.5		40 - 170
D5-NEtFOSAA	85.1		25 - 135
13C2 4:2 FTS	104		40 - 200
13C2 6:2 FTS	95.4		40 - 200
13C2 8:2 FTS	93.1		40 - 300
13C3 HFPO-DA	115		40 - 130
D7-NMeFOSE	69.4		10 - 130
D9-NEtFOSE	66.2		10 - 130
D5-NEtFOSA	63.3		10 - 130
D3-NMeFOSA	62.7		10 - 130

Method: 1633 - Percent Moisture

Lab Sample ID: 320-125031-9 DU

Matrix: Solid

Analysis Batch: 875107

Client Sample ID: BIO-A-25-202509

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	77		75		%		4	20
Percent Solids	23		25		%		11	20

Eurofins Sacramento

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

LCMS

Prep Batch: 877204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Total/NA	Solid	1633A Biosol P	
320-125031-10	BIO-A-24-202509	Total/NA	Solid	1633A Biosol P	
320-125031-12	BIO-A-23-202509	Total/NA	Solid	1633A Biosol P	
320-125031-13	BIO-B-202509	Total/NA	Solid	1633A Biosol P	
MB 320-877204/1-A	Method Blank	Total/NA	Solid	1633A Biosol P	
LCS 320-877204/3-A	Lab Control Sample	Total/NA	Solid	1633A Biosol P	
LCSD 320-877204/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A Biosol P	
LLCS 320-877204/2-A	Lab Control Sample	Total/NA	Solid	1633A Biosol P	

Prep Batch: 877226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-1	INF-02-202509	Total/NA	Water	1633A	
320-125031-2	INF-07-202509	Total/NA	Water	1633A	
320-125031-3	INF-08-202509	Total/NA	Water	1633A	
320-125031-4	INF-11-202509	Total/NA	Water	1633A	
320-125031-5	INF-18-202509	Total/NA	Water	1633A	
320-125031-6	INF-COMP-202509	Total/NA	Water	1633A	
320-125031-7	EFF-G-202509	Total/NA	Water	1633A	
320-125031-8	EB01-202509	Total/NA	Water	1633A	
320-125031-11	EB02-202509	Total/NA	Water	1633A	
MB 320-877226/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-877226/3-A	Lab Control Sample	Total/NA	Water	1633A	
LCSD 320-877226/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	
LLCS 320-877226/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 877619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Total/NA	Solid	1633A	877204
320-125031-10	BIO-A-24-202509	Total/NA	Solid	1633A	877204
320-125031-12	BIO-A-23-202509	Total/NA	Solid	1633A	877204
320-125031-13	BIO-B-202509	Total/NA	Solid	1633A	877204
MB 320-877204/1-A	Method Blank	Total/NA	Solid	1633A	877204
LCS 320-877204/3-A	Lab Control Sample	Total/NA	Solid	1633A	877204
LCSD 320-877204/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	877204
LLCS 320-877204/2-A	Lab Control Sample	Total/NA	Solid	1633A	877204

Analysis Batch: 877634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-1	INF-02-202509	Total/NA	Water	1633A	877226
320-125031-2	INF-07-202509	Total/NA	Water	1633A	877226
320-125031-3	INF-08-202509	Total/NA	Water	1633A	877226
320-125031-4	INF-11-202509	Total/NA	Water	1633A	877226
320-125031-5	INF-18-202509	Total/NA	Water	1633A	877226
320-125031-6	INF-COMP-202509	Total/NA	Water	1633A	877226
320-125031-7	EFF-G-202509	Total/NA	Water	1633A	877226
320-125031-8	EB01-202509	Total/NA	Water	1633A	877226
320-125031-11	EB02-202509	Total/NA	Water	1633A	877226
MB 320-877226/1-A	Method Blank	Total/NA	Water	1633A	877226
LCS 320-877226/3-A	Lab Control Sample	Total/NA	Water	1633A	877226
LCSD 320-877226/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	877226
LLCS 320-877226/2-A	Lab Control Sample	Total/NA	Water	1633A	877226

Eurofins Sacramento

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

General Chemistry

Analysis Batch: 875107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Total/NA	Solid	1633	
320-125031-10	BIO-A-24-202509	Total/NA	Solid	1633	
320-125031-12	BIO-A-23-202509	Total/NA	Solid	1633	
320-125031-13	BIO-B-202509	Total/NA	Solid	1633	
320-125031-9 DU	BIO-A-25-202509	Total/NA	Solid	1633	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-02-202509

Lab Sample ID: 320-125031-1

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			159.1 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 10:08	S1M	EET SAC

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			149.1 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 10:25	S1M	EET SAC

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			160.6 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 10:41	S1M	EET SAC

Client Sample ID: INF-11-202509

Lab Sample ID: 320-125031-4

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			154.7 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 10:58	S1M	EET SAC

Client Sample ID: INF-18-202509

Lab Sample ID: 320-125031-5

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			153.3 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 11:14	S1M	EET SAC

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			161.8 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 11:30	S1M	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			163 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 12:20	S1M	EET SAC

Client Sample ID: EB01-202509

Lab Sample ID: 320-125031-8

Date Collected: 09/08/25 13:40

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			162.5 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 12:36	S1M	EET SAC

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			875107	09/11/25 14:11	JCB	EET SAC

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			1.04 g	5.00 mL	877204	09/23/25 20:55	AWT	EET SAC
Total/NA	Analysis	1633A		1			877619	09/26/25 00:19	C1P	EET SAC

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			875107	09/11/25 14:11	JCB	EET SAC

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			1.09 g	5.00 mL	877204	09/23/25 20:55	AWT	EET SAC
Total/NA	Analysis	1633A		1			877619	09/26/25 00:35	C1P	EET SAC

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			156.9 mL	5.0 mL	877226	09/24/25 06:47	CGL	EET SAC
Total/NA	Analysis	1633A		1			877634	09/26/25 12:52	S1M	EET SAC

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			875107	09/11/25 14:11	JCB	EET SAC

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			1.04 g	5.00 mL	877204	09/23/25 20:55	AWT	EET SAC
Total/NA	Analysis	1633A		1			877619	09/26/25 00:51	C1P	EET SAC

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			875107	09/11/25 14:11	JCB	EET SAC

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			1.05 g	5.00 mL	877204	09/23/25 20:55	AWT	EET SAC
Total/NA	Analysis	1633A		1			877619	09/26/25 01:08	C1P	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids

1
2
3
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15

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633	Percent Moisture	EPA	EET SAC
1633A	Solid-Phase Extraction (SPE)	EPA	EET SAC
1633A Biosol P	Shake Extraction with SPE	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-125031-1	INF-02-202509	Water	09/08/25 23:59	09/10/25 10:00	Wisconsin
320-125031-2	INF-07-202509	Water	09/08/25 23:59	09/10/25 10:00	Wisconsin
320-125031-3	INF-08-202509	Water	09/08/25 23:59	09/10/25 10:00	Wisconsin
320-125031-4	INF-11-202509	Water	09/08/25 23:59	09/10/25 10:00	Wisconsin
320-125031-5	INF-18-202509	Water	09/08/25 23:59	09/10/25 10:00	Wisconsin
320-125031-6	INF-COMP-202509	Water	09/08/25 23:59	09/10/25 10:00	Wisconsin
320-125031-7	EFF-G-202509	Water	09/09/25 08:00	09/10/25 10:00	Wisconsin
320-125031-8	EB01-202509	Water	09/08/25 13:40	09/10/25 10:00	Wisconsin
320-125031-9	BIO-A-25-202509	Solid	09/08/25 14:38	09/10/25 10:00	Wisconsin
320-125031-10	BIO-A-24-202509	Solid	09/08/25 14:09	09/10/25 10:00	Wisconsin
320-125031-11	EB02-202509	Water	09/08/25 14:51	09/10/25 10:00	Wisconsin
320-125031-12	BIO-A-23-202509	Solid	09/08/25 15:08	09/10/25 10:00	Wisconsin
320-125031-13	BIO-B-202509	Solid	09/08/25 15:21	09/10/25 10:00	Wisconsin

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environment Testing

Client Information		Sampler: <u>Jennifer Faust</u>		Lab PM: <u>Jessica McAmmon</u>		Carrier Tracking No(s): <u>4493 3568 1450</u>		COC No: <u>202509</u>	
Client Contact: <u>Mike Ursin</u>		Phone: <u>608 222-1201</u>		E-Mail: <u>jessicame@madsewer.org</u>		State of Origin: <u>WI</u>		Page: <u>1</u> of <u>2</u>	
Company: <u>TRE 999 Fourier Dr Suite 101 Madison, WI 53717</u>		PWSID:		Analysis Requested					
Address: <u>Madison Metro Sewerage Dist</u>		Due Date Requested:		 320-125031 Chain of Custody					
City: <u>1610 Moorland Madison</u>		TAT Requested (days): <u>20 business days as per contract</u>							
State, Zip: <u>WI 53713</u>		Compliance Project: ☐ Yes ☐ No							
Phone: <u>608 222-1201</u>		PO #: <u>240819</u>							
Email: <u>mursin@trccompanies.com</u>		WO #:		Total Number of Containers					
Project Name: <u>PFAS Study</u>		Project #:							
Site: <u>MMSD</u>		SSOW#:							
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=sewage)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Preservation Codes	
								A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)	
								Other:	
								Special Instructions/Note	
INF-02 202509		9/8/25	23 59	C	W	N	N	X	
INF-07 202509		9/8/25	23 59	C	W	N	N	X	
INF-08 202509		9/8/25	23 59	C	W	N	N	X	
INF-11 202509		9/8/25	23 59	C	W	N	N	X	
INF-18-202509		9/8/25	23 59	C	W	N	N	X	
INF-COMP 202509		9/8/25	23 59	C	W	N	N	X	
EFF-6 202509		9/9/25	08:00	G	W	N	N	X	X
EB01-202509		9/8/25	13 40	G	W	N	N	X	
BIO A-25 202509		9/8/25	14 38	C	S	N	N	X	
BIO A 24-202509		9/8/25	14 09	C	S	N	N	X	
EB02-202509		9/8/25	14 51	G	W	N	N	X	
Possible Hazard Identification									
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I II, III, IV Other (specify)									
Special Instructions/QC Requirements									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>9/9/25 08 30</u>		Company: <u>MMSD</u>		Received by: <u>8</u>		Date/Time: <u>9/10/25 1000</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: <u>32</u>					

Reports to

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9/29/2025

eurofins

Environment Testing

[illegible]

Vi Vo

From: Auner, Lydia <LAuner@trccompanies.com>
Sent: Monday, September 15, 2025 6:43 AM
To: Vi Vo; Esser, Jessica; Morin, Kristen; Ursin, Mike
Subject: RE: [EXTERNAL] Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-125031-1 PFAS Sampling

Follow Up Flag: Follow up
Flag Status: Flagged

Unverified Sender: The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Yes, please proceed with the TOP assay for the biosolids samples.
Thanks,

Lydia Auner
Project Geologist



999 Fourier Drive, Suite 101, Madison, WI 53717
C 608.977.1089 | LAuner@trccompanies.com
[LinkedIn](#) | [Instagram](#) | TRCcompanies.com

From: Vi Vo <Vi.HieuVo@et.eurofinsus.com>
Sent: Friday, September 12, 2025 10:34 AM
To: Auner, Lydia <LAuner@trccompanies.com>; Esser, Jessica <JEsser@trccompanies.com>; Morin, Kristen <KMorin@trccompanies.com>; Ursin, Mike <MUrsin@trccompanies.com>
Subject: RE: [EXTERNAL] Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-125031-1 PFAS Sampling

This is an **External** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

Hi Lydia,

Just confirmed with our Prep Department Manager, TOP assay for biosolids requires only 10 grams – the 4 ounce jar will suffice for both 1633 analysis and TOP assay- would you like to proceed?

I can send a revised confirmation once confirmed.

With kind regards,

Vi Hieu Vo

Project Management Assistant
(916) 374-4344

Eurofins Environment Testing (USA)
880 Riverside Parkway
West Sacramento, CA 95605
USA

This email including its attachments may contain confidential and proprietary information. Any unauthorized disclosure or use of this email including its attachments is prohibited and may be prosecuted. If you are not the intended recipient, please inform the sender by an email reply and delete the message. Transmission by email is not secure and can result in errors or omissions in the content of the message. Despite state-of-the-art precautions we cannot guarantee that emails and attachments are free from viruses. We accept no liability for viruses or any transmission-related errors and omissions. You need to always virus[1]check any emails and attachments. Eurofins companies are independent legal entities that are bound only by acts of members of their respective management bodies. No other persons, legal or natural, have representation power unless specifically authorized by proxy or other legal means.

E-mail: Vi.HieuVo@et.eurofinsus.com
www.EurofinsUS.com/ENV

From: Auner, Lydia <LAuner@trccompanies.com>

Sent: Friday, September 12, 2025 7:29 AM

To: Vi Vo <Vi.HieuVo@et.eurofinsus.com>; Esser, Jessica <JEsser@trccompanies.com>; Morin, Kristen <KMorin@trccompanies.com>; Ursin, Mike <MUrsin@trccompanies.com>

Subject: RE: [EXTERNAL] Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-125031-1 PFAS Sampling

Unverified Sender: The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Hi Vi,

We had intended to include TOP assay for all the biosolids samples, I think it was mistakenly left off the COC (applies to all 4 samples starting with "BIO"). Did you receive biosolids containers for the TOP assay?

Lydia Auner

Project Geologist



999 Fourier Drive, Suite 101, Madison, WI 53717

C 608.977.1089 | LAuner@trccompanies.com

[LinkedIn](#) | [Instagram](#) | TRCcompanies.com

From: Vi Vo <TALS@reports.et.eurofinsus.com>

Sent: Thursday, September 11, 2025 3:51 PM

To: Esser, Jessica <JEsser@trccompanies.com>; Morin, Kristen <KMorin@trccompanies.com>; Auner, Lydia <LAuner@trccompanies.com>; Ursin, Mike <MUrsin@trccompanies.com>

Subject: [EXTERNAL] Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-125031-1 PFAS Sampling

This is an **External** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

Hello,

Attached please find the sample confirmation files for job 320-125031-1; PFAS Sampling

The samples were received on 9/10/2025 10:00 AM.

Please review the attachments for accuracy and notify your Project Manager of any discrepancies as quickly as possible.

Any discrepancies not communicated in a timely fashion could result in missed holding times, TAT delays and may potentially incur additional charges.

Please feel free to contact me or your PM Micah Smith if you have any questions.

Thank you.

Vi H Vo
Project Manager Assistant

Eurofins Sacramento

E-mail: vi.hieuvo@et.eurofinsus.com
www.eurofinsus.com/env



Reference: [320-713654]
Attachments: 3

■

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 10/22/2025 3:30:53 PM Revision 3

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-125031-2

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
10/22/2025 3:30:53 PM
Revision 3

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-125031-2

Job ID: 320-125031-2

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Job Narrative 320-125031-2

REVISION

The report being provided is a revision of the original report sent on 10/7/2025. The report (revision 3) is being revised to include PFTeDA and PFDS data for the QC associated with preparation batch 878028 and analytical batch 878654.

Report revision history

Revision 2 - 10/21/2025 - Reason – Added 8:2 FTS data for preparation batch 878028 and analytical batch 878654.

Revision 1 - 10/15/2025 - Reason - Client requested the Difference and Summary TOPs reports removed.

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/10/2025 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C.

PFAS

Method PFC_IDA - Post-Treatment: The following sample in preparation batch 320-876144 was observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction: EFF-G-202509 (320-125031-7).

Method PFC_IDA - Post-Treatment: The labeled analyte M2-4:2 FTS is converted to PFBA during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors: EFF-G-202509 (320-125031-7) and (MB 320-876144/1-A).

Method PFC_IDA - Post-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: EFF-G-202509 (320-125031-7), (LCS 320-876144/2-A), (LCSD 320-876144/3-A) and (MB 320-876144/1-A).

Method PFC_IDA - Post-Treatment: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-876144 and analytical batch 320-876733 recovered outside control limits for Perfluorotridecanoic acid (PFTeDA) and Perfluorotetradecanoic acid (PFTeDA). Re-analysis confirms the recoveries outside control limits. The associated samples were non-detect (ND) for this analyte and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No such results were identified and therefore there is no adverse impact on the reported results: EFF-G-202509 (320-125031-7), (LCS 320-876144/2-A) and (LCSD 320-876144/3-A).

Method PFC_IDA - Post-Treatment: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 320-876144 and analytical batch 320-876733 recovered outside control limits for the following analytes: Nonfluoro-3,6-dioxahexanoic acid (NFDHA). This analyte was biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method PFC_IDA - Post-Treatment: Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NEtFOSAA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes: EFF-G-202509 (320-125031-7), (LCS 320-876144/2-A) and (LCSD

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-125031-2

Job ID: 320-125031-2 (Continued)

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320-876144/3-A).

Method PFC_IDA - Post-Treatment: The labeled analyte M2-4:2 FTS is converted to Perfluorobutanoic acid (PFBA) during the oxidation step of the TOP assay. The PFBA result in the Post-Treatment Method Blank (MB) indicates how much of a field sample's Post-Treatment PFBA result is contributed by the Reverse Surrogate, when adjusted for dilution factors: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12), BIO-B-202509 (320-125031-13) and (MB 320-878032/1-A).

Method PFC_IDA - Post-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12), BIO-B-202509 (320-125031-13), (LCS 320-878032/2-A), (LCSD 320-878032/3-A) and (MB 320-878032/1-A).

Method PFC_IDA - Post-Treatment: Zero to ten percent recovery (0 - 10%) of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NeFOSAA, etc.) and enhanced recoveries of PFCA is observed in the Post-Treatment Laboratory Control Sample (LCS) and Post-Treatment Laboratory Control Sample Duplicate (LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12), BIO-B-202509 (320-125031-13), (LCS 320-878032/2-A), (LCSD 320-878032/3-A) and (MB 320-878032/1-A).

Method PFC_IDA - Pre-Treatment: The following sample in preparation batch 320-876143 was observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction: EFF-G-202509 (320-125031-7).

Method PFC_IDA - Pre-Treatment: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-876143 and analytical batch 320-876688 recovered outside control limits for N-methylperfluorooctane sulfonamide (NMeFOSA). Re-analysis confirms the recoveries outside control limits. The associated samples were non-detect (ND) for this analyte and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No such results were identified and therefore there is no adverse impact on the reported results: EFF-G-202509 (320-125031-7), (LCS 320-876143/2-A) and (LCSD 320-876143/3-A).

Method PFC_IDA - Pre-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: EFF-G-202509 (320-125031-7), (LCS 320-876143/2-A), (LCSD 320-876143/3-A) and (MB 320-876143/1-A).

Method PFC_IDA - Pre-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12), BIO-B-202509 (320-125031-13), (LCS 320-878028/2-A), (LCSD 320-878028/3-A) and (MB 320-878028/1-A).

Method PFC_IDA - Pre-Treatment: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. The associated analytes have been flagged: BIO-A-24-202509 (320-125031-10) and BIO-A-23-202509 (320-125031-12).

Method PFC_IDA - Pre-Treatment: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12) and BIO-B-202509 (320-125031-13). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method PFC_IDA - Pre-Treatment: The laboratory control sample duplicate (LCSD) for preparation batch 320-878028 and analytical batch 320-878654 recovered outside control limits for the following analyte: 8:2 FTS. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported: BIO-A-25-202509 (320-125031-9) and BIO-A-24-202509 (320-125031-10).

Method PFC_IDA - Pre-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate". It is used to monitor the oxidation efficiency of the TOP assay. This analyte is fortified into all sample fractions prior to any processing. The recovery of this analyte should be 0% in Post-Treatment fractions, indicating complete oxidation of the sample: BIO-A-25-202509 (320-125031-9), BIO-A-24-202509 (320-125031-10), BIO-A-23-202509 (320-125031-12), BIO-B-202509 (320-125031-13), (LCS 320-879326/2-A), (LCSD 320-879326/3-A) and (MB 320-879326/1-A).

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-125031-2

Job ID: 320-125031-2 (Continued)

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No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.4	J	13	3.1	ng/L	1			537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	12		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	16		5.0	1.5	ng/L	1			537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	1.5	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	9.1		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	6.5		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	7.9		5.0	1.4	ng/L	1			537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	4.5	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.0	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	50	B	13	3.1	ng/L	1			537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	21	*+	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	19		5.0	1.5	ng/L	1			537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	2.1	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	9.7		5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	4.6	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	7.9		5.0	1.4	ng/L	1			537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	3.9	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	4.6		4.4	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA) - RE	4.0	J	4.4	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA) - RE	12		4.4	0.91	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA) - RE	12		4.4	0.68	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA) - RE	9.8		4.4	1.2	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA) - RE	1.2	J	4.4	0.48	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA) - RE	5.5		4.4	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA) - RE	1.7	J	4.4	0.66	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS) - RE	5.0		4.4	0.83	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS) - RE	16		4.4	0.95	ug/Kg	1		✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509 (Continued)

Lab Sample ID: 320-125031-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanesulfonamide (PFOSA) - RE	1.0	J	4.4	0.72	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RE	16		4.4	0.51	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE) - RE	7.6		4.4	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) - RE	5.1		4.4	0.62	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RE	48		4.4	0.83	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	14		4.4	0.91	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	96	B *+	4.3	0.99	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	67	*+	4.3	0.89	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	42	*+	4.3	0.67	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	19		4.3	0.82	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	40	*+	4.3	1.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	12	*+	4.3	0.47	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	11		4.3	1.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	4.5		4.3	0.90	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	4.0	J	4.3	0.65	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.3	J *	4.3	0.45	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.4	J	4.3	0.80	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	13		4.3	0.82	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	4.3	0.62	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	13		4.3	0.93	ug/Kg	1		✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.6		4.0	0.96	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA) - RE	7.6		4.0	0.92	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA) - RE	23		4.0	0.83	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA) - RE	34		4.0	0.62	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA) - RE	4.0		4.0	0.76	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA) - RE	31		4.0	1.1	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA) - RE	1.9	J	4.0	0.44	ug/Kg	1		✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509 (Continued)

Lab Sample ID: 320-125031-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorodecanoic acid (PFDA) - RE	15		4.0	0.96	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroundecanoic acid (PFUnA) - RE	1.7	J	4.0	0.84	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA) - RE	3.3	J	4.0	0.60	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS) - RE	5.5		4.0	0.76	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS) - RE	2.7	J I	4.0	0.58	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS) - RE	15		4.0	0.87	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA) - RE	1.5	J	4.0	0.66	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RE	28		4.0	0.46	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS - RE	1.3	J	4.0	0.54	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE) - RE	5.2		4.0	0.95	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE) - RE	5.6		4.0	0.56	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RE	17		4.0	0.76	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	8.6		4.0	0.83	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	200	B *+	4.0	0.93	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	150	*+	4.0	0.83	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	100	*+	4.0	0.63	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	49		4.0	0.77	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	82	*+	4.0	1.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	23	*+	4.0	0.44	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	23		4.0	0.97	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	7.4		4.0	0.85	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	6.9		4.0	0.61	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.9	J *	4.0	0.42	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	2.3	J	4.0	0.75	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	22		4.0	0.77	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	4.0	0.59	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	13		4.0	0.87	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanesulfonic acid (PFDS)	1.2	J	4.0	1.1	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.6		2.4	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA) - RE	8.0		2.4	0.55	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA) - RE	18		2.4	0.49	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA) - RE	37		2.4	0.37	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA) - RE	3.0		2.4	0.45	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA) - RE	35		2.4	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA) - RE	1.7	J	2.4	0.26	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA) - RE	13		2.4	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroundecanoic acid (PFUnA) - RE	1.1	J	2.4	0.50	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA) - RE	2.9		2.4	0.36	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorotridecanoic acid (PFTTrDA) - RE	0.30	J	2.4	0.25	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorotetradecanoic acid (PFTeDA) - RE	0.93	J	2.4	0.44	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS) - RE	5.4		2.4	0.45	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS) - RE	1.8	J	2.4	0.35	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS) - RE	13		2.4	0.51	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanesulfonic acid (PFDS) - RE	1.4	J	2.4	0.62	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA) - RE	1.1	J	2.4	0.39	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RE	23		2.4	0.27	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS - RE	2.5		2.4	0.32	ug/Kg	1		✱	537 (modified)	Pre-Treatment
8:2 FTS - RE	1.1	J	2.4	0.42	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE) - RE	6.2		2.4	0.56	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE) - RE	5.2		2.4	0.33	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RE	15		2.4	0.45	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	11		2.4	0.49	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	200	B **	2.4	0.55	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	120	**	2.4	0.49	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	99	**	2.4	0.37	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	38		2.4	0.45	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	83	**	2.4	0.63	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509 (Continued)

Lab Sample ID: 320-125031-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	19	*+	2.4	0.26	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	23		2.4	0.57	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	5.5		2.4	0.50	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	6.1		2.4	0.36	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.5	J *	2.4	0.25	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.9	J	2.4	0.44	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	32		2.4	0.45	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.4	J	2.4	0.35	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	12		2.4	0.51	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanesulfonic acid (PFDS)	0.81	J	2.4	0.62	ug/Kg	1		✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS) - RE	15	J I	18	3.8	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) - RE	10	J	18	2.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA) - RE	130		18	3.3	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA) - RE	6.9	J	18	3.6	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	170	B *+	18	4.1	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	130	*+	18	3.6	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	53	*+	18	2.7	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	37		18	3.4	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	41	*+	18	4.7	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	23	*+	18	1.9	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	12	J	18	4.2	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	9.0	J	18	3.7	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	5.6	J	18	2.7	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	3.7	J	18	3.3	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	7.5	J	18	3.4	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	11	J	18	3.8	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.4	J	13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoropentanoic acid (PFPeA)	12		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorohexanoic acid (PFHxA)	16		5.0	1.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorooctanoic acid (PFOA)	9.1		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorobutanesulfonic acid (PFBS)	6.5		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorohexanesulfonic acid (PFHxS)	7.9		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorooctanesulfonic acid (PFOS)	4.5	J	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
4:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
6:2 FTS	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
8:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND	*	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		09/17/25 19:40	09/21/25 17:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.0	J	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 17:08	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	76		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFBA	91		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C5 PFPeA	94		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFHxA	104		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFHpA	101		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFOA	89		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C5 PFNA	88		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFDA	75		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFUnA	66		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFDoA	55		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFTeDA	52		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C3 PFBS	100		25 - 150				09/17/25 19:40	09/21/25 17:08	1
18O2 PFHxS	90		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFOS	79		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D3-NMeFOSAA	75		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D5-NEtFOSAA	82		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 4:2 FTS	94		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 6:2 FTS	77		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 8:2 FTS	70		25 - 150				09/17/25 19:40	09/21/25 17:08	1
d-N-MeFOSA-M	50		25 - 150				09/17/25 19:40	09/21/25 17:08	1
d-N-EtFOSA-M	40		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D7-NMeFOSE	40		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D9-NEtFOSE	39		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C3 HFPO-DA	103		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C-6:2 FTCA	105		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C-8:2 FTCA	115		25 - 150				09/17/25 19:40	09/21/25 17:08	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	50	B	13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoropentanoic acid (PFPeA)	21	++	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorohexanoic acid (PFHxA)	19		5.0	1.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoroheptanoic acid (PFHpA)	2.1	J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorooctanoic acid (PFOA)	9.7		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorotridecanoic acid (PFTeDA)	ND	-	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorotetradecanoic acid (PFTeDA)	ND	-	5.0	1.8	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorobutanesulfonic acid (PFBS)	4.6	J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorohexanesulfonic acid (PFHxS)	7.9		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorooctanesulfonic acid (PFOS)	3.9	J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
4:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
6:2 FTS	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
8:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		09/17/25 19:44	09/21/25 20:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*+	5.0	1.6	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	78		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C4 PFBA	97		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C5 PFPeA	92		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFHxA	97		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C4 PFHpA	102		25 - 150	09/17/25 19:44	09/21/25 20:53	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	90		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C5 PFNA	89		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFDA	84		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFUnA	89		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFDoA	83		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFTeDA	77		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C3 PFBS	97		25 - 150	09/17/25 19:44	09/21/25 20:53	1
18O2 PFHxS	87		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C4 PFOS	82		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D3-NMeFOSAA	90		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D5-NEtFOSAA	104		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 4:2 FTS	0		0 - 10	09/17/25 19:44	09/21/25 20:53	1
13C2 6:2 FTS	71		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 8:2 FTS	66		25 - 150	09/17/25 19:44	09/21/25 20:53	1
d-N-MeFOSA-M	65		25 - 150	09/17/25 19:44	09/21/25 20:53	1
d-N-EtFOSA-M	53		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D7-NMeFOSE	68		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D9-NEtFOSE	62		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C3 HFPO-DA	108		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C-6:2 FTCA	105		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C-8:2 FTCA	117		25 - 150	09/17/25 19:44	09/21/25 20:53	1

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6		4.4	1.1	ug/Kg	☼	09/28/25 19:52	10/01/25 23:55	1
8:2 FTS	ND	*+	4.4	0.77	ug/Kg	☼	09/28/25 19:52	10/01/25 23:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	110		25 - 150				09/28/25 19:52	10/01/25 23:55	1
13C2 8:2 FTS	175	*5+	25 - 150				09/28/25 19:52	10/01/25 23:55	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0	J	4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoropentanoic acid (PFPeA)	12		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorohexanoic acid (PFHxA)	12		4.4	0.68	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoroheptanoic acid (PFHpA)	ND		4.4	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorooctanoic acid (PFOA)	9.8		4.4	1.2	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorononanoic acid (PFNA)	1.2	J	4.4	0.48	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorodecanoic acid (PFDA)	5.5		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoroundecanoic acid (PFUnA)	ND		4.4	0.92	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorododecanoic acid (PFDoA)	1.7	J	4.4	0.66	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorotridecanoic acid (PFTTrDA)	ND		4.4	0.46	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorotetradecanoic acid (PFTeDA)	ND		4.4	0.81	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorobutanesulfonic acid (PFBS)	5.0		4.4	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		4.4	0.81	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		4.4	0.64	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorooctanesulfonic acid (PFOS)	16		4.4	0.95	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorononanesulfonic acid (PFNS)	ND		4.4	0.64	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorooctanesulfonamide (PFOSA)	1.0 J		4.4	0.72	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	16		4.4	0.51	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
4:2 FTS	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
6:2 FTS	ND		4.4	0.59	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.6		4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.1		4.4	0.62	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
9CI-PF3ONS	ND		4.4	0.77	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
11CI-PF3OUdS	ND		4.4	0.68	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.4	0.86	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	48		4.4	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	14		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.4	0.88	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.4	0.99	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.4	0.53	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		4.4	0.70	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	72		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFBA	77		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C5 PFPeA	80		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFHxA	92		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFHpA	90		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFOA	91		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C5 PFNA	89		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFDA	89		25 - 150	10/05/25 19:13	10/07/25 01:40	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PUnA	94		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFDaA	74		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFTeDA	41		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C3 PFBS	86		25 - 150	10/05/25 19:13	10/07/25 01:40	1
18O2 PFHxS	84		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFOS	78		25 - 150	10/05/25 19:13	10/07/25 01:40	1
D3-NMeFOSAA	61		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 4:2 FTS	150		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 6:2 FTS	167	*5+	25 - 150	10/05/25 19:13	10/07/25 01:40	1
d-N-MeFOSA-M	47		25 - 150	10/05/25 19:13	10/07/25 01:40	1
d-N-EtFOSA-M	38		25 - 150	10/05/25 19:13	10/07/25 01:40	1
D7-NMeFOSE	43		25 - 150	10/05/25 19:13	10/07/25 01:40	1
D9-NEtFOSE	52		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C3 HFPO-DA	79		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C-6:2 FTCA	86		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C-8:2 FTCA	90		25 - 150	10/05/25 19:13	10/07/25 01:40	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	96	B **	4.3	0.99	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoropentanoic acid (PFPeA)	67	**	4.3	0.89	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorohexanoic acid (PFHxA)	42	**	4.3	0.67	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoroheptanoic acid (PFHpA)	19		4.3	0.82	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorooctanoic acid (PFOA)	40	**	4.3	1.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorononanoic acid (PFNA)	12	**	4.3	0.47	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorodecanoic acid (PFDA)	11		4.3	1.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoroundecanoic acid (PFUnA)	4.5		4.3	0.90	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorododecanoic acid (PFDaA)	4.0	J	4.3	0.65	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorotridecanoic acid (PFTTrDA)	1.3	J *	4.3	0.45	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorotetradecanoic acid (PFTeDA)	1.4	J	4.3	0.80	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorobutanesulfonic acid (PFBS)	13		4.3	0.82	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.3	0.80	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	4.3	0.62	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	*+	4.3	1.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorooctanesulfonic acid (PFOS)	13		4.3	0.93	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorononanesulfonic acid (PFNS)	ND		4.3	0.62	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.3	1.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorododecanesulfonic acid (PFDaS)	ND		4.3	1.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorooctanesulfonamide (PFOSA)	ND		4.3	0.71	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.3	0.50	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.3	1.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		4.3	1.1	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
6:2 FTS	ND		4.3	0.58	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
8:2 FTS	ND		4.3	0.75	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.3	1.0	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.3	1.1	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.3	1.0	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.3	0.60	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
9Cl-PF3ONS	ND		4.3	0.75	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.3	0.89	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
11Cl-PF3OUdS	ND		4.3	0.67	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.3	0.84	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.3	0.89	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.3	0.82	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.3	0.89	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.3	0.86	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.3	0.97	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	+	4.3	0.52	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		4.3	0.69	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	58		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFBA	98		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C5 PFPeA	95		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFHxA	103		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFHpA	102		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFOA	90		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C5 PFNA	83		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFDA	68		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFUnA	74		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFDoA	68		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFTeDA	76		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C3 PFBS	107		25 - 150	09/28/25 20:30	10/02/25 03:11	1
18O2 PFHxS	100		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFOS	74		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D3-NMeFOSAA	65		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D5-NEtFOSAA	78		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:11	1
13C2 6:2 FTS	89		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 8:2 FTS	67		25 - 150	09/28/25 20:30	10/02/25 03:11	1
d-N-MeFOSA-M	56		25 - 150	09/28/25 20:30	10/02/25 03:11	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d-N-EtFOSA-M	46		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D7-NMeFOSE	55		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D9-NEtFOSE	53		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C3 HFPO-DA	105		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C-6:2 FTCA	95		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C-8:2 FTCA	88		25 - 150	09/28/25 20:30	10/02/25 03:11	1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	ND		4.0	0.74	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.0	1.0	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	6.6		4.0	0.96	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
8:2 FTS	ND	*+	4.0	0.70	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFTeDA	57		25 - 150				09/28/25 19:52	10/02/25 00:09	1
13C4 PFOS	100		25 - 150				09/28/25 19:52	10/02/25 00:09	1
D5-NEtFOSAA	122		25 - 150				09/28/25 19:52	10/02/25 00:09	1
13C2 8:2 FTS	165	*5+	25 - 150				09/28/25 19:52	10/02/25 00:09	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.6		4.0	0.92	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoropentanoic acid (PFPeA)	23		4.0	0.83	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorohexanoic acid (PFHxA)	34		4.0	0.62	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoroheptanoic acid (PFHpA)	4.0		4.0	0.76	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorooctanoic acid (PFOA)	31		4.0	1.1	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorononanoic acid (PFNA)	1.9 J		4.0	0.44	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorodecanoic acid (PFDA)	15		4.0	0.96	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoroundecanoic acid (PFUnA)	1.7 J		4.0	0.84	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorododecanoic acid (PFDoA)	3.3 J		4.0	0.60	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		4.0	0.42	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorobutanesulfonic acid (PFBS)	5.5		4.0	0.76	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.0	0.74	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorohexanesulfonic acid (PFHxS)	2.7 J I		4.0	0.58	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.0	0.99	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorooctanesulfonic acid (PFOS)	15		4.0	0.87	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorononanesulfonic acid (PFNS)	ND		4.0	0.58	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.0	0.95	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (PFOSA)	1.5	J	4.0	0.66	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	28		4.0	0.46	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
4:2 FTS	ND		4.0	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
6:2 FTS	1.3	J	4.0	0.54	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.0	0.95	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.0	0.99	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.2		4.0	0.95	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.6		4.0	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
9CI-PF3ONS	ND		4.0	0.70	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.0	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
11CI-PF3OUdS	ND		4.0	0.62	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.0	0.78	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		4.0	0.76	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.6		4.0	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.0	0.80	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.0	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.0	0.48	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		4.0	0.64	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	75		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFBA	84		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C5 PFPeA	84		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFHxA	92		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFHpA	93		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFOA	94		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C5 PFNA	92		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFDA	89		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFUnA	98		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFDoA	82		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C3 PFBS	86		25 - 150				10/05/25 19:13	10/07/25 01:54	1
18O2 PFHxS	87		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFOS	81		25 - 150				10/05/25 19:13	10/07/25 01:54	1
D3-NMeFOSAA	72		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 4:2 FTS	130		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 6:2 FTS	151	*5+	25 - 150				10/05/25 19:13	10/07/25 01:54	1
d-N-MeFOSA-M	57		25 - 150				10/05/25 19:13	10/07/25 01:54	1
d-N-EtFOSA-M	56		25 - 150				10/05/25 19:13	10/07/25 01:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D7-NMeFOSE	57		25 - 150	10/05/25 19:13	10/07/25 01:54	1
D9-NEtFOSE	65		25 - 150	10/05/25 19:13	10/07/25 01:54	1
13C3 HFPO-DA	80		25 - 150	10/05/25 19:13	10/07/25 01:54	1
13C-6:2 FTCA	92		25 - 150	10/05/25 19:13	10/07/25 01:54	1
13C-8:2 FTCA	78		25 - 150	10/05/25 19:13	10/07/25 01:54	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	200	B **	4.0	0.93	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoropentanoic acid (PFPeA)	150	+	4.0	0.83	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorohexanoic acid (PFHxA)	100	+	4.0	0.63	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoroheptanoic acid (PFHpA)	49		4.0	0.77	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorooctanoic acid (PFOA)	82	+	4.0	1.1	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorononanoic acid (PFNA)	23	+	4.0	0.44	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorodecanoic acid (PFDA)	23		4.0	0.97	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoroundecanoic acid (PFUnA)	7.4		4.0	0.85	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorododecanoic acid (PFDoA)	6.9		4.0	0.61	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorotridecanoic acid (PFTTrDA)	1.9	J *	4.0	0.42	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorotetradecanoic acid (PFTeDA)	2.3	J	4.0	0.75	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorobutanesulfonic acid (PFBS)	22		4.0	0.77	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.0	0.75	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	4.0	0.59	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	+	4.0	1.0	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorooctanesulfonic acid (PFOS)	13		4.0	0.87	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorononanesulfonic acid (PFNS)	ND		4.0	0.59	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorodecanesulfonic acid (PFDS)	1.2	J	4.0	1.1	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.0	0.95	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorooctanesulfonamide (PFOSA)	ND		4.0	0.67	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.0	0.47	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.0	0.97	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
4:2 FTS	ND		4.0	1.0	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
6:2 FTS	ND		4.0	0.55	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
8:2 FTS	ND		4.0	0.71	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.0	0.95	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.0	1.0	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.0	0.95	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.0	0.57	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		4.0	0.71	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.0	0.83	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
11CI-PF3OUdS	ND		4.0	0.63	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.0	0.79	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.83	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.0	0.77	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.0	0.83	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.0	0.81	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.0	0.91	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	+	4.0	0.49	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		4.0	0.65	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	66		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFBA	95		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C5 PFPeA	93		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFHxA	100		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFHpA	106		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFOA	90		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C5 PFNA	88		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFDA	76		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFUnA	82		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFDoA	73		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFTeDA	79		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C3 PFBS	104		25 - 150	09/28/25 20:30	10/02/25 03:25	1
18O2 PFHxS	94		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFOS	75		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D3-NMeFOSAA	80		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D5-NEtFOSAA	91		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:25	1
13C2 6:2 FTS	84		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 8:2 FTS	81		25 - 150	09/28/25 20:30	10/02/25 03:25	1
d-N-MeFOSA-M	64		25 - 150	09/28/25 20:30	10/02/25 03:25	1
d-N-EtFOSA-M	57		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D7-NMeFOSE	65		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D9-NEtFOSE	61		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C3 HFPO-DA	103		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C-6:2 FTCA	104		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C-8:2 FTCA	93		25 - 150	09/28/25 20:30	10/02/25 03:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.6		2.4	0.57	ug/Kg	☼	09/28/25 19:52	10/02/25 00:23	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	113		25 - 150				09/28/25 19:52	10/02/25 00:23	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.0		2.4	0.55	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoropentanoic acid (PFPeA)	18		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorohexanoic acid (PFHxA)	37		2.4	0.37	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoroheptanoic acid (PFHpA)	3.0		2.4	0.45	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorooctanoic acid (PFOA)	35		2.4	0.63	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorononanoic acid (PFNA)	1.7 J		2.4	0.26	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorodecanoic acid (PFDA)	13		2.4	0.57	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoroundecanoic acid (PFUnA)	1.1 J		2.4	0.50	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorododecanoic acid (PFDoA)	2.9		2.4	0.36	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorotridecanoic acid (PFTTrDA)	0.30 J		2.4	0.25	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorotetradecanoic acid (PFTTeDA)	0.93 J		2.4	0.44	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorobutanesulfonic acid (PFBS)	5.4		2.4	0.45	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.4	0.44	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorohexanesulfonic acid (PFHxS)	1.8 J		2.4	0.35	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.4	0.59	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorooctanesulfonic acid (PFOS)	13		2.4	0.51	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorononanesulfonic acid (PFNS)	ND		2.4	0.35	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorodecanesulfonic acid (PFDS)	1.4 J		2.4	0.62	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.4	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorooctanesulfonamide (PFOSA)	1.1 J		2.4	0.39	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	23		2.4	0.27	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
4:2 FTS	ND		2.4	0.61	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
6:2 FTS	2.5		2.4	0.32	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
8:2 FTS	1.1 J		2.4	0.42	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.4	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.4	0.59	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.2		2.4	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.2		2.4	0.33	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
9CI-PF3ONS	ND		2.4	0.42	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
11CI-PF3OUdS	ND		2.4	0.37	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.4	0.46	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		2.4	0.45	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.4	0.48	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.4	0.54	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.4	0.29	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.4	0.38	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	85		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFBA	87		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C5 PFPeA	88		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFHxA	95		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFHpA	98		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFOA	101		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C5 PFNA	99		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFDA	100		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFUnA	108		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFDoA	85		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFTeDA	41		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C3 PFBS	92		25 - 150	10/05/25 19:13	10/07/25 02:08	1
18O2 PFHxS	89		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFOS	82		25 - 150	10/05/25 19:13	10/07/25 02:08	1
D3-NMeFOSAA	78		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 4:2 FTS	167	*5+	25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 6:2 FTS	199	*5+	25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 8:2 FTS	186	*5+	25 - 150	10/05/25 19:13	10/07/25 02:08	1
d-N-MeFOSA-M	58		25 - 150	10/05/25 19:13	10/07/25 02:08	1
d-N-EtFOSA-M	44		25 - 150	10/05/25 19:13	10/07/25 02:08	1
D7-NMeFOSE	56		25 - 150	10/05/25 19:13	10/07/25 02:08	1
D9-NEtFOSE	58		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C3 HFPO-DA	84		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C-6:2 FTCA	99		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C-8:2 FTCA	91		25 - 150	10/05/25 19:13	10/07/25 02:08	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	200	B **	2.4	0.55	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1
Perfluoropentanoic acid (PFPeA)	120	**	2.4	0.49	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1
Perfluorohexanoic acid (PFHxA)	99	**	2.4	0.37	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1
Perfluoroheptanoic acid (PFHpA)	38		2.4	0.45	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	83	++	2.4	0.63	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorononanoic acid (PFNA)	19	++	2.4	0.26	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorodecanoic acid (PFDA)	23		2.4	0.57	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoroundecanoic acid (PFUnA)	5.5		2.4	0.50	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorododecanoic acid (PFDoA)	6.1		2.4	0.36	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorotridecanoic acid (PFTTrDA)	1.5	J *	2.4	0.25	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorotetradecanoic acid (PFTeDA)	1.9	J	2.4	0.44	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorobutanesulfonic acid (PFBS)	32		2.4	0.45	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.4	0.44	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	J	2.4	0.35	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	++	2.4	0.59	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorooctanesulfonic acid (PFOS)	12		2.4	0.51	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorononanesulfonic acid (PFNS)	ND		2.4	0.35	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorodecanesulfonic acid (PFDS)	0.81	J	2.4	0.62	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.4	0.56	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.4	0.39	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.4	0.27	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.4	0.57	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
4:2 FTS	ND		2.4	0.61	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
6:2 FTS	ND		2.4	0.32	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
8:2 FTS	ND		2.4	0.42	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.4	0.56	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.4	0.59	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.4	0.56	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.4	0.33	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
9CI-PF3ONS	ND		2.4	0.42	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.4	0.49	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
11CI-PF3OUdS	ND		2.4	0.37	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.4	0.46	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.4	0.49	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		2.4	0.45	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		2.4	0.49	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.4	0.48	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.4	0.54	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	+	2.4	0.29	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.4	0.38	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	64		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFBA	97		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C5 PFPeA	96		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFHxA	103		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFHpA	104		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFOA	89		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C5 PFNA	90		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFDA	76		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFUnA	76		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFDoA	68		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFTeDA	79		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C3 PFBS	107		25 - 150	09/28/25 20:30	10/02/25 03:39	1
18O2 PFHxS	102		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFOS	82		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D3-NMeFOSAA	72		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D5-NEtFOSAA	85		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:39	1
13C2 6:2 FTS	94		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 8:2 FTS	80		25 - 150	09/28/25 20:30	10/02/25 03:39	1
d-N-MeFOSA-M	63		25 - 150	09/28/25 20:30	10/02/25 03:39	1
d-N-EtFOSA-M	56		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D7-NMeFOSE	60		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D9-NEtFOSE	58		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C3 HFPO-DA	105		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C-6:2 FTCA	100		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C-8:2 FTCA	101		25 - 150	09/28/25 20:30	10/02/25 03:39	1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.2	ug/Kg	☼	09/28/25 19:52	10/02/25 00:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	118		25 - 150				09/28/25 19:52	10/02/25 00:37	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		18	4.0	ug/Kg	☆	10/05/25 19:13	10/07/25 02:22	1
Perfluoropentanoic acid (PFPeA)	ND		18	3.6	ug/Kg	☆	10/05/25 19:13	10/07/25 02:22	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		18	2.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoroheptanoic acid (PFHpA)	ND		18	3.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorooctanoic acid (PFOA)	ND		18	4.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorononanoic acid (PFNA)	ND		18	1.9	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorodecanoic acid (PFDA)	ND		18	4.2	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoroundecanoic acid (PFUnA)	ND		18	3.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorododecanoic acid (PFDoA)	ND		18	2.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorotridecanoic acid (PFTrDA)	ND		18	1.8	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.2	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		18	3.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.2	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorooctanesulfonic acid (PFOS)	15	J I	18	3.8	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorododecanesulfonic acid (PFDoS)	ND		18	4.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	2.9	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10	J	18	2.0	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
4:2 FTS	ND		18	4.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
6:2 FTS	ND		18	2.4	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
8:2 FTS	ND		18	3.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
9CI-PF3ONS	ND		18	3.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
11CI-PF3OUdS	ND		18	2.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.4	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	130		18	3.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	6.9	J	18	3.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.0	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		18	2.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	2.8	ug/Kg	☆	10/05/25 19:13	10/07/25 02:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	81		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFBA	84		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C5 PFPeA	85		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFHxA	97		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFHpA	96		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFOA	93		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C5 PFNA	97		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFDA	97		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFUnA	98		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFDaA	86		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFTeDA	51		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C3 PFBS	94		25 - 150				10/05/25 19:13	10/07/25 02:22	1
18O2 PFHxS	91		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFOS	88		25 - 150				10/05/25 19:13	10/07/25 02:22	1
D3-NMeFOSAA	80		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 4:2 FTS	164	*5+	25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 6:2 FTS	160	*5+	25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 8:2 FTS	184	*5+	25 - 150				10/05/25 19:13	10/07/25 02:22	1
d-N-MeFOSA-M	60		25 - 150				10/05/25 19:13	10/07/25 02:22	1
d-N-EtFOSA-M	59		25 - 150				10/05/25 19:13	10/07/25 02:22	1
D7-NMeFOSE	56		25 - 150				10/05/25 19:13	10/07/25 02:22	1
D9-NEtFOSE	68		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C3 HFPO-DA	87		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C-6:2 FTCA	89		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C-8:2 FTCA	87		25 - 150				10/05/25 19:13	10/07/25 02:22	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	170	B **	18	4.1	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoropentanoic acid (PFPeA)	130	**	18	3.6	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorohexanoic acid (PFHxA)	53	**	18	2.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoroheptanoic acid (PFHpA)	37		18	3.4	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorooctanoic acid (PFOA)	41	**	18	4.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorononanoic acid (PFNA)	23	**	18	1.9	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorodecanoic acid (PFDA)	12	J	18	4.2	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoroundecanoic acid (PFUnA)	9.0	J	18	3.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorododecanoic acid (PFDaA)	5.6	J	18	2.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorotridecanoic acid (PFTTrDA)	ND	*-	18	1.9	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorotetradecanoic acid (PFTeDA)	3.7	J	18	3.3	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorobutanesulfonic acid (PFBS)	7.5	J	18	3.4	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.3	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.6	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND	++	18	4.3	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorooctanesulfonic acid (PFOS)	11	J	18	3.8	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	2.9	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
4:2 FTS	ND		18	4.5	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
6:2 FTS	ND		18	2.4	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
8:2 FTS	ND		18	3.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.3	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.5	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
9CI-PF3ONS	ND		18	3.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
11CI-PF3OUdS	ND		18	2.7	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.4	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		18	3.4	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		18	3.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.5	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	++	18	2.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	2.8	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	64		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFBA	99		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C5 PFPeA	95		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFHxA	103		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFHpA	102		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFOA	88		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C5 PFNA	86		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFDA	73		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFUnA	73		25 - 150	09/28/25 20:30	10/02/25 03:53	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	69		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFTeDA	77		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C3 PFBS	112		25 - 150	09/28/25 20:30	10/02/25 03:53	1
18O2 PFHxS	103		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFOS	75		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D3-NMeFOSAA	70		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D5-NEtFOSAA	78		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:53	1
13C2 6:2 FTS	93		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 8:2 FTS	83		25 - 150	09/28/25 20:30	10/02/25 03:53	1
d-N-MeFOSA-M	60		25 - 150	09/28/25 20:30	10/02/25 03:53	1
d-N-EtFOSA-M	54		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D7-NMeFOSE	58		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D9-NEtFOSE	55		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C3 HFPO-DA	108		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C-6:2 FTCA	104		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C-8:2 FTCA	92		25 - 150	09/28/25 20:30	10/02/25 03:53	1

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7
Matrix: Water

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	Total PFCA-Sum			Total PFCA-Sum			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	8.4	J	ng/L	50		ng/L	41	ng/L
Perfluorobutanoic acid (PFBA)	8.4	J	ng/L	50		ng/L	41	ng/L
Perfluoropentanoic acid (PFPeA)	12		ng/L	21		ng/L	9.3	ng/L
Perfluoropentanoic acid (PFPeA)	12		ng/L	21		ng/L	9.3	ng/L
Perfluorohexanoic acid (PFHxA)	16		ng/L	19		ng/L	2.9	ng/L
Perfluorohexanoic acid (PFHxA)	16		ng/L	19		ng/L	2.9	ng/L
Perfluoroheptanoic acid (PFHpA)	1.5	J	ng/L	2.1	J	ng/L	0.68	ng/L
Perfluoroheptanoic acid (PFHpA)	1.5	J	ng/L	2.1	J	ng/L	0.68	ng/L
Perfluorooctanoic acid (PFOA)	9.1		ng/L	9.7		ng/L	0.56	ng/L
Perfluorooctanoic acid (PFOA)	9.1		ng/L	9.7		ng/L	0.56	ng/L
Perfluorononanoic acid (PFNA)	ND		ng/L	ND		ng/L	0.00	ng/L
Perfluorononanoic acid (PFNA)	ND		ng/L	ND		ng/L	0.00	ng/L
Total Perfluoroalkyl carboxylic acid	47		ng/L	100		ng/L	55	ng/L

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	4.0	J	ug/Kg	96		ug/Kg	92	ug/Kg
Perfluoropentanoic acid (PFPeA)	12		ug/Kg	67		ug/Kg	56	ug/Kg
Perfluorohexanoic acid (PFHxA)	12		ug/Kg	42		ug/Kg	29	ug/Kg
Perfluoroheptanoic acid (PFHpA)	ND		ug/Kg	19		ug/Kg	19	ug/Kg
Perfluorooctanoic acid (PFOA)	9.8		ug/Kg	40		ug/Kg	30	ug/Kg
Perfluorononanoic acid (PFNA)	1.2	J	ug/Kg	12		ug/Kg	11	ug/Kg
Total Perfluoroalkyl carboxylic acid	39		ug/Kg	280		ug/Kg	240	ug/Kg

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	7.6		ug/Kg	200		ug/Kg	190	ug/Kg
Perfluoropentanoic acid (PFPeA)	23		ug/Kg	150		ug/Kg	120	ug/Kg
Perfluorohexanoic acid (PFHxA)	34		ug/Kg	100		ug/Kg	68	ug/Kg
Perfluoroheptanoic acid (PFHpA)	4.0		ug/Kg	49		ug/Kg	45	ug/Kg
Perfluorooctanoic acid (PFOA)	31		ug/Kg	82		ug/Kg	51	ug/Kg
Perfluorononanoic acid (PFNA)	1.9	J	ug/Kg	23		ug/Kg	21	ug/Kg
Total Perfluoroalkyl carboxylic acid	100		ug/Kg	600		ug/Kg	500	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	8.0		ug/Kg	200		ug/Kg	190	ug/Kg
Perfluoropentanoic acid (PFPeA)	18		ug/Kg	120		ug/Kg	100	ug/Kg
Perfluorohexanoic acid (PFHxA)	37		ug/Kg	99		ug/Kg	62	ug/Kg
Perfluoroheptanoic acid (PFHpA)	3.0		ug/Kg	38		ug/Kg	35	ug/Kg
Perfluorooctanoic acid (PFOA)	35		ug/Kg	83		ug/Kg	48	ug/Kg
Perfluorononanoic acid (PFNA)	1.7 J		ug/Kg	19		ug/Kg	17	ug/Kg
Total Perfluoroalkyl carboxylic acid	100		ug/Kg	560		ug/Kg	460	ug/Kg

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	ND		ug/Kg	170		ug/Kg	170	ug/Kg
Perfluoropentanoic acid (PFPeA)	ND		ug/Kg	130		ug/Kg	130	ug/Kg
Perfluorohexanoic acid (PFHxA)	ND		ug/Kg	53		ug/Kg	53	ug/Kg
Perfluoroheptanoic acid (PFHpA)	ND		ug/Kg	37		ug/Kg	37	ug/Kg
Perfluorooctanoic acid (PFOA)	ND		ug/Kg	41		ug/Kg	41	ug/Kg
Perfluorononanoic acid (PFNA)	ND		ug/Kg	23		ug/Kg	23	ug/Kg
Total Perfluoroalkyl carboxylic acid	0.00		ug/Kg	450		ug/Kg	450	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Pre-Treatment

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)			
		PFTDA (25-150)	PFOS (25-150)	d5NEFOS (25-150)	M282FTS (25-150)
320-125031-9	BIO-A-25-202509			110	175 *5+
320-125031-10	BIO-A-24-202509	57	100	122	165 *5+
320-125031-12	BIO-A-23-202509			113	
320-125031-13	BIO-B-202509			118	
LCS 320-878028/2-A	Lab Control Sample	93	93	115	82
LCSD 320-878028/3-A	Lab Control Sample Dup	81	81	109	75
MB 320-878028/1-A	Method Blank	91	97	101	79

Surrogate Legend

PFTDA = 13C2 PFTeDA

PFOS = 13C4 PFOS

d5NEFOS = D5-NEtFOSAA

M282FTS = 13C2 8:2 FTS

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Pre-Treatment

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-125031-9 - RE	BIO-A-25-202509	72	77	80	92	90	91	89	89
320-125031-10 - RE	BIO-A-24-202509	75	84	84	92	93	94	92	89
320-125031-12 - RE	BIO-A-23-202509	85	87	88	95	98	101	99	100
320-125031-13 - RE	BIO-B-202509	81	84	85	97	96	93	97	97
LCS 320-879326/2-A	Lab Control Sample	86	97	91	90	102	96	93	92
LCSD 320-879326/3-A	Lab Control Sample Dup	97	93	93	94	102	96	96	91
MB 320-879326/1-A	Method Blank	80	91	89	90	98	96	92	87

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	M242FTS (25-150)
320-125031-9 - RE	BIO-A-25-202509	94	74	41	86	84	78	61	150
320-125031-10 - RE	BIO-A-24-202509	98	82		86	87	81	72	130
320-125031-12 - RE	BIO-A-23-202509	108	85	41	92	89	82	78	167 *5+
320-125031-13 - RE	BIO-B-202509	98	86	51	94	91	88	80	164 *5+
LCS 320-879326/2-A	Lab Control Sample	108	87	76	101	97	94	79	96
LCSD 320-879326/3-A	Lab Control Sample Dup	98	98	88	100	95	97	87	89
MB 320-879326/1-A	Method Blank	103	87	82	97	93	89	86	93

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)	MFHEA (25-150)
320-125031-9 - RE	BIO-A-25-202509	167 *5+		47	38	43	52	79	86
320-125031-10 - RE	BIO-A-24-202509	151 *5+		57	56	57	65	80	92
320-125031-12 - RE	BIO-A-23-202509	199 *5+	186 *5+	58	44	56	58	84	99
320-125031-13 - RE	BIO-B-202509	160 *5+	184 *5+	60	59	56	68	87	89
LCS 320-879326/2-A	Lab Control Sample	94	99	76	68	73	70	96	96
LCSD 320-879326/3-A	Lab Control Sample Dup	92	92	86	78	71	69	90	96
MB 320-879326/1-A	Method Blank	88	93	65	58	69	65	90	99

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Solid

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFOEA (25-150)
320-125031-9 - RE	BIO-A-25-202509	90
320-125031-10 - RE	BIO-A-24-202509	78
320-125031-12 - RE	BIO-A-23-202509	91
320-125031-13 - RE	BIO-B-202509	87
LCS 320-879326/2-A	Lab Control Sample	91
LCSD 320-879326/3-A	Lab Control Sample Dup	105
MB 320-879326/1-A	Method Blank	97

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-125031-9	BIO-A-25-202509	58	98	95	103	102	90	83	68
320-125031-10	BIO-A-24-202509	66	95	93	100	106	90	88	76
320-125031-12	BIO-A-23-202509	64	97	96	103	104	89	90	76
320-125031-13	BIO-B-202509	64	99	95	103	102	88	86	73
LCS 320-878032/2-A	Lab Control Sample	79	102	99	108	110	98	98	88
LCSD 320-878032/3-A	Lab Control Sample Dup	49	94	90	97	96	90	80	62
MB 320-878032/1-A	Method Blank	67	100	101	102	105	94	87	74

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Solid

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PfUnA (25-150)	PfDoA (25-150)	PfTDA (25-150)	C3PFBS (25-150)	PfHxS (25-150)	PfOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-125031-9	BIO-A-25-202509	74	68	76	107	100	74	65	78
320-125031-10	BIO-A-24-202509	82	73	79	104	94	75	80	91
320-125031-12	BIO-A-23-202509	76	68	79	107	102	82	72	85
320-125031-13	BIO-B-202509	73	69	77	112	103	75	70	78
LCS 320-878032/2-A	Lab Control Sample	91	83	81	113	104	93	97	112
LCSD 320-878032/3-A	Lab Control Sample Dup	55	50	57	102	91	68	50	59
MB 320-878032/1-A	Method Blank	74	69	74	111	104	81	65	84

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-125031-9	BIO-A-25-202509	0	89	67	56	46	55	53	105
320-125031-10	BIO-A-24-202509	0	84	81	64	57	65	61	103
320-125031-12	BIO-A-23-202509	0	94	80	63	56	60	58	105
320-125031-13	BIO-B-202509	0	93	83	60	54	58	55	108
LCS 320-878032/2-A	Lab Control Sample	0	105	85	63	54	58	55	112
LCSD 320-878032/3-A	Lab Control Sample Dup	0	83	56	44	38	42	38	101
MB 320-878032/1-A	Method Blank	0	107	77	57	49	56	53	108

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-125031-9	BIO-A-25-202509	95	88
320-125031-10	BIO-A-24-202509	104	93
320-125031-12	BIO-A-23-202509	100	101
320-125031-13	BIO-B-202509	104	92
LCS 320-878032/2-A	Lab Control Sample	113	119
LCSD 320-878032/3-A	Lab Control Sample Dup	94	74
MB 320-878032/1-A	Method Blank	103	89

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-125031-2

Project/Site: PFAS Sampling

NMFM = D7-NMeFOSE

NEFM = D9-NEtFOSE

HFPODA = 13C3 HFPO-DA

MFHEA = 13C-6:2 FTCA

MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-125031-7	EFF-G-202509	76	91	94	104	101	89	88	75
LCS 320-876143/2-A	Lab Control Sample	87	106	102	101	110	93	102	92
LCSD 320-876143/3-A	Lab Control Sample Dup	86	101	93	96	100	91	98	91
MB 320-876143/1-A	Method Blank	78	96	96	96	101	87	93	87

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-125031-7	EFF-G-202509	66	55	52	100	90	79	75	82
LCS 320-876143/2-A	Lab Control Sample	106	103	105	105	96	97	106	128
LCSD 320-876143/3-A	Lab Control Sample Dup	102	99	100	96	91	93	98	118
MB 320-876143/1-A	Method Blank	93	89	95	98	88	89	90	107

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-125031-7	EFF-G-202509	94	77	70	50	40	40	39	103
LCS 320-876143/2-A	Lab Control Sample	79	79	79	82	75	83	89	114
LCSD 320-876143/3-A	Lab Control Sample Dup	76	83	81	86	78	81	81	108
MB 320-876143/1-A	Method Blank	77	72	68	78	76	81	74	108

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-125031-7	EFF-G-202509	105	115
LCS 320-876143/2-A	Lab Control Sample	114	124
LCSD 320-876143/3-A	Lab Control Sample Dup	109	126
MB 320-876143/1-A	Method Blank	109	117

Surrogate Legend

PFOSA = 13C8 FOSA

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

PFHxA = 13C2 PFHxA

C4PFHA = 13C4 PFHpA

PFOA = 13C4 PFOA

PFNA = 13C5 PFNA

PFDA = 13C2 PFDA

PFUnA = 13C2 PFUnA

PFDoA = 13C2 PFDoA

PFTDA = 13C2 PFTeDA

C3PFBS = 13C3 PFBS

PFHxS = 18O2 PFHxS

PFOS = 13C4 PFOS

d3NMFOS = D3-NMeFOSAA

d5NEFOS = D5-NEtFOSAA

M242FTS = 13C2 4:2 FTS

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-125031-2

Project/Site: PFAS Sampling

M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Post-Treatment

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-125031-7	EFF-G-202509	78	97	92	97	102	90	89	84
LCS 320-876144/2-A	Lab Control Sample	68	98	93	94	104	87	89	79
LCS 320-876144/2-A - RA	Lab Control Sample								
LCSD 320-876144/3-A	Lab Control Sample Dup	71	99	92	101	99	87	89	80
LCSD 320-876144/3-A - RA	Lab Control Sample Dup								
MB 320-876144/1-A	Method Blank	71	92	91	94	101	85	85	80

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-125031-7	EFF-G-202509	89	83	77	97	87	82	90	104
LCS 320-876144/2-A	Lab Control Sample	80	71	77	94	91	85	75	73
LCS 320-876144/2-A - RA	Lab Control Sample						77		
LCSD 320-876144/3-A	Lab Control Sample Dup	85	75	76	97	95	85	77	81
LCSD 320-876144/3-A - RA	Lab Control Sample Dup						78		
MB 320-876144/1-A	Method Blank	87	76	77	92	85	81	76	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-125031-7	EFF-G-202509	0	71	66	65	53	68	62	108
LCS 320-876144/2-A	Lab Control Sample	0	71	65	59	49	63	55	110
LCS 320-876144/2-A - RA	Lab Control Sample	0							
LCSD 320-876144/3-A	Lab Control Sample Dup	0	76	69	58	52	60	55	109
LCSD 320-876144/3-A - RA	Lab Control Sample Dup	0							
MB 320-876144/1-A	Method Blank	0	68	68	55	47	65	57	104

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)						
320-125031-7	EFF-G-202509	105	117						
LCS 320-876144/2-A	Lab Control Sample	104	104						
LCS 320-876144/2-A - RA	Lab Control Sample								
LCSD 320-876144/3-A	Lab Control Sample Dup	105	100						
LCSD 320-876144/3-A - RA	Lab Control Sample Dup								
MB 320-876144/1-A	Method Blank	101	107						

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-125031-2

Project/Site: PFAS Sampling

PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-876143/1-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorooctanesulfonic acid (PFOS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		09/17/25 19:40	09/21/25 14:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 14:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 14:33	1
4:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
6:2 FTS	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 14:33	1
8:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		09/17/25 19:40	09/21/25 14:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		09/17/25 19:40	09/21/25 14:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		09/17/25 19:40	09/21/25 14:33	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		09/17/25 19:40	09/21/25 14:33	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		09/17/25 19:40	09/21/25 14:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 14:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		09/17/25 19:40	09/21/25 14:33	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-876143/1-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 14:33	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	78		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C4 PFBA	96		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C5 PFPeA	96		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 PFHxA	96		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C4 PFHpA	101		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C4 PFOA	87		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C5 PFNA	93		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 PFDA	87		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 PFUnA	93		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 PFDoA	89		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 PFTeDA	95		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C3 PFBS	98		25 - 150	09/17/25 19:40	09/21/25 14:33	1
18O2 PFHxS	88		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C4 PFOS	89		25 - 150	09/17/25 19:40	09/21/25 14:33	1
D3-NMeFOSAA	90		25 - 150	09/17/25 19:40	09/21/25 14:33	1
D5-NEtFOSAA	107		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 4:2 FTS	77		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 6:2 FTS	72		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C2 8:2 FTS	68		25 - 150	09/17/25 19:40	09/21/25 14:33	1
d-N-MeFOSA-M	78		25 - 150	09/17/25 19:40	09/21/25 14:33	1
d-N-EtFOSA-M	76		25 - 150	09/17/25 19:40	09/21/25 14:33	1
D7-NMeFOSE	81		25 - 150	09/17/25 19:40	09/21/25 14:33	1
D9-NEtFOSE	74		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C3 HFPO-DA	108		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C-6:2 FTCA	109		25 - 150	09/17/25 19:40	09/21/25 14:33	1
13C-8:2 FTCA	117		25 - 150	09/17/25 19:40	09/21/25 14:33	1

Lab Sample ID: LCS 320-876143/2-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	43.4		ng/L		109	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	40.4		ng/L		101	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	44.1		ng/L		110	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	37.4		ng/L		93	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	44.4		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	40.0	39.4		ng/L		98	68 - 135
Perfluorodecanoic acid (PFDA)	40.0	46.6		ng/L		117	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	38.7		ng/L		97	75 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-876143/2-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	40.0	43.2		ng/L		108	76 - 136
Perfluorotridecanoic acid (PFTTrDA)	40.0	37.0		ng/L		93	70 - 130
Perfluorotetradecanoic acid (PFTeDA)	40.0	35.5		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	35.2		ng/L		99	76 - 136
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.1		ng/L		99	75 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.7		ng/L		101	68 - 128
Perfluoroheptanesulfonic acid (PFHpS)	38.2	40.5		ng/L		106	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.2	37.9		ng/L		102	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	41.0		ng/L		107	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	36.5		ng/L		95	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	40.9		ng/L		105	59 - 142
Perfluorooctanesulfonamide (PFOSA)	40.0	38.2		ng/L		95	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.9		ng/L		107	71 - 131
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	30.2		ng/L		75	71 - 129
4:2 FTS	37.5	29.6		ng/L		79	71 - 131
6:2 FTS	38.1	41.4		ng/L		109	71 - 131
8:2 FTS	38.4	38.8		ng/L		101	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	31.9		ng/L		80	65 - 127
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	24.2	*-	ng/L		61	72 - 132
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	40.3		ng/L		101	70 - 130
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	38.0		ng/L		95	71 - 131
9CI-PF3ONS	37.4	38.9		ng/L		104	75 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	38.5		ng/L		96	74 - 134
11CI-PF3OUdS	37.8	40.8		ng/L		108	70 - 142
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	42.9		ng/L		113	66 - 146
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	38.1		ng/L		95	68 - 144
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	40.4		ng/L		101	61 - 132
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	33.0		ng/L		83	61 - 132
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	52.6		ng/L		132	63 - 139
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	42.5		ng/L		106	73 - 133

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-876143/2-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	41.5		ng/L		104	72 - 132
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	36.4		ng/L		102	75 - 144

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	87		25 - 150
13C4 PFBA	106		25 - 150
13C5 PFPeA	102		25 - 150
13C2 PFHxA	101		25 - 150
13C4 PFHpA	110		25 - 150
13C4 PFOA	93		25 - 150
13C5 PFNA	102		25 - 150
13C2 PFDA	92		25 - 150
13C2 PFUnA	106		25 - 150
13C2 PFDoA	103		25 - 150
13C2 PFTeDA	105		25 - 150
13C3 PFBS	105		25 - 150
18O2 PFHxS	96		25 - 150
13C4 PFOS	97		25 - 150
D3-NMeFOSAA	106		25 - 150
D5-NEtFOSAA	128		25 - 150
13C2 4:2 FTS	79		25 - 150
13C2 6:2 FTS	79		25 - 150
13C2 8:2 FTS	79		25 - 150
d-N-MeFOSA-M	82		25 - 150
d-N-EtFOSA-M	75		25 - 150
D7-NMeFOSE	83		25 - 150
D9-NEtFOSE	89		25 - 150
13C3 HFPO-DA	114		25 - 150
13C-6:2 FTCA	114		25 - 150
13C-8:2 FTCA	124		25 - 150

Lab Sample ID: LCSD 320-876143/3-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	42.6		ng/L		107	76 - 136	2	30
Perfluoropentanoic acid (PFPeA)	40.0	43.9		ng/L		110	71 - 131	8	30
Perfluorohexanoic acid (PFHxA)	40.0	44.3		ng/L		111	73 - 133	1	30
Perfluoroheptanoic acid (PFHpA)	40.0	39.1		ng/L		98	72 - 132	5	30
Perfluorooctanoic acid (PFOA)	40.0	43.5		ng/L		109	70 - 130	2	30
Perfluorononanoic acid (PFNA)	40.0	39.3		ng/L		98	68 - 135	0	30
Perfluorodecanoic acid (PFDA)	40.0	47.4		ng/L		118	76 - 136	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.0		ng/L		98	75 - 135	1	30
Perfluorododecanoic acid (PFDoA)	40.0	43.0		ng/L		107	76 - 136	1	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-876143/3-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTTrDA)	40.0	37.6		ng/L		94	70 - 130	2	30
Perfluorotetradecanoic acid (PFTTeDA)	40.0	40.0		ng/L		100	70 - 130	12	30
Perfluorobutanesulfonic acid (PFBS)	35.5	36.9		ng/L		104	76 - 136	5	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.3		ng/L		105	75 - 135	6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	40.4		ng/L		111	68 - 128	10	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	40.2		ng/L		105	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.7		ng/L		104	70 - 130	2	30
Perfluorononanesulfonic acid (PFNS)	38.5	42.8		ng/L		111	75 - 135	4	30
Perfluorodecanesulfonic acid (PFDS)	38.6	38.9		ng/L		101	71 - 131	6	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	40.5		ng/L		105	59 - 142	1	30
Perfluorooctanesulfonamide (PFOSA)	40.0	35.8		ng/L		89	73 - 133	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	44.6		ng/L		112	71 - 131	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	29.1		ng/L		73	71 - 129	4	30
4:2 FTS	37.5	33.9		ng/L		90	71 - 131	14	30
6:2 FTS	38.1	39.7		ng/L		104	71 - 131	4	30
8:2 FTS	38.4	40.7		ng/L		106	75 - 135	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	32.3		ng/L		81	65 - 127	1	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	25.6	*-	ng/L		64	72 - 132	5	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	42.6		ng/L		107	70 - 130	6	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	40.0		ng/L		100	71 - 131	5	30
9CI-PF3ONS	37.4	40.1		ng/L		107	75 - 135	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	37.5		ng/L		94	74 - 134	2	30
11CI-PF3OUdS	37.8	42.3		ng/L		112	70 - 142	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	42.6		ng/L		113	66 - 146	1	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	39.4		ng/L		99	68 - 144	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	42.4		ng/L		106	61 - 132	5	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	36.9		ng/L		92	61 - 132	11	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	54.5		ng/L		136	63 - 139	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.1		ng/L		113	73 - 133	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	45.5		ng/L		114	72 - 132	9	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-876143/3-A

Matrix: Water

Analysis Batch: 876688

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 876143

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	37.2		ng/L		104	75 - 144	2	30

LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C8 FOSA	86		25 - 150
13C4 PFBA	101		25 - 150
13C5 PFPeA	93		25 - 150
13C2 PFHxA	96		25 - 150
13C4 PFHpA	100		25 - 150
13C4 PFOA	91		25 - 150
13C5 PFNA	98		25 - 150
13C2 PFDA	91		25 - 150
13C2 PFUnA	102		25 - 150
13C2 PFDoA	99		25 - 150
13C2 PFTeDA	100		25 - 150
13C3 PFBS	96		25 - 150
18O2 PFHxS	91		25 - 150
13C4 PFOS	93		25 - 150
D3-NMeFOSAA	98		25 - 150
D5-NEtFOSAA	118		25 - 150
13C2 4:2 FTS	76		25 - 150
13C2 6:2 FTS	83		25 - 150
13C2 8:2 FTS	81		25 - 150
d-N-MeFOSA-M	86		25 - 150
d-N-EtFOSA-M	78		25 - 150
D7-NMeFOSE	81		25 - 150
D9-NEtFOSE	81		25 - 150
13C3 HFPO-DA	108		25 - 150
13C-6:2 FTCA	109		25 - 150
13C-8:2 FTCA	126		25 - 150

Lab Sample ID: MB 320-878028/1-A

Matrix: Solid

Analysis Batch: 878654

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 878028

MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result							
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.19	ug/Kg		09/28/25 19:52	10/01/25 23:12	1
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.26	ug/Kg		09/28/25 19:52	10/01/25 23:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	1.0	0.24	ug/Kg		09/28/25 19:52	10/01/25 23:12	1
8:2 FTS	ND	1.0	0.18	ug/Kg		09/28/25 19:52	10/01/25 23:12	1

MB MB				Prepared	Analyzed	Dil Fac
Isotope Dilution	%Recovery	Qualifier	Limits			
13C2 PFTeDA	91		25 - 150	09/28/25 19:52	10/01/25 23:12	1
13C4 PFOS	97		25 - 150	09/28/25 19:52	10/01/25 23:12	1
D5-NEtFOSAA	101		25 - 150	09/28/25 19:52	10/01/25 23:12	1
13C2 8:2 FTS	79		25 - 150	09/28/25 19:52	10/01/25 23:12	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-878028/2-A

Matrix: Solid

Analysis Batch: 878654

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 878028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.01		ug/Kg		100	67 - 127
Perfluorodecanesulfonic acid (PFDS)	3.86	3.97		ug/Kg		103	71 - 131
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	4.00	3.71		ug/Kg		93	72 - 132
8:2 FTS	3.84	5.05		ug/Kg		131	75 - 135

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFTeDA	93		25 - 150
13C4 PFOS	93		25 - 150
D5-NETFOSAA	115		25 - 150
13C2 8:2 FTS	82		25 - 150

Lab Sample ID: LCSD 320-878028/3-A

Matrix: Solid

Analysis Batch: 878654

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 878028

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.80		ug/Kg		120	67 - 127	18	30
Perfluorodecanesulfonic acid (PFDS)	3.86	4.94		ug/Kg		128	71 - 131	22	30
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	4.00	3.83		ug/Kg		96	72 - 132	3	30
8:2 FTS	3.84	5.28	*+	ug/Kg		138	75 - 135	5	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFTeDA	81		25 - 150
13C4 PFOS	81		25 - 150
D5-NETFOSAA	109		25 - 150
13C2 8:2 FTS	75		25 - 150

Lab Sample ID: MB 320-879326/1-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 879326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.0	0.23	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		10/05/25 19:13	10/07/25 00:58	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-879326/1-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 879326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
4:2 FTS	ND		1.0	0.26	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
6:2 FTS	ND		1.0	0.14	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
8:2 FTS	ND		1.0	0.18	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		10/05/25 19:13	10/07/25 00:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		1.0	0.16	ug/Kg		10/05/25 19:13	10/07/25 00:58	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	80		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C4 PFBA	91		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C5 PFPeA	89		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 PFHxA	90		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C4 PFHpA	98		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C4 PFOA	96		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C5 PFNA	92		25 - 150	10/05/25 19:13	10/07/25 00:58	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-879326/1-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 879326

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	87		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 PFUnA	103		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 PFDoA	87		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 PFTeDA	82		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C3 PFBS	97		25 - 150	10/05/25 19:13	10/07/25 00:58	1
18O2 PFHxS	93		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C4 PFOS	89		25 - 150	10/05/25 19:13	10/07/25 00:58	1
D3-NMeFOSAA	86		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 4:2 FTS	93		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 6:2 FTS	88		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C2 8:2 FTS	93		25 - 150	10/05/25 19:13	10/07/25 00:58	1
d-N-MeFOSA-M	65		25 - 150	10/05/25 19:13	10/07/25 00:58	1
d-N-EtFOSA-M	58		25 - 150	10/05/25 19:13	10/07/25 00:58	1
D7-NMeFOSE	69		25 - 150	10/05/25 19:13	10/07/25 00:58	1
D9-NEtFOSE	65		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C3 HFPO-DA	90		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C-6:2 FTCA	99		25 - 150	10/05/25 19:13	10/07/25 00:58	1
13C-8:2 FTCA	97		25 - 150	10/05/25 19:13	10/07/25 00:58	1

Lab Sample ID: LCS 320-879326/2-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 879326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	4.55		ug/Kg		114	76 - 136
Perfluoropentanoic acid (PFPeA)	4.00	4.68		ug/Kg		117	69 - 129
Perfluorohexanoic acid (PFHxA)	4.00	4.68		ug/Kg		117	71 - 131
Perfluoroheptanoic acid (PFHpA)	4.00	4.46		ug/Kg		111	71 - 131
Perfluorooctanoic acid (PFOA)	4.00	4.34		ug/Kg		108	72 - 132
Perfluorononanoic acid (PFNA)	4.00	4.41		ug/Kg		110	73 - 133
Perfluorodecanoic acid (PFDA)	4.00	4.70		ug/Kg		117	72 - 132
Perfluoroundecanoic acid (PFUnA)	4.00	4.62		ug/Kg		116	66 - 126
Perfluorododecanoic acid (PFDoA)	4.00	4.36		ug/Kg		109	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.64		ug/Kg		116	71 - 131
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.59		ug/Kg		115	67 - 127
Perfluorobutanesulfonic acid (PFBS)	3.55	3.77		ug/Kg		106	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.01		ug/Kg		107	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.76		ug/Kg		103	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.45		ug/Kg		117	76 - 136
Perfluorooctanesulfonic acid (PFOS)	3.72	4.11		ug/Kg		111	68 - 141
Perfluorononanesulfonic acid (PFNS)	3.85	4.07		ug/Kg		106	72 - 132

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-879326/2-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 879326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanesulfonic acid (PFDS)	3.86	3.89		ug/Kg		101	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	3.88	4.21		ug/Kg		109	70 - 130
Perfluorooctanesulfonamide (PFOSA)	4.00	4.04		ug/Kg		101	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	5.18		ug/Kg		130	72 - 132
4:2 FTS	3.75	3.69		ug/Kg		98	68 - 143
6:2 FTS	3.81	4.26		ug/Kg		112	73 - 139
8:2 FTS	3.84	4.11		ug/Kg		107	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	5.00		ug/Kg		125	47 - 161
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.74		ug/Kg		118	63 - 148
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.36		ug/Kg		109	43 - 153
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.46		ug/Kg		111	44 - 155
9CI-PF3ONS	3.74	4.17		ug/Kg		112	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.25		ug/Kg		106	53 - 158
11CI-PF3OUdS	3.78	3.46		ug/Kg		92	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.45		ug/Kg		118	79 - 139
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	4.33		ug/Kg		108	50 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	4.71		ug/Kg		118	50 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	4.29		ug/Kg		107	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.54		ug/Kg		114	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.73		ug/Kg		118	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.39		ug/Kg		110	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.61		ug/Kg		101	50 - 150

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C8 FOSA	86		25 - 150
13C4 PFBA	97		25 - 150
13C5 PFPeA	91		25 - 150
13C2 PFHxA	90		25 - 150
13C4 PFHpA	102		25 - 150
13C4 PFOA	96		25 - 150
13C5 PFNA	93		25 - 150
13C2 PFDA	92		25 - 150
13C2 PFUnA	108		25 - 150
13C2 PFDoA	87		25 - 150
13C2 PFTeDA	76		25 - 150
13C3 PFBS	101		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-879326/2-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 879326

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
18O2 PFHxS	97		25 - 150
13C4 PFOS	94		25 - 150
D3-NMeFOSAA	79		25 - 150
13C2 4:2 FTS	96		25 - 150
13C2 6:2 FTS	94		25 - 150
13C2 8:2 FTS	99		25 - 150
d-N-MeFOSA-M	76		25 - 150
d-N-EtFOSA-M	68		25 - 150
D7-NMeFOSE	73		25 - 150
D9-NEtFOSE	70		25 - 150
13C3 HFPO-DA	96		25 - 150
13C-6:2 FTCA	96		25 - 150
13C-8:2 FTCA	91		25 - 150

Lab Sample ID: LCSD 320-879326/3-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 879326

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec	RPD	Limit
							Limits		
Perfluorobutanoic acid (PFBA)	4.00	4.20		ug/Kg		105	76 - 136	8	30
Perfluoropentanoic acid (PFPeA)	4.00	4.17		ug/Kg		104	69 - 129	12	30
Perfluorohexanoic acid (PFHxA)	4.00	4.00		ug/Kg		100	71 - 131	16	30
Perfluoroheptanoic acid (PFHpA)	4.00	3.79		ug/Kg		95	71 - 131	16	30
Perfluorooctanoic acid (PFOA)	4.00	4.08		ug/Kg		102	72 - 132	6	30
Perfluorononanoic acid (PFNA)	4.00	4.25		ug/Kg		106	73 - 133	4	30
Perfluorodecanoic acid (PFDA)	4.00	4.55		ug/Kg		114	72 - 132	3	30
Perfluoroundecanoic acid (PFUnA)	4.00	3.52		ug/Kg		88	66 - 126	27	30
Perfluorododecanoic acid (PFDoA)	4.00	4.06		ug/Kg		101	71 - 131	7	30
Perfluorotridecanoic acid (PFTrDA)	4.00	3.55		ug/Kg		89	71 - 131	27	30
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.77		ug/Kg		94	67 - 127	20	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.48		ug/Kg		98	69 - 129	8	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.77		ug/Kg		100	66 - 126	6	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.71		ug/Kg		102	62 - 122	1	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.93		ug/Kg		103	76 - 136	12	30
Perfluorooctanesulfonic acid (PFOS)	3.72	3.69		ug/Kg		99	68 - 141	11	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.81		ug/Kg		99	72 - 132	7	30
Perfluorodecanesulfonic acid (PFDS)	3.86	3.87		ug/Kg		100	71 - 131	1	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.38		ug/Kg		87	70 - 130	22	30
Perfluorooctanesulfonamide (PFOSA)	4.00	3.62		ug/Kg		91	77 - 137	11	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-879326/3-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 879326

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.65		ug/Kg		116	72 - 132	11	30
4:2 FTS	3.75	3.57		ug/Kg		95	68 - 143	3	30
6:2 FTS	3.81	4.34		ug/Kg		114	73 - 139	2	30
8:2 FTS	3.84	3.71		ug/Kg		97	75 - 135	10	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.36		ug/Kg		109	47 - 161	14	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.98		ug/Kg		100	63 - 148	17	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.30		ug/Kg		108	43 - 153	1	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	4.38		ug/Kg		110	44 - 155	2	30
9Cl-PF3ONS	3.74	3.33		ug/Kg		89	74 - 134	22	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.47		ug/Kg		112	53 - 158	5	30
11Cl-PF3OUdS	3.78	3.34		ug/Kg		88	66 - 136	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.81		ug/Kg		101	79 - 139	15	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	3.68		ug/Kg		92	50 - 150	16	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	4.24		ug/Kg		106	50 - 150	11	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	3.87		ug/Kg		97	50 - 150	10	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.15		ug/Kg		104	50 - 150	9	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.27		ug/Kg		107	50 - 150	10	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.95		ug/Kg		99	50 - 150	11	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.36		ug/Kg		94	50 - 150	7	30

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C8 FOSA	97		25 - 150
13C4 PFBA	93		25 - 150
13C5 PFPeA	93		25 - 150
13C2 PFHxA	94		25 - 150
13C4 PFHpA	102		25 - 150
13C4 PFOA	96		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFDA	91		25 - 150
13C2 PFUnA	98		25 - 150
13C2 PFDoA	98		25 - 150
13C2 PFTeDA	88		25 - 150
13C3 PFBS	100		25 - 150
18O2 PFHxS	95		25 - 150
13C4 PFOS	97		25 - 150
D3-NMeFOSAA	87		25 - 150
13C2 4:2 FTS	89		25 - 150
13C2 6:2 FTS	92		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-879326/3-A

Matrix: Solid

Analysis Batch: 879622

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 879326

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2 8:2 FTS	92		25 - 150
d-N-MeFOSA-M	86		25 - 150
d-N-EtFOSA-M	78		25 - 150
D7-NMeFOSE	71		25 - 150
D9-NEtFOSE	69		25 - 150
13C3 HFPO-DA	90		25 - 150
13C-6:2 FTCA	96		25 - 150
13C-8:2 FTCA	105		25 - 150

Lab Sample ID: MB 320-876144/1-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.44	J	13	3.1	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		09/17/25 19:44	09/21/25 18:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 18:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 18:18	1
4:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
6:2 FTS	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 18:18	1
8:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		09/17/25 19:44	09/21/25 18:18	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		09/17/25 19:44	09/21/25 18:18	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-876144/1-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NETFOSE)	ND		5.0	2.1	ng/L		09/17/25 19:44	09/21/25 18:18	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		09/17/25 19:44	09/21/25 18:18	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		09/17/25 19:44	09/21/25 18:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 18:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 18:18	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	71		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C4 PFBA	92		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C5 PFPeA	91		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 PFHxA	94		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C4 PFHpA	101		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C4 PFOA	85		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C5 PFNA	85		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 PFDA	80		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 PFUnA	87		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 PFDoA	76		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 PFTeDA	77		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C3 PFBS	92		25 - 150	09/17/25 19:44	09/21/25 18:18	1
18O2 PFHxS	85		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C4 PFOS	81		25 - 150	09/17/25 19:44	09/21/25 18:18	1
D3-NMeFOSAA	76		25 - 150	09/17/25 19:44	09/21/25 18:18	1
D5-NEtFOSAA	90		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 4:2 FTS	0		0 - 10	09/17/25 19:44	09/21/25 18:18	1
13C2 6:2 FTS	68		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C2 8:2 FTS	68		25 - 150	09/17/25 19:44	09/21/25 18:18	1
d-N-MeFOSA-M	55		25 - 150	09/17/25 19:44	09/21/25 18:18	1
d-N-EtFOSA-M	47		25 - 150	09/17/25 19:44	09/21/25 18:18	1
D7-NMeFOSE	65		25 - 150	09/17/25 19:44	09/21/25 18:18	1
D9-NEtFOSE	57		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C3 HFPO-DA	104		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C-6:2 FTCA	101		25 - 150	09/17/25 19:44	09/21/25 18:18	1
13C-8:2 FTCA	107		25 - 150	09/17/25 19:44	09/21/25 18:18	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-876144/2-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	85.6		ng/L		214	157 - 278
Perfluoropentanoic acid (PFPeA)	40.0	87.7	*+	ng/L		219	151 - 208
Perfluorohexanoic acid (PFHxA)	40.0	103		ng/L		257	194 - 269
Perfluoroheptanoic acid (PFHpA)	40.0	82.2		ng/L		205	199 - 252
Perfluorooctanoic acid (PFOA)	40.0	168		ng/L		420	351 - 490
Perfluorononanoic acid (PFNA)	40.0	77.8		ng/L		194	145 - 205
Perfluorodecanoic acid (PFDA)	40.0	73.3		ng/L		183	130 - 190
Perfluoroundecanoic acid (PFUnA)	40.0	41.0		ng/L		102	82 - 142
Perfluorododecanoic acid (PFDoA)	40.0	37.9		ng/L		95	82 - 142
Perfluorotridecanoic acid (PFTTrDA)	40.0	27.8	*-	ng/L		70	85 - 145
Perfluorotetradecanoic acid (PFTeDA)	40.0	29.6		ng/L		74	72 - 132
Perfluorobutanesulfonic acid (PFBS)	35.5	36.6		ng/L		103	84 - 144
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.3		ng/L		99	83 - 143
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.7		ng/L		101	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.9		ng/L		105	80 - 140
Perfluorooctanesulfonic acid (PFOS)	37.2	38.5		ng/L		103	82 - 142
Perfluorononanesulfonic acid (PFNS)	38.5	33.3		ng/L		87	79 - 139
Perfluorodecanesulfonic acid (PFDS)	38.6	32.3		ng/L		84	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	24.6		ng/L		63	52 - 139
Perfluorooctanesulfonamide (PFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10
4:2 FTS	37.5	ND		ng/L		0	0 - 10
6:2 FTS	38.1	ND		ng/L		0	0 - 10
8:2 FTS	38.4	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10
9CI-PF3ONS	37.4	32.7		ng/L		88	66 - 126
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	32.4		ng/L		81	52 - 112
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	ND		ng/L		0	0 - 10

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-876144/2-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	52.9	*+	ng/L		132	67 - 127
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	43.7		ng/L		109	60 - 120
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	68.1		ng/L		170	111 - 174
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	35.1		ng/L		98	81 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	68		25 - 150
13C4 PFBA	98		25 - 150
13C5 PFPeA	93		25 - 150
13C2 PFHxA	94		25 - 150
13C4 PFHpA	104		25 - 150
13C4 PFOA	87		25 - 150
13C5 PFNA	89		25 - 150
13C2 PFDA	79		25 - 150
13C2 PFUnA	80		25 - 150
13C2 PFDoA	71		25 - 150
13C2 PFTeDA	77		25 - 150
13C3 PFBS	94		25 - 150
18O2 PFHxS	91		25 - 150
13C4 PFOS	85		25 - 150
D3-NMeFOSAA	75		25 - 150
D5-NEtFOSAA	73		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	71		25 - 150
13C2 8:2 FTS	65		25 - 150
d-N-MeFOSA-M	59		25 - 150
d-N-EtFOSA-M	49		25 - 150
D7-NMeFOSE	63		25 - 150
D9-NEtFOSE	55		25 - 150
13C3 HFPO-DA	110		25 - 150
13C-6:2 FTCA	104		25 - 150
13C-8:2 FTCA	104		25 - 150

Lab Sample ID: LCSD 320-876144/3-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	89.2		ng/L		223	157 - 278	4	30
Perfluoropentanoic acid (PFPeA)	40.0	94.0	*+	ng/L		235	151 - 208	7	30
Perfluorohexanoic acid (PFHxA)	40.0	99.2		ng/L		248	194 - 269	4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-876144/3-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanoic acid (PFHpA)	40.0	87.7		ng/L		219	199 - 252	7	30
Perfluorooctanoic acid (PFOA)	40.0	170		ng/L		424	351 - 490	1	30
Perfluorononanoic acid (PFNA)	40.0	74.7		ng/L		187	145 - 205	4	30
Perfluorodecanoic acid (PFDA)	40.0	71.0		ng/L		178	130 - 190	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	41.5		ng/L		104	82 - 142	1	30
Perfluorododecanoic acid (PFDoA)	40.0	36.0		ng/L		90	82 - 142	5	30
Perfluorotridecanoic acid (PFTrDA)	40.0	27.7	*-	ng/L		69	85 - 145	0	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	27.3	*-	ng/L		68	72 - 132	8	30
Perfluorobutanesulfonic acid (PFBS)	35.5	36.8		ng/L		104	84 - 144	1	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.9		ng/L		103	83 - 143	4	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.4		ng/L		100	73 - 133	1	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	42.7		ng/L		112	80 - 140	7	30
Perfluorooctanesulfonic acid (PFOS)	37.2	39.5		ng/L		106	82 - 142	3	30
Perfluorononanesulfonic acid (PFNS)	38.5	36.0		ng/L		94	79 - 139	8	30
Perfluorodecanesulfonic acid (PFDS)	38.6	28.1		ng/L		73	71 - 131	14	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	26.2		ng/L		67	52 - 139	6	30
Perfluorooctanesulfonamide (PFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30
4:2 FTS	37.5	ND		ng/L		0	0 - 10	NC	30
6:2 FTS	38.1	ND		ng/L		0	0 - 10	NC	30
8:2 FTS	38.4	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
9CI-PF3ONS	37.4	35.8		ng/L		96	66 - 126	9	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	36.0		ng/L		90	52 - 112	11	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	ND		ng/L		0	0 - 10	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-876144/3-A

Matrix: Water

Analysis Batch: 876733

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	51.0	*+	ng/L		128	67 - 127	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.1		ng/L		113	60 - 120	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	74.1	*+	ng/L		185	111 - 174	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	36.9		ng/L		103	81 - 141	5	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C8 FOSA	71		25 - 150
13C4 PFBA	99		25 - 150
13C5 PFPeA	92		25 - 150
13C2 PFHxA	101		25 - 150
13C4 PFHpA	99		25 - 150
13C4 PFOA	87		25 - 150
13C5 PFNA	89		25 - 150
13C2 PFDA	80		25 - 150
13C2 PFUnA	85		25 - 150
13C2 PFDoA	75		25 - 150
13C2 PFTeDA	76		25 - 150
13C3 PFBS	97		25 - 150
18O2 PFHxS	95		25 - 150
13C4 PFOS	85		25 - 150
D3-NMeFOSAA	77		25 - 150
D5-NEtFOSAA	81		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	76		25 - 150
13C2 8:2 FTS	69		25 - 150
d-N-MeFOSA-M	58		25 - 150
d-N-EtFOSA-M	52		25 - 150
D7-NMeFOSE	60		25 - 150
D9-NEtFOSE	55		25 - 150
13C3 HFPO-DA	109		25 - 150
13C-6:2 FTCA	105		25 - 150
13C-8:2 FTCA	100		25 - 150

Lab Sample ID: MB 320-878032/1-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 878032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.556	J	1.0	0.23	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		09/28/25 20:30	10/02/25 04:36	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-878032/1-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 878032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
4:2 FTS	ND		1.0	0.26	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
6:2 FTS	ND		1.0	0.14	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
8:2 FTS	ND		1.0	0.18	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		09/28/25 20:30	10/02/25 04:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		09/28/25 20:30	10/02/25 04:36	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	67		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C4 PFBA	100		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C5 PFPeA	101		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 PFHxA	102		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C4 PFHpA	105		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C4 PFOA	94		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C5 PFNA	87		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 PFDA	74		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 PFUnA	74		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 PFDaA	69		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 PFTeDA	74		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C3 PFBS	111		25 - 150	09/28/25 20:30	10/02/25 04:36	1
18O2 PFHxS	104		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C4 PFOS	81		25 - 150	09/28/25 20:30	10/02/25 04:36	1
D3-NMeFOSAA	65		25 - 150	09/28/25 20:30	10/02/25 04:36	1
D5-NEtFOSAA	84		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 4:2 FTS	0	0 - 10		09/28/25 20:30	10/02/25 04:36	1
13C2 6:2 FTS	107		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C2 8:2 FTS	77		25 - 150	09/28/25 20:30	10/02/25 04:36	1
d-N-MeFOSA-M	57		25 - 150	09/28/25 20:30	10/02/25 04:36	1
d-N-EtFOSA-M	49		25 - 150	09/28/25 20:30	10/02/25 04:36	1
D7-NMeFOSE	56		25 - 150	09/28/25 20:30	10/02/25 04:36	1
D9-NEtFOSE	53		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C3 HFPO-DA	108		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C-6:2 FTCA	103		25 - 150	09/28/25 20:30	10/02/25 04:36	1
13C-8:2 FTCA	89		25 - 150	09/28/25 20:30	10/02/25 04:36	1

Lab Sample ID: LCS 320-878032/2-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 878032

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	11.0	*+	ug/Kg		274	167 - 261
Perfluoropentanoic acid (PFPeA)	4.00	11.3	*+	ug/Kg		282	159 - 221
Perfluorohexanoic acid (PFHxA)	4.00	11.4	*+	ug/Kg		284	208 - 257
Perfluoroheptanoic acid (PFHpA)	4.00	9.04		ug/Kg		226	189 - 267
Perfluorooctanoic acid (PFOA)	4.00	20.7	*+	ug/Kg		516	372 - 496
Perfluorononanoic acid (PFNA)	4.00	8.38	*+	ug/Kg		210	154 - 205
Perfluorodecanoic acid (PFDA)	4.00	7.06		ug/Kg		177	130 - 190
Perfluoroundecanoic acid (PFUnA)	4.00	4.03		ug/Kg		101	81 - 141
Perfluorododecanoic acid (PFDaA)	4.00	4.00		ug/Kg		100	84 - 144
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.22		ug/Kg		81	78 - 138
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.46		ug/Kg		87	72 - 132
Perfluorobutanesulfonic acid (PFBS)	3.55	4.12		ug/Kg		116	89 - 149
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.14		ug/Kg		110	94 - 154
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.32		ug/Kg		118	73 - 133

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-878032/2-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 878032

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.70		ug/Kg		123	68 - 128
Perfluorooctanesulfonic acid (PFOS)	3.72	4.70		ug/Kg		126	70 - 138
Perfluorononanesulfonic acid (PFNS)	3.85	4.09		ug/Kg		106	66 - 126
Perfluorodecanesulfonic acid (PFDS)	3.86	3.37		ug/Kg		87	66 - 126
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.53		ug/Kg		65	47 - 107
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10
9CI-PF3ONS	3.74	3.41		ug/Kg		91	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	3.79		ug/Kg		95	53 - 158
11CI-PF3OUdS	3.78	2.49		ug/Kg		66	46 - 106
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.80		ug/Kg		120	60 - 138
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.87		ug/Kg		122	62 - 122
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	7.52	*+	ug/Kg		188	112 - 172
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.84		ug/Kg		108	84 - 152

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	79		25 - 150
13C4 PFBA	102		25 - 150
13C5 PFPeA	99		25 - 150
13C2 PFHxA	108		25 - 150
13C4 PFHpA	110		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-878032/2-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 878032

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFOA	98		25 - 150
13C5 PFNA	98		25 - 150
13C2 PFDA	88		25 - 150
13C2 PFUnA	91		25 - 150
13C2 PFDoA	83		25 - 150
13C2 PFTeDA	81		25 - 150
13C3 PFBS	113		25 - 150
18O2 PFHxS	104		25 - 150
13C4 PFOS	93		25 - 150
D3-NMeFOSAA	97		25 - 150
D5-NEtFOSAA	112		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	105		25 - 150
13C2 8:2 FTS	85		25 - 150
d-N-MeFOSA-M	63		25 - 150
d-N-EtFOSA-M	54		25 - 150
D7-NMeFOSE	58		25 - 150
D9-NEtFOSE	55		25 - 150
13C3 HFPO-DA	112		25 - 150
13C-6:2 FTCA	113		25 - 150
13C-8:2 FTCA	119		25 - 150

Lab Sample ID: LCSD 320-878032/3-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 878032

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	10.0		ug/Kg		251	167 - 261	9	30
Perfluoropentanoic acid (PFPeA)	4.00	10.6	*+	ug/Kg		266	159 - 221	6	30
Perfluorohexanoic acid (PFHxA)	4.00	11.5	*+	ug/Kg		288	208 - 257	2	30
Perfluoroheptanoic acid (PFHpA)	4.00	8.81		ug/Kg		220	189 - 267	3	30
Perfluorooctanoic acid (PFOA)	4.00	20.5	*+	ug/Kg		512	372 - 496	1	30
Perfluorononanoic acid (PFNA)	4.00	7.99		ug/Kg		200	154 - 205	5	30
Perfluorodecanoic acid (PFDA)	4.00	7.24		ug/Kg		181	130 - 190	2	30
Perfluoroundecanoic acid (PFUnA)	4.00	4.32		ug/Kg		108	81 - 141	7	30
Perfluorododecanoic acid (PFDoA)	4.00	3.68		ug/Kg		92	84 - 144	8	30
Perfluorotridecanoic acid (PFTTrDA)	4.00	2.84	*-	ug/Kg		71	78 - 138	13	30
Perfluorotetradecanoic acid (PFTeDA)	4.00	2.87		ug/Kg		72	72 - 132	19	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.81		ug/Kg		107	89 - 149	8	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.13		ug/Kg		110	94 - 154	0	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.26		ug/Kg		117	73 - 133	1	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	5.70	*+	ug/Kg		149	68 - 128	19	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-878032/3-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 878032

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	3.72	4.77		ug/Kg		128	70 - 138	1	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.09		ug/Kg		80	66 - 126	28	30
Perfluorodecanesulfonic acid (PFDS)	3.86	2.77		ug/Kg		72	66 - 126	20	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.20		ug/Kg		57	47 - 107	14	30
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10	NC	30
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10	NC	30
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
9CI-PF3ONS	3.74	3.61		ug/Kg		97	74 - 134	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	3.88		ug/Kg		97	53 - 158	2	30
11CI-PF3OUdS	3.78	1.85		ug/Kg		49	46 - 106	30	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.96		ug/Kg		124	60 - 138	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.87		ug/Kg		122	62 - 122	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	7.36	+	ug/Kg		184	112 - 172	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.78		ug/Kg		106	84 - 152	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C8 FOSA	49		25 - 150
13C4 PFBA	94		25 - 150
13C5 PFPeA	90		25 - 150
13C2 PFHxA	97		25 - 150
13C4 PFHpA	96		25 - 150
13C4 PFOA	90		25 - 150
13C5 PFNA	80		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-878032/3-A

Matrix: Solid

Analysis Batch: 878655

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 878032

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C2 PFDA	62		25 - 150
13C2 PFUnA	55		25 - 150
13C2 PFDoA	50		25 - 150
13C2 PFTeDA	57		25 - 150
13C3 PFBS	102		25 - 150
18O2 PFHxS	91		25 - 150
13C4 PFOS	68		25 - 150
D3-NMeFOSAA	50		25 - 150
D5-NEtFOSAA	59		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	83		25 - 150
13C2 8:2 FTS	56		25 - 150
d-N-MeFOSA-M	44		25 - 150
d-N-EtFOSA-M	38		25 - 150
D7-NMeFOSE	42		25 - 150
D9-NEtFOSE	38		25 - 150
13C3 HFPO-DA	101		25 - 150
13C-6:2 FTCA	94		25 - 150
13C-8:2 FTCA	74		25 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances - RA

Lab Sample ID: LCS 320-876144/2-A

Matrix: Water

Analysis Batch: 876734

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 876144

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11Cl-PF3OUdS - RA			37.8	18.8		ng/L	-	50	45 - 105		
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits								
13C4 PFOS - RA	77		25 - 150								
13C2 4:2 FTS - RA	0		0 - 10								

Lab Sample ID: LCSD 320-876144/3-A

Matrix: Water

Analysis Batch: 876734

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 876144

			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
11Cl-PF3OUdS - RA			37.8	21.7		ng/L	-	57	45 - 105	14	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits								
13C4 PFOS - RA	78		25 - 150								
13C2 4:2 FTS - RA	0		0 - 10								

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

LCMS

Prep Batch: 876143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-7	EFF-G-202509	Pre-Treatment	Water	TOP Pre - Prep	
MB 320-876143/1-A	Method Blank	Pre-Treatment	Water	TOP Pre - Prep	
LCS 320-876143/2-A	Lab Control Sample	Pre-Treatment	Water	TOP Pre - Prep	
LCSD 320-876143/3-A	Lab Control Sample Dup	Pre-Treatment	Water	TOP Pre - Prep	

Prep Batch: 876144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-7	EFF-G-202509	Post-Treatment	Water	TOP Post Prep	
MB 320-876144/1-A	Method Blank	Post-Treatment	Water	TOP Post Prep	
LCS 320-876144/2-A	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCS 320-876144/2-A - RA	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCSD 320-876144/3-A	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	
LCSD 320-876144/3-A - RA	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	

Analysis Batch: 876688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-7	EFF-G-202509	Pre-Treatment	Water	537 (modified)	876143
MB 320-876143/1-A	Method Blank	Pre-Treatment	Water	537 (modified)	876143
LCS 320-876143/2-A	Lab Control Sample	Pre-Treatment	Water	537 (modified)	876143
LCSD 320-876143/3-A	Lab Control Sample Dup	Pre-Treatment	Water	537 (modified)	876143

Analysis Batch: 876733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-7	EFF-G-202509	Post-Treatment	Water	537 (modified)	876144
MB 320-876144/1-A	Method Blank	Post-Treatment	Water	537 (modified)	876144
LCS 320-876144/2-A	Lab Control Sample	Post-Treatment	Water	537 (modified)	876144
LCSD 320-876144/3-A	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	876144

Analysis Batch: 876734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-876144/2-A - RA	Lab Control Sample	Post-Treatment	Water	537 (modified)	876144
LCSD 320-876144/3-A - RA	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	876144

Prep Batch: 878028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Pre-Treatment	Solid	TOP Pre-Prep	
320-125031-10	BIO-A-24-202509	Pre-Treatment	Solid	TOP Pre-Prep	
320-125031-12	BIO-A-23-202509	Pre-Treatment	Solid	TOP Pre-Prep	
320-125031-13	BIO-B-202509	Pre-Treatment	Solid	TOP Pre-Prep	
MB 320-878028/1-A	Method Blank	Pre-Treatment	Solid	TOP Pre-Prep	
LCS 320-878028/2-A	Lab Control Sample	Pre-Treatment	Solid	TOP Pre-Prep	
LCSD 320-878028/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	TOP Pre-Prep	

Prep Batch: 878032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Post-Treatment	Solid	TOP Post-Prep	
320-125031-10	BIO-A-24-202509	Post-Treatment	Solid	TOP Post-Prep	
320-125031-12	BIO-A-23-202509	Post-Treatment	Solid	TOP Post-Prep	
320-125031-13	BIO-B-202509	Post-Treatment	Solid	TOP Post-Prep	
MB 320-878032/1-A	Method Blank	Post-Treatment	Solid	TOP Post-Prep	
LCS 320-878032/2-A	Lab Control Sample	Post-Treatment	Solid	TOP Post-Prep	

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

LCMS (Continued)

Prep Batch: 878032 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 320-878032/3-A	Lab Control Sample Dup	Post-Treatment	Solid	TOP Post-Prep	

Analysis Batch: 878654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Pre-Treatment	Solid	537 (modified)	878028
320-125031-10	BIO-A-24-202509	Pre-Treatment	Solid	537 (modified)	878028
320-125031-12	BIO-A-23-202509	Pre-Treatment	Solid	537 (modified)	878028
320-125031-13	BIO-B-202509	Pre-Treatment	Solid	537 (modified)	878028
MB 320-878028/1-A	Method Blank	Pre-Treatment	Solid	537 (modified)	878028
LCS 320-878028/2-A	Lab Control Sample	Pre-Treatment	Solid	537 (modified)	878028
LCSD 320-878028/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	537 (modified)	878028

Analysis Batch: 878655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9	BIO-A-25-202509	Post-Treatment	Solid	537 (modified)	878032
320-125031-10	BIO-A-24-202509	Post-Treatment	Solid	537 (modified)	878032
320-125031-12	BIO-A-23-202509	Post-Treatment	Solid	537 (modified)	878032
320-125031-13	BIO-B-202509	Post-Treatment	Solid	537 (modified)	878032
MB 320-878032/1-A	Method Blank	Post-Treatment	Solid	537 (modified)	878032
LCS 320-878032/2-A	Lab Control Sample	Post-Treatment	Solid	537 (modified)	878032
LCSD 320-878032/3-A	Lab Control Sample Dup	Post-Treatment	Solid	537 (modified)	878032

Prep Batch: 879326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9 - RE	BIO-A-25-202509	Pre-Treatment	Solid	TOP Pre-Prep	
320-125031-10 - RE	BIO-A-24-202509	Pre-Treatment	Solid	TOP Pre-Prep	
320-125031-12 - RE	BIO-A-23-202509	Pre-Treatment	Solid	TOP Pre-Prep	
320-125031-13 - RE	BIO-B-202509	Pre-Treatment	Solid	TOP Pre-Prep	
MB 320-879326/1-A	Method Blank	Pre-Treatment	Solid	TOP Pre-Prep	
LCS 320-879326/2-A	Lab Control Sample	Pre-Treatment	Solid	TOP Pre-Prep	
LCSD 320-879326/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	TOP Pre-Prep	

Analysis Batch: 879622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-125031-9 - RE	BIO-A-25-202509	Pre-Treatment	Solid	537 (modified)	879326
320-125031-10 - RE	BIO-A-24-202509	Pre-Treatment	Solid	537 (modified)	879326
320-125031-12 - RE	BIO-A-23-202509	Pre-Treatment	Solid	537 (modified)	879326
320-125031-13 - RE	BIO-B-202509	Pre-Treatment	Solid	537 (modified)	879326
MB 320-879326/1-A	Method Blank	Pre-Treatment	Solid	537 (modified)	879326
LCS 320-879326/2-A	Lab Control Sample	Pre-Treatment	Solid	537 (modified)	879326
LCSD 320-879326/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	537 (modified)	879326

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post Prep			100 mL	10.0 mL	876144	09/17/25 19:44	CJS	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	876733	09/21/25 20:53	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre - Prep			100 mL	10.0 mL	876143	09/17/25 19:40	CJS	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	876688	09/21/25 17:08	P1P	EET SAC

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.02 g	10.0 mL	878032	09/28/25 20:30	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878655	10/02/25 03:11	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	878028	09/28/25 19:52	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878654	10/01/25 23:55	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep	RE		1.00 g	10.0 mL	879326	10/05/25 19:13	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)	RE	1	1 mL	1 mL	879622	10/07/25 01:40	T6XR	EET SAC

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.01 g	10.0 mL	878032	09/28/25 20:30	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878655	10/02/25 03:25	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.02 g	10.0 mL	878028	09/28/25 19:52	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878654	10/02/25 00:09	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep	RE		1.02 g	10.0 mL	879326	10/05/25 19:13	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)	RE	1	1 mL	1 mL	879622	10/07/25 01:54	T6XR	EET SAC

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.00 g	10.0 mL	878032	09/28/25 20:30	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878655	10/02/25 03:39	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	878028	09/28/25 19:52	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878654	10/02/25 00:23	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep	RE		1.00 g	10.0 mL	879326	10/05/25 19:13	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)	RE	1	1 mL	1 mL	879622	10/07/25 02:08	T6XR	EET SAC

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.01 g	10.0 mL	878032	09/28/25 20:30	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878655	10/02/25 03:53	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.02 g	10.0 mL	878028	09/28/25 19:52	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	878654	10/02/25 00:37	T6XR	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep	RE		1.02 g	10.0 mL	879326	10/05/25 19:13	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)	RE	1	1 mL	1 mL	879622	10/07/25 02:22	T6XR	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Post Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
TOP Post Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Post-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC
TOP Pre - Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Pre-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-125031-7	EFF-G-202509	Water	09/09/25 08:00	09/10/25 10:00	Wisconsin
320-125031-9	BIO-A-25-202509	Solid	09/08/25 14:38	09/10/25 10:00	Wisconsin
320-125031-10	BIO-A-24-202509	Solid	09/08/25 14:09	09/10/25 10:00	Wisconsin
320-125031-12	BIO-A-23-202509	Solid	09/08/25 15:08	09/10/25 10:00	Wisconsin
320-125031-13	BIO-B-202509	Solid	09/08/25 15:21	09/10/25 10:00	Wisconsin

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environment Testing

Client Information		Sampler: <u>Jennifer Faust</u>		Lab PM: <u>Jessica McAmmon</u>		Carrier Tracking No(s): <u>4493 3568 1450</u>		COC No: <u>202509</u>	
Client Contact: <u>Mike Ursin</u>		Phone: <u>608 222-1201</u>		E-Mail: <u>jessicame@madsewer.org</u>		State of Origin: <u>WI</u>		Page: <u>1</u> of <u>2</u>	
Company: <u>TRE 999 Fourier Dr Suite 101 Madison, WI 53717</u>		PWSID:		Analysis Requested					
Address: <u>Madison Metro Sewerage Dist</u>		Due Date Requested:		 320-125031 Chain of Custody					
City: <u>1610 Moorland Madison</u>		TAT Requested (days): <u>20 business days as per contract</u>							
State, Zip: <u>WI 53713</u>		Compliance Project: ☐ Yes ☐ No							
Phone: <u>608 222-1201</u>		PO #: <u>240819</u>							
Email: <u>mursin@trccompanies.com</u>		WO #:		Total Number of Containers					
Project Name: <u>PFAAS Study</u>		Project #:							
Site: <u>MMSD</u>		SSOW#:							
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=sewage)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Preservation Codes	
								A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)	
								Other:	
								Special Instructions/Note	
INF-02 202509		9/8/25	23 59	C	W	N	N	X	
INF-07 202509		9/8/25	23 59	C	W	N	N	X	
INF-08 202509		9/8/25	23 59	C	W	N	N	X	
INF-11 202509		9/8/25	23 59	C	W	N	N	X	
INF-18-202509		9/8/25	23 59	C	W	N	N	X	
INF-COMP 202509		9/8/25	23 59	C	W	N	N	X	
EFF-6 202509		9/9/25	08:00	G	W	N	N	X	X
EB01-202509		9/8/25	13 40	G	W	N	N	X	
BIO A-25 202509		9/8/25	14 38	C	S	N	N	X	
BIO A 24-202509		9/8/25	14 09	C	S	N	N	X	
EB02-202509		9/8/25	14 51	G	W	N	N	X	
Possible Hazard Identification									
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I II, III, IV Other (specify)									
Special Instructions/QC Requirements									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>9/9/25 08 30</u>		Company: <u>MMSD</u>		Received by: <u>8</u>		Date/Time: <u>9/10/25 1000</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: <u>32</u>					

Reports to

eurofins

Environment Testing

[illegible]

October 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 11/7/2025 11:29:44 AM Revision 1

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-126326-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Revision 1

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-126326-1

Job ID: 320-126326-1

Eurofins Sacramento

Job Narrative 320-126326-1

REVISION

The report being provided is a revision of the original report sent on 10/29/2025. The report (revision 1) is being revised to remove the unnecessary correspondence document which was included in error on the original report.

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 10/15/2025 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.7°C.

PFAS

Method 1633_Final: The following sample was discolored and contained particulates prior to extraction, and yielded a discolored extract: INF-COMP-202510 (320-126326-1).

Method 1633_Final: The following sample yielded a discolored extract: EFF-G-202510 (320-126326-2).

Method 1633_Final: Per client request, sample INF-COMP-202510 (320-126326-1) with elevated total suspended solids (TSS) was fortified with Extracted Internal Standards (EIS/IDA), equilibrated, and centrifuged. The aqueous phase was separated and then extracted using Solid Phase Extraction (SPE). A rinse of the solid residue using basic methanol was added to the aqueous sample prior to SPE, such that the final extract represents the combined contribution of both solid and aqueous fractions. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method 1633_Final: Isotope Dilution Analyte (IDA) recoveries are outside the method recommended limit in one or more samples, as indicated in the Isotope Dilution Summary. Generally, data quality is not considered to be affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 1633_Final: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty.

Method 1633_Final: One or more continuing calibration verifications (CCV) and/or continuing calibration blanks (CCB) for analytical batch 320-882202 recovered above the upper control limit for one or more IDAs. The associated target analyte was within control limits in the CCVs and non-detect in the CCBs; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: INF-COMP-202510

Lab Sample ID: 320-126326-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.1		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	4.6		1.6	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	5.3		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.5	J	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.46	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.5		1.6	0.42	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.49	J I	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.1		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.1		1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	1.3	J	3.1	0.32	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.20	J I	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.6	0.27	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.79	J	1.6	0.34	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.6	J	7.8	1.8	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	21		7.8	1.3	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.0	J	7.8	0.97	ng/L	1		1633A	Total/NA

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.6		3.1	0.29	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	19		1.6	0.18	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	8.2		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.1		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.56	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.8		1.6	0.42	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.44	J I	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.9		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.9		1.6	0.22	ng/L	1		1633A	Total/NA
6:2 FTS	0.76	J	3.1	0.32	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.84	J	1.6	0.18	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.81	J	1.6	0.27	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.3	J	7.8	1.3	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: INF-COMP-202510

Lab Sample ID: 320-126326-1

Date Collected: 10/13/25 23:59

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.1		3.1	0.29	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoropentanoic acid (PFPeA)	4.6		1.6	0.18	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorohexanoic acid (PFHxA)	5.3		1.6	0.21	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	1.6	0.27	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorooctanoic acid (PFOA)	5.2		1.6	0.31	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorononanoic acid (PFNA)	0.46	J	1.6	0.35	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorobutanesulfonic acid (PFBS)	3.5		1.6	0.42	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoropentanesulfonic acid (PFPeS)	0.49	J I	1.6	0.17	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorohexanesulfonic acid (PFHxS)	6.1		1.6	0.19	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorooctanesulfonic acid (PFOS)	4.1		1.6	0.22	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		10/23/25 19:45	10/24/25 18:07	1
4:2 FTS	ND		3.1	0.34	ng/L		10/23/25 19:45	10/24/25 18:07	1
6:2 FTS	1.3	J	3.1	0.32	ng/L		10/23/25 19:45	10/24/25 18:07	1
8:2 FTS	ND		3.1	0.70	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorooctanesulfonamide (PFOSA)	0.20	J I	1.6	0.18	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.6	0.27	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.79	J	1.6	0.34	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.6	J	7.8	1.8	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		10/23/25 19:45	10/24/25 18:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		10/23/25 19:45	10/24/25 18:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		10/23/25 19:45	10/24/25 18:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		10/23/25 19:45	10/24/25 18:07	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		10/23/25 19:45	10/24/25 18:07	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		10/23/25 19:45	10/24/25 18:07	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: INF-COMP-202510

Lab Sample ID: 320-126326-1

Date Collected: 10/13/25 23:59

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		10/23/25 19:45	10/24/25 18:07	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		10/23/25 19:45	10/24/25 18:07	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	21		7.8	1.3	ng/L		10/23/25 19:45	10/24/25 18:07	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.0	J	7.8	0.97	ng/L		10/23/25 19:45	10/24/25 18:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	82.4		5 - 130				10/23/25 19:45	10/24/25 18:07	1
13C5 PFPeA	86.8		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C5 PFHxA	88.3		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C4 PFHpA	94.4		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C8 PFOA	86.3		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C9 PFNA	97.3		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C6 PFDA	81.6		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C7 PFUnA	46.0		30 - 130				10/23/25 19:45	10/24/25 18:07	1
13C2 PFDoA	37.8		10 - 130				10/23/25 19:45	10/24/25 18:07	1
13C2 PFTeDA	47.4		10 - 130				10/23/25 19:45	10/24/25 18:07	1
13C3 PFBS	86.7		40 - 135				10/23/25 19:45	10/24/25 18:07	1
13C3 PFHxS	99.4		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C8 PFOS	83.7		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C8 FOSA	57.8		40 - 130				10/23/25 19:45	10/24/25 18:07	1
D3-NMeFOSAA	61.3		40 - 170				10/23/25 19:45	10/24/25 18:07	1
D5-NeFOSAA	68.6		25 - 135				10/23/25 19:45	10/24/25 18:07	1
13C2 4:2 FTS	268	*5+	40 - 200				10/23/25 19:45	10/24/25 18:07	1
13C2 6:2 FTS	222	*5+	40 - 200				10/23/25 19:45	10/24/25 18:07	1
13C2 8:2 FTS	239		40 - 300				10/23/25 19:45	10/24/25 18:07	1
13C3 HFPO-DA	98.4		40 - 130				10/23/25 19:45	10/24/25 18:07	1
D7-NMeFOSE	25.2		10 - 130				10/23/25 19:45	10/24/25 18:07	1
D9-NeFOSE	49.0		10 - 130				10/23/25 19:45	10/24/25 18:07	1
D5-NeFOSA	46.2		10 - 130				10/23/25 19:45	10/24/25 18:07	1
D3-NMeFOSA	41.9		10 - 130				10/23/25 19:45	10/24/25 18:07	1

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.6		3.1	0.29	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoropentanoic acid (PFPeA)	19		1.6	0.18	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorohexanoic acid (PFHxA)	8.2		1.6	0.21	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.27	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorooctanoic acid (PFOA)	7.1		1.6	0.31	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorodecanoic acid (PFDA)	0.56	J	1.6	0.35	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		10/17/25 04:23	10/21/25 01:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.8		1.6	0.42	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoropentanesulfonic acid (PFPeS)	0.44	J I	1.6	0.17	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorohexanesulfonic acid (PFHxS)	5.9		1.6	0.19	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorooctanesulfonic acid (PFOS)	2.9		1.6	0.22	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		10/17/25 04:23	10/21/25 01:47	1
4:2 FTS	ND		3.1	0.34	ng/L		10/17/25 04:23	10/21/25 01:47	1
6:2 FTS	0.76	J	3.1	0.32	ng/L		10/17/25 04:23	10/21/25 01:47	1
8:2 FTS	ND		3.1	0.70	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorooctanesulfonamide (PFOSA)	0.84	J	1.6	0.18	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.81	J	1.6	0.27	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.34	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.8	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		10/17/25 04:23	10/21/25 01:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		10/17/25 04:23	10/21/25 01:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		10/17/25 04:23	10/21/25 01:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		10/17/25 04:23	10/21/25 01:47	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		10/17/25 04:23	10/21/25 01:47	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		10/17/25 04:23	10/21/25 01:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		10/17/25 04:23	10/21/25 01:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.3	J	7.8	1.3	ng/L		10/17/25 04:23	10/21/25 01:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		10/17/25 04:23	10/21/25 01:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	90.2		5 - 130				10/17/25 04:23	10/21/25 01:47	1
13C5 PFPeA	108		40 - 130				10/17/25 04:23	10/21/25 01:47	1
13C5 PFHxA	121		40 - 130				10/17/25 04:23	10/21/25 01:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	98.8		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C8 PFOA	104		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C9 PFNA	95.8		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C6 PFDA	92.0		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C7 PFUnA	78.6		30 - 130	10/17/25 04:23	10/21/25 01:47	1
13C2 PFDoA	80.2		10 - 130	10/17/25 04:23	10/21/25 01:47	1
13C2 PFTeDA	59.4		10 - 130	10/17/25 04:23	10/21/25 01:47	1
13C3 PFBS	104		40 - 135	10/17/25 04:23	10/21/25 01:47	1
13C3 PFHxS	111		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C8 PFOS	101		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C8 FOSA	87.4		40 - 130	10/17/25 04:23	10/21/25 01:47	1
D3-NMeFOSAA	88.1		40 - 170	10/17/25 04:23	10/21/25 01:47	1
D5-NEtFOSAA	81.2		25 - 135	10/17/25 04:23	10/21/25 01:47	1
13C2 4:2 FTS	158		40 - 200	10/17/25 04:23	10/21/25 01:47	1
13C2 6:2 FTS	117		40 - 200	10/17/25 04:23	10/21/25 01:47	1
13C2 8:2 FTS	152		40 - 300	10/17/25 04:23	10/21/25 01:47	1
13C3 HFPO-DA	95.1		40 - 130	10/17/25 04:23	10/21/25 01:47	1
D7-NMeFOSE	68.4		10 - 130	10/17/25 04:23	10/21/25 01:47	1
D9-NEtFOSE	66.6		10 - 130	10/17/25 04:23	10/21/25 01:47	1
D5-NEtFOSA	67.2		10 - 130	10/17/25 04:23	10/21/25 01:47	1
D3-NMeFOSA	68.7		10 - 130	10/17/25 04:23	10/21/25 01:47	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-126326-1	INF-COMP-202510	82.4	86.8	88.3	94.4	86.3	97.3	81.6	46.0
320-126326-2	EFF-G-202510	90.2	108	121	98.8	104	95.8	92.0	78.6
LCS 320-881647/3-A	Lab Control Sample	92.9	97.7	112	109	101	97.2	96.0	86.6
LCS 320-882971/3-A	Lab Control Sample	90.7	93.0	91.7	92.9	90.3	103	100	80.5
LCSD 320-881647/4-A	Lab Control Sample Dup	96.9	90.4	120	119	101	95.0	98.6	83.0
LLCS 320-881647/2-A	Lab Control Sample	92.9	100	100	107	96.8	87.9	85.3	82.4
LLCS 320-882971/2-A	Lab Control Sample	92.6	102	113	107	97.1	97.2	87.2	92.9
MB 320-881647/1-A	Method Blank	94.2	97.5	117	114	104	99.6	96.8	97.6
MB 320-882971/1-A	Method Blank	92.6	85.9	100	96.1	91.6	86.6	91.8	92.1

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-126326-1	INF-COMP-202510	37.8	47.4	86.7	99.4	83.7	57.8	61.3	68.6
320-126326-2	EFF-G-202510	80.2	59.4	104	111	101	87.4	88.1	81.2
LCS 320-881647/3-A	Lab Control Sample	82.1	95.7	94.2	110	91.3	79.2	93.3	89.7
LCS 320-882971/3-A	Lab Control Sample	79.4	73.9	96.2	89.7	85.6	89.2	88.2	90.4
LCSD 320-881647/4-A	Lab Control Sample Dup	87.3	95.1	98.3	108	106	86.9	97.1	93.4
LLCS 320-881647/2-A	Lab Control Sample	88.3	82.9	99.5	106	106	78.5	87.9	88.6
LLCS 320-882971/2-A	Lab Control Sample	77.6	75.2	94.3	88.9	96.0	86.9	90.2	91.0
MB 320-881647/1-A	Method Blank	97.5	96.8	95.2	104	95.2	76.2	97.7	87.5
MB 320-882971/1-A	Method Blank	81.4	70.5	77.6	94.0	94.3	87.0	89.3	93.5

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-126326-1	INF-COMP-202510	268 *5+	222 *5+	239	98.4	25.2	49.0	46.2	41.9
320-126326-2	EFF-G-202510	158	117	152	95.1	68.4	66.6	67.2	68.7
LCS 320-881647/3-A	Lab Control Sample	120	99.7	121	98.3	75.4	77.9	65.7	68.0
LCS 320-882971/3-A	Lab Control Sample	88.0	76.1	81.0	96.3	76.8	78.6	68.2	69.6
LCSD 320-881647/4-A	Lab Control Sample Dup	111	101	126	95.3	80.8	83.8	71.4	75.9
LLCS 320-881647/2-A	Lab Control Sample	127	109	122	92.2	75.7	75.5	64.6	67.2
LLCS 320-882971/2-A	Lab Control Sample	98.4	86.6	91.1	101	75.8	76.1	69.8	72.9
MB 320-881647/1-A	Method Blank	117	94.1	120	105	74.8	76.1	66.5	69.1
MB 320-882971/1-A	Method Blank	98.5	77.8	71.3	93.3	77.1	74.4	70.4	74.6

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-126326-1

Project/Site: PFAS Sampling

d3NMFOS = D3-NMeFOSAA

d5NEFOS = D5-NEtFOSAA

M242FTS = 13C2 4:2 FTS

M262FTS = 13C2 6:2 FTS

M282FTS = 13C2 8:2 FTS

HFPODA = 13C3 HFPO-DA

NMFM = D7-NMeFOSE

NEFM = D9-NEtFOSE

d5NPFSA = D5-NEtFOSA

d3NMFSA = D3-NMeFOSA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-881647/1-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 881647

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.54	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		10/17/25 04:23	10/21/25 00:41	1
4:2 FTS	ND		4.0	0.44	ng/L		10/17/25 04:23	10/21/25 00:41	1
6:2 FTS	ND		4.0	0.41	ng/L		10/17/25 04:23	10/21/25 00:41	1
8:2 FTS	ND		4.0	0.90	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		10/17/25 04:23	10/21/25 00:41	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		10/17/25 04:23	10/21/25 00:41	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		10/17/25 04:23	10/21/25 00:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		10/17/25 04:23	10/21/25 00:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		10/17/25 04:23	10/21/25 00:41	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		10/17/25 04:23	10/21/25 00:41	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		10/17/25 04:23	10/21/25 00:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		10/17/25 04:23	10/21/25 00:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		10/17/25 04:23	10/21/25 00:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		10/17/25 04:23	10/21/25 00:41	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		10/17/25 04:23	10/21/25 00:41	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		10/17/25 04:23	10/21/25 00:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		10/17/25 04:23	10/21/25 00:41	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-881647/1-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 881647

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		10/17/25 04:23	10/21/25 00:41	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		10/17/25 04:23	10/21/25 00:41	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		10/17/25 04:23	10/21/25 00:41	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	94.2		5 - 130	10/17/25 04:23	10/21/25 00:41	1
13C5 PFPeA	97.5		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C5 PFHxA	117		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C4 PFHpA	114		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C8 PFOA	104		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C9 PFNA	99.6		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C6 PFDA	96.8		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C7 PFUnA	97.6		30 - 130	10/17/25 04:23	10/21/25 00:41	1
13C2 PFDoA	97.5		10 - 130	10/17/25 04:23	10/21/25 00:41	1
13C2 PFTeDA	96.8		10 - 130	10/17/25 04:23	10/21/25 00:41	1
13C3 PFBS	95.2		40 - 135	10/17/25 04:23	10/21/25 00:41	1
13C3 PFHxS	104		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C8 PFOS	95.2		40 - 130	10/17/25 04:23	10/21/25 00:41	1
13C8 FOSA	76.2		40 - 130	10/17/25 04:23	10/21/25 00:41	1
D3-NMeFOSAA	97.7		40 - 170	10/17/25 04:23	10/21/25 00:41	1
D5-NEtFOSAA	87.5		25 - 135	10/17/25 04:23	10/21/25 00:41	1
13C2 4:2 FTS	117		40 - 200	10/17/25 04:23	10/21/25 00:41	1
13C2 6:2 FTS	94.1		40 - 200	10/17/25 04:23	10/21/25 00:41	1
13C2 8:2 FTS	120		40 - 300	10/17/25 04:23	10/21/25 00:41	1
13C3 HFPO-DA	105		40 - 130	10/17/25 04:23	10/21/25 00:41	1
D7-NMeFOSE	74.8		10 - 130	10/17/25 04:23	10/21/25 00:41	1
D9-NEtFOSE	76.1		10 - 130	10/17/25 04:23	10/21/25 00:41	1
D5-NEtFOSA	66.5		10 - 130	10/17/25 04:23	10/21/25 00:41	1
D3-NMeFOSA	69.1		10 - 130	10/17/25 04:23	10/21/25 00:41	1

Lab Sample ID: LCS 320-881647/3-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 881647

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	89.2		ng/L		111	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	42.4		ng/L		106	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	39.1		ng/L		98	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	38.7		ng/L		97	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	40.6		ng/L		102	70 - 150
Perfluorononanoic acid (PFNA)	40.0	49.6		ng/L		124	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	43.8		ng/L		110	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	42.1		ng/L		105	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	44.3		ng/L		111	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-881647/3-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 881647

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.7		ng/L		99	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	35.1		ng/L		88	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	29.4		ng/L		83	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	36.9		ng/L		98	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.8		ng/L		87	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	41.3		ng/L		108	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	42.2		ng/L		113	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	40.3		ng/L		105	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	39.0		ng/L		101	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	37.7		ng/L		97	50 - 145
4:2 FTS	75.0	62.4		ng/L		83	70 - 145
6:2 FTS	76.2	89.3		ng/L		117	65 - 155
8:2 FTS	76.8	76.9		ng/L		100	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	42.9		ng/L		107	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	39.5		ng/L		99	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	42.5		ng/L		106	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.4		ng/L		99	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.7		ng/L		94	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	201		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	197		ng/L		98	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	28.5		ng/L		95	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	40.7		ng/L		108	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	40.6		ng/L		101	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	43.1		ng/L		108	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	27.5		ng/L		69	50 - 150
9Cl-PF3ONS	37.4	35.5		ng/L		95	70 - 155
11Cl-PF3OUdS	37.8	34.2		ng/L		90	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	32.7		ng/L		92	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	78.9		ng/L		99	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	186		ng/L		93	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-881647/3-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 881647

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	163		ng/L		81	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	92.9		5 - 130
13C5 PFPeA	97.7		40 - 130
13C5 PFHxA	112		40 - 130
13C4 PFHpA	109		40 - 130
13C8 PFOA	101		40 - 130
13C9 PFNA	97.2		40 - 130
13C6 PFDA	96.0		40 - 130
13C7 PFUnA	86.6		30 - 130
13C2 PFDoA	82.1		10 - 130
13C2 PFTeDA	95.7		10 - 130
13C3 PFBS	94.2		40 - 135
13C3 PFHxS	110		40 - 130
13C8 PFOS	91.3		40 - 130
13C8 FOSA	79.2		40 - 130
D3-NMeFOSAA	93.3		40 - 170
D5-NEtFOSAA	89.7		25 - 135
13C2 4:2 FTS	120		40 - 200
13C2 6:2 FTS	99.7		40 - 200
13C2 8:2 FTS	121		40 - 300
13C3 HFPO-DA	98.3		40 - 130
D7-NMeFOSE	75.4		10 - 130
D9-NEtFOSE	77.9		10 - 130
D5-NEtFOSA	65.7		10 - 130
D3-NMeFOSA	68.0		10 - 130

Lab Sample ID: LCSD 320-881647/4-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 881647

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	83.6		ng/L		104	70 - 140	6	30
Perfluoropentanoic acid (PFPeA)	40.0	44.1		ng/L		110	65 - 135	4	30
Perfluorohexanoic acid (PFHxA)	40.0	35.6		ng/L		89	70 - 145	9	30
Perfluoroheptanoic acid (PFHpA)	40.0	34.8		ng/L		87	70 - 150	11	30
Perfluorooctanoic acid (PFOA)	40.0	40.8		ng/L		102	70 - 150	0	30
Perfluorononanoic acid (PFNA)	40.0	47.7		ng/L		119	70 - 150	4	30
Perfluorodecanoic acid (PFDA)	40.0	39.7		ng/L		99	70 - 140	10	30
Perfluoroundecanoic acid (PFUnA)	40.0	44.9		ng/L		112	70 - 145	6	30
Perfluorododecanoic acid (PFDoA)	40.0	47.5		ng/L		119	70 - 140	7	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	34.8		ng/L		87	65 - 140	13	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	37.4		ng/L		93	60 - 140	6	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-881647/4-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 881647

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	35.5	30.5		ng/L		86	60 - 145	4	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.6		ng/L		100	65 - 140	2	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	33.0		ng/L		90	65 - 145	4	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.3		ng/L		103	70 - 150	5	30
Perfluorooctanesulfonic acid (PFOS)	37.2	36.5		ng/L		98	55 - 150	15	30
Perfluorononanesulfonic acid (PFNS)	38.5	37.1		ng/L		96	65 - 145	8	30
Perfluorodecanesulfonic acid (PFDS)	38.6	32.2		ng/L		83	60 - 145	19	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	34.0		ng/L		88	50 - 145	10	30
4:2 FTS	75.0	76.2		ng/L		102	70 - 145	20	30
6:2 FTS	76.2	86.3		ng/L		113	65 - 155	3	30
8:2 FTS	76.8	64.2		ng/L		84	60 - 150	18	30
Perfluorooctanesulfonamide (PFOSA)	40.0	45.3		ng/L		113	70 - 145	6	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	39.9		ng/L		100	60 - 150	1	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	44.9		ng/L		112	65 - 145	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.5		ng/L		106	50 - 140	8	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.3		ng/L		101	70 - 145	7	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	200		ng/L		100	70 - 145	0	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	208		ng/L		104	70 - 135	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	28.1		ng/L		94	70 - 140	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.2		ng/L		114	65 - 145	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	39.2		ng/L		98	55 - 140	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	48.5		ng/L		121	60 - 150	12	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	32.1		ng/L		80	50 - 150	15	30
9Cl-PF3ONS	37.4	36.2		ng/L		97	70 - 155	2	30
11Cl-PF3OUdS	37.8	33.2		ng/L		88	55 - 160	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	31.4		ng/L		88	70 - 140	4	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	84.7		ng/L		106	65 - 130	7	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	160		ng/L		80	70 - 135	15	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	145		ng/L		73	50 - 145	11	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C4 PFBA	96.9		5 - 130
13C5 PFPeA	90.4		40 - 130
13C5 PFHxA	120		40 - 130
13C4 PFHpA	119		40 - 130
13C8 PFOA	101		40 - 130
13C9 PFNA	95.0		40 - 130
13C6 PFDA	98.6		40 - 130
13C7 PFUnA	83.0		30 - 130
13C2 PFDoA	87.3		10 - 130
13C2 PFTeDA	95.1		10 - 130
13C3 PFBS	98.3		40 - 135
13C3 PFHxS	108		40 - 130
13C8 PFOS	106		40 - 130
13C8 FOSA	86.9		40 - 130
D3-NMeFOSAA	97.1		40 - 170
D5-NEtFOSAA	93.4		25 - 135
13C2 4:2 FTS	111		40 - 200
13C2 6:2 FTS	101		40 - 200
13C2 8:2 FTS	126		40 - 300
13C3 HFPO-DA	95.3		40 - 130
D7-NMeFOSE	80.8		10 - 130
D9-NEtFOSE	83.8		10 - 130
D5-NEtFOSA	71.4		10 - 130
D3-NMeFOSA	75.9		10 - 130

Lab Sample ID: LLCS 320-881647/2-A
Matrix: Water
Analysis Batch: 882202

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 881647

<i>Analyte</i>	<i>Spike Added</i>	<i>LLCS Result</i>	<i>LLCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluorobutanoic acid (PFBA)	8.00	9.26		ng/L		116	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.22		ng/L		105	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.77		ng/L		119	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.89		ng/L		97	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.78		ng/L		120	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.71		ng/L		118	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	5.41		ng/L		135	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.74		ng/L		119	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.62		ng/L		116	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.75		ng/L		119	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.67		ng/L		92	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.04		ng/L		85	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.52		ng/L		120	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.70		ng/L		101	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.65		ng/L		96	70 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-881647/2-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 881647

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	4.28		ng/L		115	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.40		ng/L		88	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.47		ng/L		90	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.11		ng/L		80	50 - 145
4:2 FTS	7.50	7.27		ng/L		97	70 - 145
6:2 FTS	7.62	8.50		ng/L		112	65 - 155
8:2 FTS	7.68	7.67		ng/L		100	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.86		ng/L		121	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.97		ng/L		99	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.55		ng/L		114	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.20		ng/L		105	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.72		ng/L		93	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.8		ng/L		99	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.2		ng/L		106	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.94		ng/L		98	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.22		ng/L		112	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.95		ng/L		99	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.74		ng/L		94	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.61		ng/L		115	50 - 150
9CI-PF3ONS	3.74	3.53		ng/L		95	70 - 155
11CI-PF3OUdS	3.78	3.14		ng/L		83	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.68		ng/L		103	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	7.35		ng/L		92	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.4		ng/L		102	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	15.1		ng/L		76	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	92.9		5 - 130
13C5 PFPeA	100		40 - 130
13C5 PFHxA	100		40 - 130
13C4 PFHpA	107		40 - 130
13C8 PFOA	96.8		40 - 130
13C9 PFNA	87.9		40 - 130
13C6 PFDA	85.3		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-881647/2-A

Matrix: Water

Analysis Batch: 882202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 881647

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C7 PFUnA	82.4		30 - 130
13C2 PFDoA	88.3		10 - 130
13C2 PFTeDA	82.9		10 - 130
13C3 PFBS	99.5		40 - 135
13C3 PFHxS	106		40 - 130
13C8 PFOS	106		40 - 130
13C8 FOSA	78.5		40 - 130
D3-NMeFOSAA	87.9		40 - 170
D5-NEtFOSAA	88.6		25 - 135
13C2 4:2 FTS	127		40 - 200
13C2 6:2 FTS	109		40 - 200
13C2 8:2 FTS	122		40 - 300
13C3 HFPO-DA	92.2		40 - 130
D7-NMeFOSE	75.7		10 - 130
D9-NEtFOSE	75.5		10 - 130
D5-NEtFOSA	64.6		10 - 130
D3-NMeFOSA	67.2		10 - 130

Lab Sample ID: MB 320-882971/1-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 882971

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	0.58	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.54	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		10/23/25 19:45	10/24/25 17:18	1
4:2 FTS	ND		4.0	0.44	ng/L		10/23/25 19:45	10/24/25 17:18	1
6:2 FTS	ND		4.0	0.41	ng/L		10/23/25 19:45	10/24/25 17:18	1
8:2 FTS	ND		4.0	0.90	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		10/23/25 19:45	10/24/25 17:18	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-882971/1-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 882971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		10/23/25 19:45	10/24/25 17:18	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		10/23/25 19:45	10/24/25 17:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		10/23/25 19:45	10/24/25 17:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		10/23/25 19:45	10/24/25 17:18	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		10/23/25 19:45	10/24/25 17:18	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		10/23/25 19:45	10/24/25 17:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		10/23/25 19:45	10/24/25 17:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		10/23/25 19:45	10/24/25 17:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		10/23/25 19:45	10/24/25 17:18	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		10/23/25 19:45	10/24/25 17:18	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		10/23/25 19:45	10/24/25 17:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		10/23/25 19:45	10/24/25 17:18	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		10/23/25 19:45	10/24/25 17:18	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		10/23/25 19:45	10/24/25 17:18	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		10/23/25 19:45	10/24/25 17:18	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	92.6		5 - 130				10/23/25 19:45	10/24/25 17:18	1
13C5 PFPeA	85.9		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C5 PFHxA	100		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C4 PFHpA	96.1		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C8 PFOA	91.6		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C9 PFNA	86.6		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C6 PFDA	91.8		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C7 PFUnA	92.1		30 - 130				10/23/25 19:45	10/24/25 17:18	1
13C2 PFDoA	81.4		10 - 130				10/23/25 19:45	10/24/25 17:18	1
13C2 PFTeDA	70.5		10 - 130				10/23/25 19:45	10/24/25 17:18	1
13C3 PFBS	77.6		40 - 135				10/23/25 19:45	10/24/25 17:18	1
13C3 PFHxS	94.0		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C8 PFOS	94.3		40 - 130				10/23/25 19:45	10/24/25 17:18	1
13C8 FOSA	87.0		40 - 130				10/23/25 19:45	10/24/25 17:18	1
D3-NMeFOSAA	89.3		40 - 170				10/23/25 19:45	10/24/25 17:18	1
D5-NEtFOSAA	93.5		25 - 135				10/23/25 19:45	10/24/25 17:18	1
13C2 4:2 FTS	98.5		40 - 200				10/23/25 19:45	10/24/25 17:18	1
13C2 6:2 FTS	77.8		40 - 200				10/23/25 19:45	10/24/25 17:18	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-882971/1-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 882971

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 8:2 FTS	71.3		40 - 300	10/23/25 19:45	10/24/25 17:18	1
13C3 HFPO-DA	93.3		40 - 130	10/23/25 19:45	10/24/25 17:18	1
D7-NMeFOSE	77.1		10 - 130	10/23/25 19:45	10/24/25 17:18	1
D9-NEtFOSE	74.4		10 - 130	10/23/25 19:45	10/24/25 17:18	1
D5-NEtFOSA	70.4		10 - 130	10/23/25 19:45	10/24/25 17:18	1
D3-NMeFOSA	74.6		10 - 130	10/23/25 19:45	10/24/25 17:18	1

Lab Sample ID: LCS 320-882971/3-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 882971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	83.9		ng/L		105	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	47.4		ng/L		119	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	45.8		ng/L		114	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	41.7		ng/L		104	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	41.3		ng/L		103	70 - 150
Perfluorononanoic acid (PFNA)	40.0	36.7		ng/L		92	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	34.0		ng/L		85	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	44.8		ng/L		112	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	44.3		ng/L		111	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	40.0	42.2		ng/L		106	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	41.2		ng/L		103	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	37.7		ng/L		106	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.8		ng/L		101	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.2		ng/L		97	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	41.4		ng/L		108	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	42.8		ng/L		115	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	39.1		ng/L		102	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	39.8		ng/L		103	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.4		ng/L		94	50 - 145
4:2 FTS	75.0	70.4		ng/L		94	70 - 145
6:2 FTS	76.2	92.9		ng/L		122	65 - 155
8:2 FTS	76.8	66.2		ng/L		86	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	39.6		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	45.1		ng/L		113	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	45.7		ng/L		114	65 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-882971/3-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 882971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.2		ng/L		98	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.6		ng/L		104	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	205		ng/L		102	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	205		ng/L		102	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	28.4		ng/L		95	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.5		ng/L		99	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	41.7		ng/L		104	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	44.9		ng/L		112	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	41.5		ng/L		104	50 - 150
9CI-PF3ONS	37.4	39.7		ng/L		106	70 - 155
11CI-PF3OUdS	37.8	39.3		ng/L		104	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	36.5		ng/L		102	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	81.0		ng/L		101	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	194		ng/L		97	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	174		ng/L		87	50 - 145

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	90.7		5 - 130
13C5 PFPeA	93.0		40 - 130
13C5 PFHxA	91.7		40 - 130
13C4 PFHpA	92.9		40 - 130
13C8 PFOA	90.3		40 - 130
13C9 PFNA	103		40 - 130
13C6 PFDA	100		40 - 130
13C7 PFUnA	80.5		30 - 130
13C2 PFDoA	79.4		10 - 130
13C2 PFTeDA	73.9		10 - 130
13C3 PFBS	96.2		40 - 135
13C3 PFHxS	89.7		40 - 130
13C8 PFOS	85.6		40 - 130
13C8 FOSA	89.2		40 - 130
D3-NMeFOSAA	88.2		40 - 170
D5-NEtFOSAA	90.4		25 - 135
13C2 4:2 FTS	88.0		40 - 200
13C2 6:2 FTS	76.1		40 - 200
13C2 8:2 FTS	81.0		40 - 300
13C3 HFPO-DA	96.3		40 - 130
D7-NMeFOSE	76.8		10 - 130
D9-NEtFOSE	78.6		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-882971/3-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 882971

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
D5-NEtFOSA	68.2		10 - 130
D3-NMeFOSA	69.6		10 - 130

Lab Sample ID: LLCS 320-882971/2-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 882971

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	7.83		ng/L		98	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.03		ng/L		101	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	3.37		ng/L		84	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.53		ng/L		88	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	3.35		ng/L		84	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.30		ng/L		83	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	3.93		ng/L		98	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	3.72		ng/L		93	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.67		ng/L		92	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	3.96		ng/L		99	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.09		ng/L		102	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.63		ng/L		102	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.79		ng/L		101	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.86		ng/L		106	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.42		ng/L		90	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.58		ng/L		96	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.24		ng/L		84	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.53		ng/L		92	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.14		ng/L		81	50 - 145
4:2 FTS	7.50	5.85		ng/L		78	70 - 145
6:2 FTS	7.62	7.80		ng/L		102	65 - 155
8:2 FTS	7.68	5.45		ng/L		71	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.89		ng/L		97	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.78		ng/L		95	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.67		ng/L		92	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.48		ng/L		87	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.87		ng/L		97	70 - 145

Eurofins Sacramento

QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-882971/2-A

Matrix: Water

Analysis Batch: 883176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 882971

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	18.8		ng/L		94	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.1		ng/L		96	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.79		ng/L		93	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.50		ng/L		92	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.75		ng/L		94	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.94		ng/L		98	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.08		ng/L		102	50 - 150
9CI-PF3ONS	3.74	3.61		ng/L		97	70 - 155
11CI-PF3OUdS	3.78	3.26		ng/L		86	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.23		ng/L		90	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.00		ng/L		100	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	15.9		ng/L		79	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	14.5		ng/L		72	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	92.6		5 - 130
13C5 PFPeA	102		40 - 130
13C5 PFHxA	113		40 - 130
13C4 PFHpA	107		40 - 130
13C8 PFOA	97.1		40 - 130
13C9 PFNA	97.2		40 - 130
13C6 PFDA	87.2		40 - 130
13C7 PFUnA	92.9		30 - 130
13C2 PFDoA	77.6		10 - 130
13C2 PFTeDA	75.2		10 - 130
13C3 PFBS	94.3		40 - 135
13C3 PFHxS	88.9		40 - 130
13C8 PFOS	96.0		40 - 130
13C8 FOSA	86.9		40 - 130
D3-NMeFOSAA	90.2		40 - 170
D5-NEtFOSAA	91.0		25 - 135
13C2 4:2 FTS	98.4		40 - 200
13C2 6:2 FTS	86.6		40 - 200
13C2 8:2 FTS	91.1		40 - 300
13C3 HFPO-DA	101		40 - 130
D7-NMeFOSE	75.8		10 - 130
D9-NEtFOSE	76.1		10 - 130
D5-NEtFOSA	69.8		10 - 130
D3-NMeFOSA	72.9		10 - 130

Eurofins Sacramento

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

LCMS

Prep Batch: 881647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-126326-2	EFF-G-202510	Total/NA	Water	1633A	
MB 320-881647/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-881647/3-A	Lab Control Sample	Total/NA	Water	1633A	
LCSD 320-881647/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	
LLCS 320-881647/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 882202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-126326-2	EFF-G-202510	Total/NA	Water	1633A	881647
MB 320-881647/1-A	Method Blank	Total/NA	Water	1633A	881647
LCS 320-881647/3-A	Lab Control Sample	Total/NA	Water	1633A	881647
LCSD 320-881647/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	881647
LLCS 320-881647/2-A	Lab Control Sample	Total/NA	Water	1633A	881647

Prep Batch: 882971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-126326-1	INF-COMP-202510	Total/NA	Water	1633A	
MB 320-882971/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-882971/3-A	Lab Control Sample	Total/NA	Water	1633A	
LLCS 320-882971/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 883176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-126326-1	INF-COMP-202510	Total/NA	Water	1633A	882971
MB 320-882971/1-A	Method Blank	Total/NA	Water	1633A	882971
LCS 320-882971/3-A	Lab Control Sample	Total/NA	Water	1633A	882971
LLCS 320-882971/2-A	Lab Control Sample	Total/NA	Water	1633A	882971

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: INF-COMP-202510

Lab Sample ID: 320-126326-1

Date Collected: 10/13/25 23:59

Matrix: Water

Date Received: 10/15/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			159.7 mL	5.0 mL	882971	10/23/25 19:45	CJS	EET SAC
Total/NA	Analysis	1633A		1			883176	10/24/25 18:07	P1P	EET SAC

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			159.5 mL	5.0 mL	881647	10/17/25 04:23	BMS	EET SAC
Total/NA	Analysis	1633A		1			882202	10/21/25 01:47	K1S	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-26

- 1
- 2
- 3
- 4
- 5
- 6
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- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633A	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-126326-1	INF-COMP-202510	Water	10/13/25 23:59	10/15/25 09:20	Wisconsin
320-126326-2	EFF-G-202510	Water	10/14/25 07:35	10/15/25 09:20	Wisconsin

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Reports to Mike Ursin

Chain of Custody Record

703619



**Environment Testing
America**

TAL-8210

Address TRC
999 Fourier Dr. Suite 101
Madison, WI 53717

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:[illegible]

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Rev. 1/7/2025 (Rev. 1)

Age Group	Number of People
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1

November 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 12/23/2025 1:23:02 PM Revision 1

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-127316-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Revision 1

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-127316-1

Job ID: 320-127316-1

Eurofins Sacramento

Job Narrative 320-127316-1

Revision

The original report has been revised to include updated results for PFBA and PFPeA in sample EFF-G-202511 (320-127316-2). Elevated reporting limits are provided for these analytes due to matrix interferences, and the results for these analytes otherwise remain unchanged (ND).

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 11/12/2025 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.7°C.

PFAS

Method 1633: The following samples contained particulates and were discolored prior to extraction, and yielded discolored extracts: INF-COMP-202511 (320-127316-1) and EFF-G-202511 (320-127316-2).

Method 1633: Per client request, sample INF-COMP-202511 (320-127316-1) with elevated total suspended solids (TSS) was fortified with Extracted Internal Standards (EIS/IDA), equilibrated, and centrifuged. The aqueous phase was separated and then extracted using Solid Phase Extraction (SPE). A rinse of the solid residue using basic methanol was added to the aqueous sample prior to SPE, such that the final extract represents the combined contribution of both solid and aqueous fractions. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method 1633: Sample INF-COMP-202511 (320-127316-1) was re-extracted (RE) at a reduced volume, as indicated in the Lab Chronicle, due to excessively low recovery of Isotope Dilution Analytes (IDA) 13C4-PFBA and 13C5-PFPeA in the original extraction described above. These IDAs and associated target analytes are reported from the RE analysis. The reporting limits (RLs) for these analytes have been adjusted proportionately.

Method 1633: IDA recoveries are outside the method recommended limit in one or more samples, as indicated in the Isotope Dilution Summary. Generally, data quality is not considered to be affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDAs in the sample(s).

Method 1633: The "I" qualifier has been applied to one or more analytes in one or more samples, which indicates that the transition mass ratio for the analyte was outside the established ratio limits. The reported results for the qualified analyte(s) have an increased degree of uncertainty.

Method 1633: One or more continuing calibration verifications (CCV) in analytical batch 320-888097 recovered above the upper control limit for one or more analytes. The associated field samples were ND and laboratory QC samples (LLCS/LCS/LCSD) were within control limits for the affected analyte(s); therefore, the data have been reported.

Method 1633: One or more continuing calibration verifications (CCV) in analytical batch 320-888097 exhibited anomalous transition mass ratios for one or more of the following analytes: Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) and Perfluorooctanesulfonamide (FOSA). Sample results were manually examined for potential positive results for these analytes that might not have been identified by automated software algorithms and none were found; therefore, the data have been reported.

Method 1633_Final_WI: The following sample exhibited matrix interferences for Perfluorobutanoic acid (PFBA) and Perfluoropentanoic acid (PFPeA) causing elevation of the reporting limit (RL): EFF-G-202511 (320-127316-2). The RL for the affected analytes have been raised to be equal to the matrix interference and a "G" qualifier applied.

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-127316-1

Job ID: 320-127316-1 (Continued)

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: INF-COMP-202511

Lab Sample ID: 320-127316-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	490		50	50	mg/L	1		1633 TSS	Total/NA
Perfluorooctanoic acid (PFOA)	5.4		1.6	0.32	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.8		1.6	0.20	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.8		1.6	0.23	ng/L	1		1633A	Total/NA
6:2 FTS	0.88	J	3.3	0.33	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.1	J	1.6	0.29	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	2.8	J	8.2	1.9	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	29		8.2	1.4	ng/L	1		1633A	Total/NA

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	11		1.6	0.21	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.7		1.6	0.27	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.7		1.6	0.31	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.68	J	1.6	0.36	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	0.58	J	1.6	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.4		1.6	0.42	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.47	J I	1.6	0.17	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.6	0.19	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		1.6	0.22	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.71	J	1.6	0.28	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.6	J I	7.9	1.4	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: INF-COMP-202511

Lab Sample ID: 320-127316-1

Date Collected: 11/10/25 23:59

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633 TSS - Total Suspended Solids

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	490		50	50	mg/L			12/02/25 16:25	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.22	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorooctanoic acid (PFOA)	5.4		1.6	0.32	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.37	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.47	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.44	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorohexanesulfonic acid (PFHxS)	6.8		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorooctanesulfonic acid (PFOS)	4.8		1.6	0.23	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		11/21/25 05:31	11/21/25 18:28	1
4:2 FTS	ND		3.3	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
6:2 FTS	0.88	J	3.3	0.33	ng/L		11/21/25 05:31	11/21/25 18:28	1
8:2 FTS	ND		3.3	0.73	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.1	J	1.6	0.29	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.8	J	8.2	1.9	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		11/21/25 05:31	11/21/25 18:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		11/21/25 05:31	11/21/25 18:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		11/21/25 05:31	11/21/25 18:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	^+	1.6	0.59	ng/L		11/21/25 05:31	11/21/25 18:28	1
9Cl-PF3ONS	ND		1.6	0.47	ng/L		11/21/25 05:31	11/21/25 18:28	1
11Cl-PF3OUdS	ND		1.6	0.24	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:28	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	29		8.2	1.4	ng/L		11/21/25 05:31	11/21/25 18:28	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: INF-COMP-202511

Lab Sample ID: 320-127316-1

Date Collected: 11/10/25 23:59

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		11/21/25 05:31	11/21/25 18:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	6.28	*5-	40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C4 PFHpA	29.3	*5-	40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C8 PFOA	72.7		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C9 PFNA	88.7		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C6 PFDA	91.0		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C7 PFUnA	80.4		30 - 130				11/21/25 05:31	11/21/25 18:28	1
13C2 PFDoA	68.1		10 - 130				11/21/25 05:31	11/21/25 18:28	1
13C2 PFTeDA	54.5		10 - 130				11/21/25 05:31	11/21/25 18:28	1
13C3 PFBS	24.4	*5-	40 - 135				11/21/25 05:31	11/21/25 18:28	1
13C3 PFHxS	74.8		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C8 PFOS	91.3		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C8 FOSA	78.1		40 - 130				11/21/25 05:31	11/21/25 18:28	1
D3-NMeFOSAA	54.6		40 - 170				11/21/25 05:31	11/21/25 18:28	1
D5-NEtFOSAA	27.4		25 - 135				11/21/25 05:31	11/21/25 18:28	1
13C2 4:2 FTS	7.10	*5-	40 - 200				11/21/25 05:31	11/21/25 18:28	1
13C2 6:2 FTS	134		40 - 200				11/21/25 05:31	11/21/25 18:28	1
13C2 8:2 FTS	119		40 - 300				11/21/25 05:31	11/21/25 18:28	1
13C3 HFPO-DA	6.99	*5-	40 - 130				11/21/25 05:31	11/21/25 18:28	1
D7-NMeFOSE	32.4		10 - 130				11/21/25 05:31	11/21/25 18:28	1
D9-NEtFOSE	45.4		10 - 130				11/21/25 05:31	11/21/25 18:28	1
D5-NEtFOSA	23.4		10 - 130				11/21/25 05:31	11/21/25 18:28	1
D3-NMeFOSA	65.7		10 - 130				11/21/25 05:31	11/21/25 18:28	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		40	3.7	ng/L		12/04/25 04:11	12/04/25 15:49	1
Perfluoropentanoic acid (PFPeA)	ND		20	2.3	ng/L		12/04/25 04:11	12/04/25 15:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		20	1.9	ng/L		12/04/25 04:11	12/04/25 15:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		20	2.6	ng/L		12/04/25 04:11	12/04/25 15:49	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		40	7.2	ng/L		12/04/25 04:11	12/04/25 15:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	110		5 - 130				12/04/25 04:11	12/04/25 15:49	1
13C5 PFPeA	64.5		40 - 130				12/04/25 04:11	12/04/25 15:49	1

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	G	4.1	4.1	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoropentanoic acid (PFPeA)	ND	G	14	14	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorohexanoic acid (PFHxA)	11		1.6	0.21	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoroheptanoic acid (PFHpA)	1.7		1.6	0.27	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorooctanoic acid (PFOA)	7.7		1.6	0.31	ng/L		11/21/25 05:31	11/21/25 18:45	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	0.68	J	1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorodecanoic acid (PFDA)	0.58	J	1.6	0.35	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.6	0.42	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoropentanesulfonic acid (PFPeS)	0.47	J I	1.6	0.17	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.6	0.19	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorooctanesulfonic acid (PFOS)	3.1		1.6	0.22	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		11/21/25 05:31	11/21/25 18:45	1
4:2 FTS	ND		3.2	0.34	ng/L		11/21/25 05:31	11/21/25 18:45	1
6:2 FTS	ND		3.2	0.32	ng/L		11/21/25 05:31	11/21/25 18:45	1
8:2 FTS	ND		3.2	0.71	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.71	J	1.6	0.28	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.9	1.8	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		11/21/25 05:31	11/21/25 18:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		11/21/25 05:31	11/21/25 18:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	^+	1.6	0.57	ng/L		11/21/25 05:31	11/21/25 18:45	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		11/21/25 05:31	11/21/25 18:45	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		11/21/25 05:31	11/21/25 18:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.6	J I	7.9	1.4	ng/L		11/21/25 05:31	11/21/25 18:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		11/21/25 05:31	11/21/25 18:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.8		5 - 130				11/21/25 05:31	11/21/25 18:45	1
13C5 PFPeA	62.1		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C5 PFHxA	87.4		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C4 PFHpA	84.7		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C8 PFOA	99.8		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C9 PFNA	103		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C6 PFDA	98.2		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C7 PFUnA	94.4		30 - 130				11/21/25 05:31	11/21/25 18:45	1
13C2 PFDoA	83.0		10 - 130				11/21/25 05:31	11/21/25 18:45	1
13C2 PFTeDA	51.9		10 - 130				11/21/25 05:31	11/21/25 18:45	1
13C3 PFBS	96.7		40 - 135				11/21/25 05:31	11/21/25 18:45	1
13C3 PFHxS	101		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C8 PFOS	101		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C8 FOSA	88.1		40 - 130				11/21/25 05:31	11/21/25 18:45	1
D3-NMeFOSAA	90.1		40 - 170				11/21/25 05:31	11/21/25 18:45	1
D5-NEtFOSAA	84.4		25 - 135				11/21/25 05:31	11/21/25 18:45	1
13C2 4:2 FTS	174		40 - 200				11/21/25 05:31	11/21/25 18:45	1
13C2 6:2 FTS	151		40 - 200				11/21/25 05:31	11/21/25 18:45	1
13C2 8:2 FTS	127		40 - 300				11/21/25 05:31	11/21/25 18:45	1
13C3 HFPO-DA	77.5		40 - 130				11/21/25 05:31	11/21/25 18:45	1
D7-NMeFOSE	85.2		10 - 130				11/21/25 05:31	11/21/25 18:45	1
D9-NEtFOSE	74.4		10 - 130				11/21/25 05:31	11/21/25 18:45	1
D5-NEtFOSA	72.5		10 - 130				11/21/25 05:31	11/21/25 18:45	1
D3-NMeFOSA	75.7		10 - 130				11/21/25 05:31	11/21/25 18:45	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-127316-1	INF-COMP-202511			6.28 *5-	29.3 *5-	72.7	88.7	91.0	80.4
320-127316-1 - RE	INF-COMP-202511	110	64.5						
320-127316-2	EFF-G-202511	97.8	62.1	87.4	84.7	99.8	103	98.2	94.4
LCS 320-888074/3-A	Lab Control Sample	109	103	108	92.9	103	93.7	125	115
LCS 320-890029/3-A	Lab Control Sample	110	87.6						
LCSD 320-888074/4-A	Lab Control Sample Dup	108	101	103	103	106	110	109	111
LCSD 320-890029/4-A	Lab Control Sample Dup	112	85.8						
LLCS 320-888074/2-A	Lab Control Sample		103	117	112	117	119	103	108
LLCS 320-888074/2-A - RA	Lab Control Sample	115							
LLCS 320-890029/2-A	Lab Control Sample	117	97.0						
MB 320-888074/1-A	Method Blank	109	103	113	106	115	103	107	103
MB 320-890029/1-A	Method Blank	109	95.4						

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-127316-1	INF-COMP-202511	68.1	54.5	24.4 *5-	74.8	91.3	78.1	54.6	27.4
320-127316-1 - RE	INF-COMP-202511								
320-127316-2	EFF-G-202511	83.0	51.9	96.7	101	101	88.1	90.1	84.4
LCS 320-888074/3-A	Lab Control Sample	103	90.4	105	103	106	82.2	91.4	86.5
LCS 320-890029/3-A	Lab Control Sample								
LCSD 320-888074/4-A	Lab Control Sample Dup	111	87.3	105	105	99.5	76.1	87.3	80.9
LCSD 320-890029/4-A	Lab Control Sample Dup								
LLCS 320-888074/2-A	Lab Control Sample	114	91.7	108	106	107	83.9	94.6	89.2
LLCS 320-888074/2-A - RA	Lab Control Sample								
LLCS 320-890029/2-A	Lab Control Sample								
MB 320-888074/1-A	Method Blank	102	88.5	94.0	99.9	100	81.4	96.0	84.8
MB 320-890029/1-A	Method Blank								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-127316-1	INF-COMP-202511	7.10 *5-	134	119	6.99 *5-	32.4	45.4	23.4	65.7
320-127316-1 - RE	INF-COMP-202511								
320-127316-2	EFF-G-202511	174	151	127	77.5	85.2	74.4	72.5	75.7
LCS 320-888074/3-A	Lab Control Sample	111	105	105	103	91.2	84.5	79.0	75.7
LCS 320-890029/3-A	Lab Control Sample								
LCSD 320-888074/4-A	Lab Control Sample Dup	111	105	106	96.5	83.8	80.5	74.2	71.3
LCSD 320-890029/4-A	Lab Control Sample Dup								
LLCS 320-888074/2-A	Lab Control Sample	123	108	110	112	85.4	80.8	77.8	75.1
LLCS 320-888074/2-A - RA	Lab Control Sample								
LLCS 320-890029/2-A	Lab Control Sample								
MB 320-888074/1-A	Method Blank	115	106	106	107	93.3	84.4	78.8	77.1
MB 320-890029/1-A	Method Blank								

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633 TSS - Total Suspended Solids

Lab Sample ID: MB 320-889690/1

Matrix: Water

Analysis Batch: 889690

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		50	50	mg/L			12/02/25 16:25	1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-888074/1-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 888074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.54	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		11/21/25 05:31	11/21/25 17:22	1
4:2 FTS	ND		4.0	0.44	ng/L		11/21/25 05:31	11/21/25 17:22	1
6:2 FTS	ND		4.0	0.41	ng/L		11/21/25 05:31	11/21/25 17:22	1
8:2 FTS	ND		4.0	0.90	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		11/21/25 05:31	11/21/25 17:22	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		11/21/25 05:31	11/21/25 17:22	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		11/21/25 05:31	11/21/25 17:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		11/21/25 05:31	11/21/25 17:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		11/21/25 05:31	11/21/25 17:22	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		11/21/25 05:31	11/21/25 17:22	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		11/21/25 05:31	11/21/25 17:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		11/21/25 05:31	11/21/25 17:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		11/21/25 05:31	11/21/25 17:22	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-888074/1-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 888074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		11/21/25 05:31	11/21/25 17:22	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	ND		2.0	0.72	ng/L		11/21/25 05:31	11/21/25 17:22	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		11/21/25 05:31	11/21/25 17:22	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		11/21/25 05:31	11/21/25 17:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		11/21/25 05:31	11/21/25 17:22	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		11/21/25 05:31	11/21/25 17:22	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		11/21/25 05:31	11/21/25 17:22	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		11/21/25 05:31	11/21/25 17:22	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	109		5 - 130	11/21/25 05:31	11/21/25 17:22	1
13C5 PFPeA	103		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C5 PFHxA	113		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C4 PFHpA	106		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C8 PFOA	115		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C9 PFNA	103		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C6 PFDA	107		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C7 PFUnA	103		30 - 130	11/21/25 05:31	11/21/25 17:22	1
13C2 PFDoA	102		10 - 130	11/21/25 05:31	11/21/25 17:22	1
13C2 PFTeDA	88.5		10 - 130	11/21/25 05:31	11/21/25 17:22	1
13C3 PFBS	94.0		40 - 135	11/21/25 05:31	11/21/25 17:22	1
13C3 PFHxS	99.9		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C8 PFOS	100		40 - 130	11/21/25 05:31	11/21/25 17:22	1
13C8 FOSA	81.4		40 - 130	11/21/25 05:31	11/21/25 17:22	1
D3-NMeFOSAA	96.0		40 - 170	11/21/25 05:31	11/21/25 17:22	1
D5-NEtFOSAA	84.8		25 - 135	11/21/25 05:31	11/21/25 17:22	1
13C2 4:2 FTS	115		40 - 200	11/21/25 05:31	11/21/25 17:22	1
13C2 6:2 FTS	106		40 - 200	11/21/25 05:31	11/21/25 17:22	1
13C2 8:2 FTS	106		40 - 300	11/21/25 05:31	11/21/25 17:22	1
13C3 HFPO-DA	107		40 - 130	11/21/25 05:31	11/21/25 17:22	1
D7-NMeFOSE	93.3		10 - 130	11/21/25 05:31	11/21/25 17:22	1
D9-NEtFOSE	84.4		10 - 130	11/21/25 05:31	11/21/25 17:22	1
D5-NEtFOSA	78.8		10 - 130	11/21/25 05:31	11/21/25 17:22	1
D3-NMeFOSA	77.1		10 - 130	11/21/25 05:31	11/21/25 17:22	1

Lab Sample ID: LCS 320-888074/3-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	86.1		ng/L		108	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	40.0		ng/L		100	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	37.8		ng/L		94	70 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-888074/3-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	40.0	43.1		ng/L		108	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	40.9		ng/L		102	70 - 150
Perfluorononanoic acid (PFNA)	40.0	40.6		ng/L		101	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	39.8		ng/L		100	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	37.4		ng/L		94	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	41.4		ng/L		103	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	43.0		ng/L		107	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	46.4		ng/L		116	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	34.6		ng/L		97	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	35.9		ng/L		96	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.1		ng/L		102	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.1		ng/L		97	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.0		ng/L		97	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	36.0		ng/L		94	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	37.9		ng/L		98	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	34.1		ng/L		88	50 - 145
4:2 FTS	75.0	70.8		ng/L		94	70 - 145
6:2 FTS	76.2	73.9		ng/L		97	65 - 155
8:2 FTS	76.8	70.6		ng/L		92	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	37.8		ng/L		94	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	43.1		ng/L		108	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.7		ng/L		102	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.8		ng/L		104	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.3		ng/L		101	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	199		ng/L		99	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	203		ng/L		102	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	29.0		ng/L		97	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	36.8		ng/L		97	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	36.8		ng/L		92	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	36.1		ng/L		90	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	36.8		ng/L		92	50 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-888074/3-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9CI-PF3ONS	37.4	35.2		ng/L		94	70 - 155
11CI-PF3OUdS	37.8	35.2		ng/L		93	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	32.1		ng/L		90	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	71.0		ng/L		89	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	162		ng/L		81	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	161		ng/L		81	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	109		5 - 130
13C5 PFPeA	103		40 - 130
13C5 PFHxA	108		40 - 130
13C4 PFHpA	92.9		40 - 130
13C8 PFOA	103		40 - 130
13C9 PFNA	93.7		40 - 130
13C6 PFDA	125		40 - 130
13C7 PFUnA	115		30 - 130
13C2 PFDoA	103		10 - 130
13C2 PFTeDA	90.4		10 - 130
13C3 PFBS	105		40 - 135
13C3 PFHxS	103		40 - 130
13C8 PFOS	106		40 - 130
13C8 FOSA	82.2		40 - 130
D3-NMeFOSAA	91.4		40 - 170
D5-NEtFOSAA	86.5		25 - 135
13C2 4:2 FTS	111		40 - 200
13C2 6:2 FTS	105		40 - 200
13C2 8:2 FTS	105		40 - 300
13C3 HFPO-DA	103		40 - 130
D7-NMeFOSE	91.2		10 - 130
D9-NEtFOSE	84.5		10 - 130
D5-NEtFOSA	79.0		10 - 130
D3-NMeFOSA	75.7		10 - 130

Lab Sample ID: LCSD 320-888074/4-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	87.6		ng/L		109	70 - 140	2	30
Perfluoropentanoic acid (PFPeA)	40.0	40.4		ng/L		101	65 - 135	1	30
Perfluorohexanoic acid (PFHxA)	40.0	42.1		ng/L		105	70 - 145	11	30
Perfluoroheptanoic acid (PFHpA)	40.0	38.6		ng/L		96	70 - 150	11	30
Perfluorooctanoic acid (PFOA)	40.0	38.0		ng/L		95	70 - 150	8	30
Perfluorononanoic acid (PFNA)	40.0	33.7		ng/L		84	70 - 150	18	30
Perfluorodecanoic acid (PFDA)	40.0	41.8		ng/L		105	70 - 140	5	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-888074/4-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	40.0	37.0		ng/L		93	70 - 145	1	30
Perfluorododecanoic acid (PFDoA)	40.0	39.3		ng/L		98	70 - 140	5	30
Perfluorotridecanoic acid (PFTrDA)	40.0	39.1		ng/L		98	65 - 140	9	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	47.6		ng/L		119	60 - 140	2	30
Perfluorobutanesulfonic acid (PFBS)	35.5	34.0		ng/L		96	60 - 145	2	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.6		ng/L		100	65 - 140	5	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.8		ng/L		101	65 - 145	1	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.4		ng/L		98	70 - 150	1	30
Perfluorooctanesulfonic acid (PFOS)	37.2	36.4		ng/L		98	55 - 150	1	30
Perfluorononanesulfonic acid (PFNS)	38.5	36.7		ng/L		95	65 - 145	2	30
Perfluorodecanesulfonic acid (PFDS)	38.6	35.6		ng/L		92	60 - 145	6	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	32.5		ng/L		84	50 - 145	5	30
4:2 FTS	75.0	71.5		ng/L		95	70 - 145	1	30
6:2 FTS	76.2	70.7		ng/L		93	65 - 155	4	30
8:2 FTS	76.8	76.9		ng/L		100	60 - 150	9	30
Perfluorooctanesulfonamide (PFOSA)	40.0	40.9		ng/L		102	70 - 145	8	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.6		ng/L		106	60 - 150	1	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.3		ng/L		101	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.2		ng/L		95	50 - 140	9	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.5		ng/L		101	70 - 145	0	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	200		ng/L		100	70 - 145	0	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	193		ng/L		96	70 - 135	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	32.8		ng/L		109	70 - 140	12	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	39.3		ng/L		104	65 - 145	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	37.5		ng/L		94	55 - 140	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	38.2		ng/L		96	60 - 150	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	35.2		ng/L		88	50 - 150	4	30
9CI-PF3ONS	37.4	36.5		ng/L		98	70 - 155	4	30
11CI-PF3OUdS	37.8	34.5		ng/L		91	55 - 160	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	35.2		ng/L		99	70 - 140	9	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-888074/4-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	76.0		ng/L		95	65 - 130	7	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	171		ng/L		86	70 - 135	6	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	174		ng/L		87	50 - 145	8	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	108		5 - 130
13C5 PFPeA	101		40 - 130
13C5 PFHxA	103		40 - 130
13C4 PFHpA	103		40 - 130
13C8 PFOA	106		40 - 130
13C9 PFNA	110		40 - 130
13C6 PFDA	109		40 - 130
13C7 PFUnA	111		30 - 130
13C2 PFDoA	111		10 - 130
13C2 PFTeDA	87.3		10 - 130
13C3 PFBS	105		40 - 135
13C3 PFHxS	105		40 - 130
13C8 PFOS	99.5		40 - 130
13C8 FOSA	76.1		40 - 130
D3-NMeFOSAA	87.3		40 - 170
D5-NEtFOSAA	80.9		25 - 135
13C2 4:2 FTS	111		40 - 200
13C2 6:2 FTS	105		40 - 200
13C2 8:2 FTS	106		40 - 300
13C3 HFPO-DA	96.5		40 - 130
D7-NMeFOSE	83.8		10 - 130
D9-NEtFOSE	80.5		10 - 130
D5-NEtFOSA	74.2		10 - 130
D3-NMeFOSA	71.3		10 - 130

Lab Sample ID: LLCS 320-888074/2-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	4.00	5.16		ng/L		129	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.40		ng/L		110	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.81		ng/L		120	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	5.10		ng/L		128	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.92		ng/L		98	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.71		ng/L		118	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.80		ng/L		120	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.47		ng/L		112	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.57		ng/L		114	65 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-888074/2-A

Matrix: Water

Analysis Batch: 888193

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.60		ng/L		115	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.70		ng/L		104	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.36		ng/L		116	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.16		ng/L		114	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.10		ng/L		107	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	4.38		ng/L		118	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.23		ng/L		110	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	4.27		ng/L		111	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.90		ng/L		100	50 - 145
4:2 FTS	7.50	7.80		ng/L		104	70 - 145
6:2 FTS	7.62	8.73		ng/L		115	65 - 155
8:2 FTS	7.68	8.44		ng/L		110	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.46		ng/L		112	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.75		ng/L		119	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.93		ng/L		98	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.77		ng/L		119	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	5.03		ng/L		126	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.9		ng/L		109	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.7		ng/L		108	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.82		ng/L		94	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.89		ng/L		103	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.49		ng/L		112	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.51		ng/L		113	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.74		ng/L		119	50 - 150
9CI-PF3ONS	3.74	4.14		ng/L		111	70 - 155
11CI-PF3OUdS	3.78	3.96		ng/L		105	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.54		ng/L		99	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.72		ng/L		109	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	19.9		ng/L		99	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	19.8		ng/L		99	50 - 145

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C5 PFPeA	103		40 - 130
13C5 PFHxA	117		40 - 130
13C4 PFHpA	112		40 - 130
13C8 PFOA	117		40 - 130
13C9 PFNA	119		40 - 130
13C6 PFDA	103		40 - 130
13C7 PFUnA	108		30 - 130
13C2 PFDoA	114		10 - 130
13C2 PFTeDA	91.7		10 - 130
13C3 PFBS	108		40 - 135
13C3 PFHxS	106		40 - 130
13C8 PFOS	107		40 - 130
13C8 FOSA	83.9		40 - 130
D3-NMeFOSAA	94.6		40 - 170
D5-NEtFOSAA	89.2		25 - 135
13C2 4:2 FTS	123		40 - 200
13C2 6:2 FTS	108		40 - 200
13C2 8:2 FTS	110		40 - 300
13C3 HFPO-DA	112		40 - 130
D7-NMeFOSE	85.4		10 - 130
D9-NEtFOSE	80.8		10 - 130
D5-NEtFOSA	77.8		10 - 130
D3-NMeFOSA	75.1		10 - 130

Lab Sample ID: MB 320-890029/1-A

Matrix: Water

Analysis Batch: 890198

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 890029

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		12/04/25 04:11	12/04/25 14:43	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		12/04/25 04:11	12/04/25 14:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		12/04/25 04:11	12/04/25 14:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		12/04/25 04:11	12/04/25 14:43	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		12/04/25 04:11	12/04/25 14:43	1

Isotope Dilution	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	109		5 - 130	12/04/25 04:11	12/04/25 14:43	1
13C5 PFPeA	95.4		40 - 130	12/04/25 04:11	12/04/25 14:43	1

Lab Sample ID: LCS 320-890029/3-A

Matrix: Water

Analysis Batch: 890198

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 890029

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	80.0	81.4		ng/L		102	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	42.4		ng/L		106	65 - 135
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	37.6		ng/L		94	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	40.0		ng/L		100	60 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-890029/3-A

Matrix: Water

Analysis Batch: 890198

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 890029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	70.2		ng/L		88	65 - 130
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
13C4 PFBA	110		5 - 130				
13C5 PFPeA	87.6		40 - 130				

Lab Sample ID: LCSD 320-890029/4-A

Matrix: Water

Analysis Batch: 890198

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 890029

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	79.8		ng/L		100	70 - 140	2	30
Perfluoropentanoic acid (PFPeA)	40.0	42.0		ng/L		105	65 - 135	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	36.7		ng/L		92	55 - 140	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	40.8		ng/L		102	60 - 150	2	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	67.2		ng/L		84	65 - 130	4	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>						
13C4 PFBA	112		5 - 130						
13C5 PFPeA	85.8		40 - 130						

Lab Sample ID: LLCS 320-890029/2-A

Matrix: Water

Analysis Batch: 890198

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 890029

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.36		ng/L		105	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.17		ng/L		104	65 - 135
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.30		ng/L		82	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.70		ng/L		93	60 - 150
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	6.71		ng/L		84	65 - 130
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
13C4 PFBA	117		5 - 130				
13C5 PFPeA	97.0		40 - 130				

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Lab Sample ID: LLCS 320-888074/2-A

Matrix: Water

Analysis Batch: 888585

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 888074

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA) - RA	8.00	10.1		ng/L		126	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Isotope Dilution	LLCS	LLCS	Limits
	%Recovery	Qualifier	
13C4 PFBA - RA	115		5 - 130

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

LCMS

Prep Batch: 888074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-127316-1	INF-COMP-202511	Total/NA	Water	1633A	
320-127316-2	EFF-G-202511	Total/NA	Water	1633A	
MB 320-888074/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-888074/3-A	Lab Control Sample	Total/NA	Water	1633A	
LCSD 320-888074/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	
LLCS 320-888074/2-A - RA	Lab Control Sample	Total/NA	Water	1633A	
LLCS 320-888074/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 888193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-127316-1	INF-COMP-202511	Total/NA	Water	1633A	888074
320-127316-2	EFF-G-202511	Total/NA	Water	1633A	888074
MB 320-888074/1-A	Method Blank	Total/NA	Water	1633A	888074
LCS 320-888074/3-A	Lab Control Sample	Total/NA	Water	1633A	888074
LCSD 320-888074/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	888074
LLCS 320-888074/2-A	Lab Control Sample	Total/NA	Water	1633A	888074

Analysis Batch: 888585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LLCS 320-888074/2-A - RA	Lab Control Sample	Total/NA	Water	1633A	888074

Analysis Batch: 889690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-127316-1	INF-COMP-202511	Total/NA	Water	1633 TSS	
MB 320-889690/1	Method Blank	Total/NA	Water	1633 TSS	

Prep Batch: 890029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-127316-1 - RE	INF-COMP-202511	Total/NA	Water	1633A	
MB 320-890029/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-890029/3-A	Lab Control Sample	Total/NA	Water	1633A	
LCSD 320-890029/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	
LLCS 320-890029/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 890198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-127316-1 - RE	INF-COMP-202511	Total/NA	Water	1633A	890029
MB 320-890029/1-A	Method Blank	Total/NA	Water	1633A	890029
LCS 320-890029/3-A	Lab Control Sample	Total/NA	Water	1633A	890029
LCSD 320-890029/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	890029
LLCS 320-890029/2-A	Lab Control Sample	Total/NA	Water	1633A	890029

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: INF-COMP-202511

Lab Sample ID: 320-127316-1

Date Collected: 11/10/25 23:59

Matrix: Water

Date Received: 11/12/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633 TSS		1	10.0 mL	10 mL	889690	12/02/25 16:25	MKC	EET SAC
Total/NA	Prep	1633A			153.1 mL	5.0 mL	888074	11/21/25 05:31	DXT	EET SAC
Total/NA	Analysis	1633A		1			888193	11/21/25 18:28	N1K	EET SAC
Total/NA	Prep	1633A	RE		12.5 mL	5.0 mL	890029	12/04/25 04:11	RMF	EET SAC
Total/NA	Analysis	1633A	RE	1			890198	12/04/25 15:49	S1M	EET SAC

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			158.7 mL	5.0 mL	888074	11/21/25 05:31	DXT	EET SAC
Total/NA	Analysis	1633A		1			888193	11/21/25 18:45	N1K	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
1633 TSS		Water	Total Suspended Solids

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Method	Method Description	Protocol	Laboratory
1633 TSS	Total Suspended Solids	EPA	EET SAC
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633A	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-127316-1	INF-COMP-202511	Water	11/10/25 23:59	11/12/25 09:10	Wisconsin
320-127316-2	EFF-G-202511	Water	11/11/25 07:08	11/12/25 09:10	Wisconsin

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Ver 01/16/2019

December 2025

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

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JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-128161-1

Eurofins Sacramento

Job Notes

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Authorization



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Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
Designee for
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-128161-1

Job ID: 320-128161-1

Eurofins Sacramento

Job Narrative 320-128161-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 12/11/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C.

PFAS

Method 1633: The following samples contained particulates and were discolored prior to extraction, and yielded discolored extracts: INF-02-202512 (320-128161-1), INF-07-202512 (320-128161-2), INF-08-202512 (320-128161-3), INF-11-202512 (320-128161-4), INF-18-202512 (320-128161-5) and INF-Comp-202512 (320-128161-6).

Method 1633: Per client request, samples INF-02-202512 (320-128161-1), INF-07-202512 (320-128161-2), INF-08-202512 (320-128161-3), INF-11-202512 (320-128161-4), INF-18-202512 (320-128161-5) and INF-Comp-202512 (320-128161-6) with elevated total suspended solids (TSS) was fortified with Extracted Internal Standards (EIS/IDA), equilibrated, and centrifuged. The aqueous phase was separated and then extracted using Solid Phase Extraction (SPE). A rinse of the solid residue using basic methanol was added to the aqueous sample prior to SPE, such that the final extract represents the combined contribution of both solid and aqueous fractions. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method 1633: The following samples were discolored prior to extraction, and yielded discolored and foamy extracts: BIO-A-25-202512 (320-128161-9), BIO-A-24-202512 (320-128161-10) and BIO-B-202512 (320-128161-11).

Method 1633: Isotope Dilution Analyte (IDA) recoveries are outside the method recommended limit in one or more samples, as indicated in the Isotope Dilution Summary. Generally, data quality is not considered to be affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDAs in the sample(s).

Method 1633: The "I" qualifier has been applied to one or more analytes in one or more samples, which indicates that the transition mass ratio for the analyte was outside the established ratio limits. The reported results for the qualified analyte(s) have an increased degree of uncertainty.

Method 1633: One or more continuing calibration verifications (CCV) in analytical batch 320-895570 recovered above the upper control limit for one or more target analytes. The associated laboratory QC samples (LLCS/LCS/LCSD) were within control limits for the affected analyte(s) and these data have been reported. The associated field samples with positive results for the affected analyte(s) were re-analyzed (RA) and the affected analytes were reported from the RA aliquot.

Method 1633: One or more continuing calibration verifications (CCV) in analytical batches 320-895570, 320-895469 and 320-894713 recovered above the upper control limit for one or more IDAs. The associated target analyte(s) were within control in the CCV(s); therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-02-202512

Lab Sample ID: 320-128161-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.5	J	3.6	0.34	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	2.6		1.8	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.24	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.90	J	1.8	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.7		1.8	0.35	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.53	J I	1.8	0.41	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.9		1.8	0.49	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.67	J I	1.8	0.19	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.8	0.22	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.8	I	1.8	0.25	ng/L	1		1633A	Total/NA
6:2 FTS	0.63	J	3.6	0.37	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.70	J	1.8	0.40	ng/L	1		1633A	Total/NA

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	19		3.6	0.34	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	4.4		1.8	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	11		1.8	0.24	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.1		1.8	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	6.3		1.8	0.36	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.87	J I	1.8	0.41	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	9.4		1.8	0.49	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.76	J I	1.8	0.19	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.8	0.22	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		1.8	0.25	ng/L	1		1633A	Total/NA
6:2 FTS	1.1	J	3.6	0.37	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	J	1.8	0.32	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.88	J	1.8	0.40	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	3.4	J	9.1	2.1	ng/L	1		1633A	Total/NA
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.85	J	3.6	0.65	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	70		9.1	1.6	ng/L	1		1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.2	J	9.1	1.1	ng/L	1		1633A	Total/NA

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.2		3.6	0.33	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	3.0		1.8	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	3.5		1.8	0.24	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.87	J	1.8	0.31	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.2		1.8	0.35	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.8		1.8	0.48	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.78	J I	1.8	0.19	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-08-202512 (Continued)

Lab Sample ID: 320-128161-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.1		1.8	0.22	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.0	I	1.8	0.25	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	J	1.8	0.31	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	J	1.8	0.39	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	9.0	1.5	ng/L	1		1633A	Total/NA

Client Sample ID: INF-11-202512

Lab Sample ID: 320-128161-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.9	J	3.5	0.33	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	2.1		1.8	0.20	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	2.7		1.8	0.24	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.53	J	1.8	0.30	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	2.3		1.8	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.8	0.47	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.80	J I	1.8	0.19	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.8	0.22	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.5	I	1.8	0.24	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.36	J	1.8	0.31	ng/L	1		1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.5	J	8.8	2.0	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.5	J	8.8	1.5	ng/L	1		1633A	Total/NA

Client Sample ID: INF-18-202512

Lab Sample ID: 320-128161-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	14		3.9	0.36	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	5.2		1.9	0.22	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	6.4		1.9	0.26	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.9	0.33	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	8.4		1.9	0.38	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.52	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.4	J	1.9	0.21	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	13		1.9	0.24	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.9	I	1.9	0.27	ng/L	1		1633A	Total/NA
6:2 FTS	2.4	J	3.9	0.39	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47	J	1.9	0.34	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.81	J	1.9	0.42	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.1	J	9.7	1.7	ng/L	1		1633A	Total/NA

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.4		3.7	0.34	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	3.2		1.8	0.21	ng/L	1		1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-Comp-202512 (Continued)

Lab Sample ID: 320-128161-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	4.8		1.8	0.25	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.8	0.32	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	4.9		1.8	0.36	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.0		1.8	0.50	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.83	J I	1.8	0.20	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.3		1.8	0.23	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.2	I	1.8	0.25	ng/L	1		1633A	Total/NA
6:2 FTS	1.1	J	3.7	0.37	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.62	J	1.8	0.32	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.61	J	1.8	0.40	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	9.7		9.2	1.6	ng/L	1		1633A	Total/NA

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.8		3.5	0.33	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	6.5		1.7	0.20	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	11		1.7	0.24	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.7	0.30	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	5.6		1.7	0.34	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		1.7	0.47	ng/L	1		1633A	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.7	0.19	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.7	0.21	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		1.7	0.24	ng/L	1		1633A	Total/NA
6:2 FTS	0.75	J	3.5	0.35	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.70	J	1.7	0.20	ng/L	1		1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.75	J	1.7	0.31	ng/L	1		1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	J	1.7	0.38	ng/L	1		1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.8	J	8.7	1.5	ng/L	1		1633A	Total/NA

Client Sample ID: EB-01-202512

Lab Sample ID: 320-128161-8

No Detections.

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.8		0.76	0.061	ug/Kg	1	✱	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	6.5		0.38	0.093	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	19		0.38	0.076	ug/Kg	1	✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.79		0.38	0.063	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	7.7		0.38	0.12	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.78		0.38	0.055	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	5.3		0.38	0.046	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.71		0.38	0.053	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	1.5		0.38	0.051	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.59		0.38	0.038	ug/Kg	1	✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-25-202512 (Continued)

Lab Sample ID: 320-128161-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	8.5		0.38	0.048	ug/Kg	1		✱	1633A	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.76		0.38	0.040	ug/Kg	1		✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.68		0.38	0.12	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		0.38	0.030	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7		0.38	0.032	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.2		1.9	0.17	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.0		1.9	0.15	ug/Kg	1		✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50		1.9	0.47	ug/Kg	1		✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20		1.9	0.41	ug/Kg	1		✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA) - RA	0.34	J	0.38	0.055	ug/Kg	1		✱	1633A	Total/NA
6:2 FTS - RA	0.25	J	0.76	0.10	ug/Kg	1		✱	1633A	Total/NA
8:2 FTS - RA	0.87		0.76	0.084	ug/Kg	1		✱	1633A	Total/NA

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.2		0.75	0.060	ug/Kg	1		✱	1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	15		0.37	0.092	ug/Kg	1		✱	1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	23		0.37	0.075	ug/Kg	1		✱	1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6		0.37	0.062	ug/Kg	1		✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	17		0.37	0.12	ug/Kg	1		✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	1.2		0.37	0.054	ug/Kg	1		✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	8.3		0.37	0.045	ug/Kg	1		✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.1		0.37	0.052	ug/Kg	1		✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	2.8		0.37	0.051	ug/Kg	1		✱	1633A	Total/NA
Perfluorotetradecanoic acid (PFTeDA)	0.68		0.37	0.11	ug/Kg	1		✱	1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3		0.37	0.13	ug/Kg	1		✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.80		0.37	0.037	ug/Kg	1		✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.2		0.37	0.047	ug/Kg	1		✱	1633A	Total/NA
Perfluorooctanesulfonamide (PFOSA)	0.92		0.37	0.12	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.25	J	0.37	0.067	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.23	J	0.37	0.039	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	17		0.37	0.030	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.1		0.37	0.032	ug/Kg	1		✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.3		1.9	0.16	ug/Kg	1		✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.9		1.9	0.14	ug/Kg	1		✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	47		1.9	0.46	ug/Kg	1		✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	26		1.9	0.40	ug/Kg	1		✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTTrDA) - RA	0.49		0.37	0.054	ug/Kg	1		✱	1633A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-24-202512 (Continued)

Lab Sample ID: 320-128161-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
6:2 FTS - RA	0.88		0.75	0.10	ug/Kg	1	✱	1633A	Total/NA
8:2 FTS - RA	0.67	J	0.75	0.082	ug/Kg	1	✱	1633A	Total/NA

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.90	J	3.6	0.29	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanoic acid (PFOA)	0.91	J	1.8	0.56	ug/Kg	1	✱	1633A	Total/NA
Perfluorononanoic acid (PFNA)	0.59	J I	1.8	0.26	ug/Kg	1	✱	1633A	Total/NA
Perfluorodecanoic acid (PFDA)	2.2		1.8	0.22	ug/Kg	1	✱	1633A	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.36	J	1.8	0.25	ug/Kg	1	✱	1633A	Total/NA
Perfluorododecanoic acid (PFDoA)	1.6	J	1.8	0.25	ug/Kg	1	✱	1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.70	J	1.8	0.18	ug/Kg	1	✱	1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.1		1.8	0.23	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.9		1.8	0.15	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.7		1.8	0.15	ug/Kg	1	✱	1633A	Total/NA
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8	J	9.1	0.80	ug/Kg	1	✱	1633A	Total/NA
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.2	J	9.1	0.70	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		9.1	2.2	ug/Kg	1	✱	1633A	Total/NA
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	14		9.1	1.9	ug/Kg	1	✱	1633A	Total/NA
Perfluorotridecanoic acid (PFTrDA) - RA	0.33	J	1.8	0.26	ug/Kg	1	✱	1633A	Total/NA
8:2 FTS - RA	0.40	J	3.6	0.40	ug/Kg	1	✱	1633A	Total/NA

Client Sample ID: EB-02-202512

Lab Sample ID: 320-128161-12

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-02-202512

Lab Sample ID: 320-128161-1

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.5	J	3.6	0.34	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoropentanoic acid (PFPeA)	2.6		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoroheptanoic acid (PFHpA)	0.90	J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorooctanoic acid (PFOA)	2.7		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorononanoic acid (PFNA)	0.53	J I	1.8	0.41	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.73	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorobutanesulfonic acid (PFBS)	1.9		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoropentanesulfonic acid (PFPeS)	0.67	J I	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorooctanesulfonic acid (PFOS)	5.8	I	1.8	0.25	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 09:53	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
6:2 FTS	0.63	J	3.6	0.37	ng/L		12/29/25 04:56	12/30/25 09:53	1
8:2 FTS	ND		3.6	0.81	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.70	J	1.8	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		9.1	2.1	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.1	2.2	ng/L		12/29/25 04:56	12/30/25 09:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.35	ng/L		12/29/25 04:56	12/30/25 09:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 09:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.65	ng/L		12/29/25 04:56	12/30/25 09:53	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 09:53	1
11CI-PF3OUs	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 09:53	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-02-202512

Lab Sample ID: 320-128161-1

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 09:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.65	ng/L		12/29/25 04:56	12/30/25 09:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 09:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.1	1.1	ng/L		12/29/25 04:56	12/30/25 09:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	95.4		5 - 130				12/29/25 04:56	12/30/25 09:53	1
13C5 PFPeA	80.7		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C5 PFHxA	96.9		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C4 PFHpA	87.9		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C8 PFOA	93.3		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C9 PFNA	87.5		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C6 PFDA	76.5		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C7 PFUnA	42.6		30 - 130				12/29/25 04:56	12/30/25 09:53	1
13C2 PFDoA	28.0		10 - 130				12/29/25 04:56	12/30/25 09:53	1
13C2 PFTeDA	43.2		10 - 130				12/29/25 04:56	12/30/25 09:53	1
13C3 PFBS	94.5		40 - 135				12/29/25 04:56	12/30/25 09:53	1
13C3 PFHxS	98.2		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C8 PFOS	72.4		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C8 FOSA	44.0		40 - 130				12/29/25 04:56	12/30/25 09:53	1
D3-NMeFOSAA	28.8	*5-	40 - 170				12/29/25 04:56	12/30/25 09:53	1
D5-NEtFOSAA	43.3		25 - 135				12/29/25 04:56	12/30/25 09:53	1
13C2 4:2 FTS	217	*5+	40 - 200				12/29/25 04:56	12/30/25 09:53	1
13C2 6:2 FTS	225	*5+	40 - 200				12/29/25 04:56	12/30/25 09:53	1
13C2 8:2 FTS	210		40 - 300				12/29/25 04:56	12/30/25 09:53	1
13C3 HFPO-DA	97.2		40 - 130				12/29/25 04:56	12/30/25 09:53	1
D7-NMeFOSE	23.1		10 - 130				12/29/25 04:56	12/30/25 09:53	1
D9-NEtFOSE	20.5		10 - 130				12/29/25 04:56	12/30/25 09:53	1
D5-NEtFOSA	25.9		10 - 130				12/29/25 04:56	12/30/25 09:53	1
D3-NMeFOSA	26.0		10 - 130				12/29/25 04:56	12/30/25 09:53	1

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	19		3.6	0.34	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoropentanoic acid (PFPeA)	4.4		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorohexanoic acid (PFHxA)	11		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoroheptanoic acid (PFHpA)	2.1		1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorooctanoic acid (PFOA)	6.3		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorononanoic acid (PFNA)	0.87	J I	1.8	0.41	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.74	ng/L		12/29/25 04:56	12/30/25 10:09	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	9.4		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoropentanesulfonic acid (PFPeS)	0.76	J I	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorooctanesulfonic acid (PFOS)	3.5		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 10:09	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
6:2 FTS	1.1	J	3.6	0.37	ng/L		12/29/25 04:56	12/30/25 10:09	1
8:2 FTS	ND		3.6	0.82	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.88	J	1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.4	J	9.1	2.1	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.1	2.2	ng/L		12/29/25 04:56	12/30/25 10:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.35	ng/L		12/29/25 04:56	12/30/25 10:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.65	ng/L		12/29/25 04:56	12/30/25 10:09	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 10:09	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:09	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.85	J	3.6	0.65	ng/L		12/29/25 04:56	12/30/25 10:09	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	70		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 10:09	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.2	J	9.1	1.1	ng/L		12/29/25 04:56	12/30/25 10:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.7		5 - 130				12/29/25 04:56	12/30/25 10:09	1
13C5 PFPeA	96.7		40 - 130				12/29/25 04:56	12/30/25 10:09	1
13C5 PFHxA	96.0		40 - 130				12/29/25 04:56	12/30/25 10:09	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	89.7		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C8 PFOA	92.8		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C9 PFNA	93.3		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C6 PFDA	88.9		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C7 PFUnA	53.9		30 - 130	12/29/25 04:56	12/30/25 10:09	1
13C2 PFDoA	37.3		10 - 130	12/29/25 04:56	12/30/25 10:09	1
13C2 PFTeDA	46.4		10 - 130	12/29/25 04:56	12/30/25 10:09	1
13C3 PFBS	96.1		40 - 135	12/29/25 04:56	12/30/25 10:09	1
13C3 PFHxS	97.6		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C8 PFOS	80.6		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C8 FOSA	65.4		40 - 130	12/29/25 04:56	12/30/25 10:09	1
D3-NMeFOSAA	36.2	*5-	40 - 170	12/29/25 04:56	12/30/25 10:09	1
D5-NEtFOSAA	48.5		25 - 135	12/29/25 04:56	12/30/25 10:09	1
13C2 4:2 FTS	193		40 - 200	12/29/25 04:56	12/30/25 10:09	1
13C2 6:2 FTS	155		40 - 200	12/29/25 04:56	12/30/25 10:09	1
13C2 8:2 FTS	186		40 - 300	12/29/25 04:56	12/30/25 10:09	1
13C3 HFPO-DA	84.8		40 - 130	12/29/25 04:56	12/30/25 10:09	1
D7-NMeFOSE	37.5		10 - 130	12/29/25 04:56	12/30/25 10:09	1
D9-NEtFOSE	32.7		10 - 130	12/29/25 04:56	12/30/25 10:09	1
D5-NEtFOSA	37.1		10 - 130	12/29/25 04:56	12/30/25 10:09	1
D3-NMeFOSA	39.4		10 - 130	12/29/25 04:56	12/30/25 10:09	1

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.2		3.6	0.33	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoropentanoic acid (PFPeA)	3.0		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorohexanoic acid (PFHxA)	3.5		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoroheptanoic acid (PFHpA)	0.87	J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorooctanoic acid (PFOA)	2.2		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.72	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorobutanesulfonic acid (PFBS)	1.8		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoropentanesulfonic acid (PFPeS)	0.78	J I	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorohexanesulfonic acid (PFHxS)	3.1		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorooctanesulfonic acid (PFOS)	2.0	I	1.8	0.25	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:26	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.47	ng/L		12/29/25 04:56	12/30/25 10:26	1
4:2 FTS	ND		3.6	0.39	ng/L		12/29/25 04:56	12/30/25 10:26	1
6:2 FTS	ND		3.6	0.36	ng/L		12/29/25 04:56	12/30/25 10:26	1
8:2 FTS	ND		3.6	0.80	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.34	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	J	1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		9.0	2.0	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.0	2.2	ng/L		12/29/25 04:56	12/30/25 10:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.35	ng/L		12/29/25 04:56	12/30/25 10:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.64	ng/L		12/29/25 04:56	12/30/25 10:26	1
9CI-PF3ONS	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 10:26	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:26	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.64	ng/L		12/29/25 04:56	12/30/25 10:26	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	9.0	1.5	ng/L		12/29/25 04:56	12/30/25 10:26	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.0	1.1	ng/L		12/29/25 04:56	12/30/25 10:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	98.0		5 - 130	12/29/25 04:56	12/30/25 10:26	1
13C5 PFPeA	100		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C5 PFHxA	97.8		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C4 PFHpA	85.7		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C8 PFOA	90.7		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C9 PFNA	87.2		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C6 PFDA	83.8		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C7 PFUnA	52.5		30 - 130	12/29/25 04:56	12/30/25 10:26	1
13C2 PFDoA	37.6		10 - 130	12/29/25 04:56	12/30/25 10:26	1
13C2 PFTeDA	45.3		10 - 130	12/29/25 04:56	12/30/25 10:26	1
13C3 PFBS	88.6		40 - 135	12/29/25 04:56	12/30/25 10:26	1
13C3 PFHxS	96.1		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C8 PFOS	81.5		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C8 FOSA	61.6		40 - 130	12/29/25 04:56	12/30/25 10:26	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	37.2	*5-	40 - 170	12/29/25 04:56	12/30/25 10:26	1
D5-NEtFOSAA	49.9		25 - 135	12/29/25 04:56	12/30/25 10:26	1
13C2 4:2 FTS	171		40 - 200	12/29/25 04:56	12/30/25 10:26	1
13C2 6:2 FTS	155		40 - 200	12/29/25 04:56	12/30/25 10:26	1
13C2 8:2 FTS	178		40 - 300	12/29/25 04:56	12/30/25 10:26	1
13C3 HFPO-DA	89.5		40 - 130	12/29/25 04:56	12/30/25 10:26	1
D7-NMeFOSE	39.8		10 - 130	12/29/25 04:56	12/30/25 10:26	1
D9-NEtFOSE	32.4		10 - 130	12/29/25 04:56	12/30/25 10:26	1
D5-NEtFOSA	35.5		10 - 130	12/29/25 04:56	12/30/25 10:26	1
D3-NMeFOSA	36.6		10 - 130	12/29/25 04:56	12/30/25 10:26	1

Client Sample ID: INF-11-202512

Lab Sample ID: 320-128161-4

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.9	J	3.5	0.33	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoropentanoic acid (PFPeA)	2.1		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorohexanoic acid (PFHxA)	2.7		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoroheptanoic acid (PFHpA)	0.53	J	1.8	0.30	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorooctanoic acid (PFOA)	2.3		1.8	0.34	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.71	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.8	0.47	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoropentanesulfonic acid (PFPeS)	0.80	J I	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.15	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorooctanesulfonic acid (PFOS)	6.5	I	1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.47	ng/L		12/29/25 04:56	12/30/25 10:42	1
4:2 FTS	ND		3.5	0.38	ng/L		12/29/25 04:56	12/30/25 10:42	1
6:2 FTS	ND		3.5	0.36	ng/L		12/29/25 04:56	12/30/25 10:42	1
8:2 FTS	ND		3.5	0.79	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.34	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.36	J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:42	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-11-202512

Lab Sample ID: 320-128161-4

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.5	J	8.8	2.0	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.8	2.1	ng/L		12/29/25 04:56	12/30/25 10:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.34	ng/L		12/29/25 04:56	12/30/25 10:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.63	ng/L		12/29/25 04:56	12/30/25 10:42	1
9CI-PF3ONS	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 10:42	1
11CI-PF3OUdS	ND		1.8	0.26	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:42	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.5	0.63	ng/L		12/29/25 04:56	12/30/25 10:42	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.5	J	8.8	1.5	ng/L		12/29/25 04:56	12/30/25 10:42	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.8	1.1	ng/L		12/29/25 04:56	12/30/25 10:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	95.2		5 - 130	12/29/25 04:56	12/30/25 10:42	1
13C5 PFPeA	83.3		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C5 PFHxA	93.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C4 PFHpA	87.2		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C8 PFOA	94.8		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C9 PFNA	90.3		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C6 PFDA	81.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C7 PFUnA	50.2		30 - 130	12/29/25 04:56	12/30/25 10:42	1
13C2 PFDoA	42.7		10 - 130	12/29/25 04:56	12/30/25 10:42	1
13C2 PFTeDA	58.3		10 - 130	12/29/25 04:56	12/30/25 10:42	1
13C3 PFBS	90.3		40 - 135	12/29/25 04:56	12/30/25 10:42	1
13C3 PFHxS	92.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C8 PFOS	80.1		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C8 FOSA	56.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
D3-NMeFOSAA	35.9	*5-	40 - 170	12/29/25 04:56	12/30/25 10:42	1
D5-NEtFOSAA	40.6		25 - 135	12/29/25 04:56	12/30/25 10:42	1
13C2 4:2 FTS	200		40 - 200	12/29/25 04:56	12/30/25 10:42	1
13C2 6:2 FTS	172		40 - 200	12/29/25 04:56	12/30/25 10:42	1
13C2 8:2 FTS	188		40 - 300	12/29/25 04:56	12/30/25 10:42	1
13C3 HFPO-DA	90.7		40 - 130	12/29/25 04:56	12/30/25 10:42	1
D7-NMeFOSE	52.8		10 - 130	12/29/25 04:56	12/30/25 10:42	1
D9-NEtFOSE	50.8		10 - 130	12/29/25 04:56	12/30/25 10:42	1
D5-NEtFOSA	55.1		10 - 130	12/29/25 04:56	12/30/25 10:42	1
D3-NMeFOSA	52.6		10 - 130	12/29/25 04:56	12/30/25 10:42	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-18-202512

Lab Sample ID: 320-128161-5

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.9	0.36	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoropentanoic acid (PFPeA)	5.2		1.9	0.22	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorohexanoic acid (PFHxA)	6.4		1.9	0.26	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoroheptanoic acid (PFHpA)	1.9		1.9	0.33	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorooctanoic acid (PFOA)	8.4		1.9	0.38	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.44	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.43	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.22	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.53	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.9	0.56	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.9	0.78	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.52	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoropentanesulfonic acid (PFPeS)	1.4 J		1.9	0.21	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorohexanesulfonic acid (PFHxS)	13		1.9	0.24	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.9	0.17	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorooctanesulfonic acid (PFOS)	7.9 I		1.9	0.27	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorononanesulfonic acid (PFNS)	ND		1.9	0.30	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.30	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.9	0.51	ng/L		12/29/25 04:56	12/30/25 10:58	1
4:2 FTS	ND		3.9	0.42	ng/L		12/29/25 04:56	12/30/25 10:58	1
6:2 FTS	2.4 J		3.9	0.39	ng/L		12/29/25 04:56	12/30/25 10:58	1
8:2 FTS	ND		3.9	0.86	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.9	0.22	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.9	0.37	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.9	0.43	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47 J		1.9	0.34	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.81 J		1.9	0.42	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		9.7	2.2	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.7	2.3	ng/L		12/29/25 04:56	12/30/25 10:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.38	ng/L		12/29/25 04:56	12/30/25 10:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.9	0.39	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.9	0.18	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.9	0.25	ng/L		12/29/25 04:56	12/30/25 10:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.9	0.69	ng/L		12/29/25 04:56	12/30/25 10:58	1
9CI-PF3ONS	ND		1.9	0.56	ng/L		12/29/25 04:56	12/30/25 10:58	1
11CI-PF3OUdS	ND		1.9	0.29	ng/L		12/29/25 04:56	12/30/25 10:58	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-18-202512

Lab Sample ID: 320-128161-5

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.9	0.24	ng/L		12/29/25 04:56	12/30/25 10:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.9	0.69	ng/L		12/29/25 04:56	12/30/25 10:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.1	J	9.7	1.7	ng/L		12/29/25 04:56	12/30/25 10:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.7	1.2	ng/L		12/29/25 04:56	12/30/25 10:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130				12/29/25 04:56	12/30/25 10:58	1
13C5 PFPeA	99.3		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C5 PFHxA	103		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C4 PFHpA	88.4		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C8 PFOA	98.0		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C9 PFNA	94.7		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C6 PFDA	87.7		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C7 PFUnA	58.8		30 - 130				12/29/25 04:56	12/30/25 10:58	1
13C2 PFDoA	47.2		10 - 130				12/29/25 04:56	12/30/25 10:58	1
13C2 PFTeDA	61.7		10 - 130				12/29/25 04:56	12/30/25 10:58	1
13C3 PFBS	96.2		40 - 135				12/29/25 04:56	12/30/25 10:58	1
13C3 PFHxS	99.3		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C8 PFOS	82.2		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C8 FOSA	54.8		40 - 130				12/29/25 04:56	12/30/25 10:58	1
D3-NMeFOSAA	39.2	*5-	40 - 170				12/29/25 04:56	12/30/25 10:58	1
D5-NEtFOSAA	49.5		25 - 135				12/29/25 04:56	12/30/25 10:58	1
13C2 4:2 FTS	247	*5+	40 - 200				12/29/25 04:56	12/30/25 10:58	1
13C2 6:2 FTS	168		40 - 200				12/29/25 04:56	12/30/25 10:58	1
13C2 8:2 FTS	228		40 - 300				12/29/25 04:56	12/30/25 10:58	1
13C3 HFPO-DA	94.8		40 - 130				12/29/25 04:56	12/30/25 10:58	1
D7-NMeFOSE	48.3		10 - 130				12/29/25 04:56	12/30/25 10:58	1
D9-NEtFOSE	47.1		10 - 130				12/29/25 04:56	12/30/25 10:58	1
D5-NEtFOSA	54.3		10 - 130				12/29/25 04:56	12/30/25 10:58	1
D3-NMeFOSA	52.0		10 - 130				12/29/25 04:56	12/30/25 10:58	1

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.4		3.7	0.34	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoropentanoic acid (PFPeA)	3.2		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorohexanoic acid (PFHxA)	4.8		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorooctanoic acid (PFOA)	4.9		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.42	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.74	ng/L		12/29/25 04:56	12/30/25 11:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	3.0		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoropentanesulfonic acid (PFPeS)	0.83	J I	1.8	0.20	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorohexanesulfonic acid (PFHxS)	6.3		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorooctanesulfonic acid (PFOS)	6.2	I	1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.29	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 11:15	1
4:2 FTS	ND		3.7	0.40	ng/L		12/29/25 04:56	12/30/25 11:15	1
6:2 FTS	1.1	J	3.7	0.37	ng/L		12/29/25 04:56	12/30/25 11:15	1
8:2 FTS	ND		3.7	0.82	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.62	J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.61	J	1.8	0.40	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		9.2	2.1	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.2	2.2	ng/L		12/29/25 04:56	12/30/25 11:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.36	ng/L		12/29/25 04:56	12/30/25 11:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.37	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 11:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.66	ng/L		12/29/25 04:56	12/30/25 11:15	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:15	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 11:15	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.7	0.66	ng/L		12/29/25 04:56	12/30/25 11:15	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	9.7		9.2	1.6	ng/L		12/29/25 04:56	12/30/25 11:15	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.2	1.1	ng/L		12/29/25 04:56	12/30/25 11:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	96.3		5 - 130				12/29/25 04:56	12/30/25 11:15	1
13C5 PFPeA	97.2		40 - 130				12/29/25 04:56	12/30/25 11:15	1
13C5 PFHxA	103		40 - 130				12/29/25 04:56	12/30/25 11:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	89.6		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C8 PFOA	90.4		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C9 PFNA	89.8		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C6 PFDA	81.6		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C7 PFUnA	53.7		30 - 130	12/29/25 04:56	12/30/25 11:15	1
13C2 PFDoA	43.1		10 - 130	12/29/25 04:56	12/30/25 11:15	1
13C2 PFTeDA	55.8		10 - 130	12/29/25 04:56	12/30/25 11:15	1
13C3 PFBS	87.3		40 - 135	12/29/25 04:56	12/30/25 11:15	1
13C3 PFHxS	96.1		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C8 PFOS	80.3		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C8 FOSA	59.8		40 - 130	12/29/25 04:56	12/30/25 11:15	1
D3-NMeFOSAA	37.3	*5-	40 - 170	12/29/25 04:56	12/30/25 11:15	1
D5-NEtFOSAA	49.2		25 - 135	12/29/25 04:56	12/30/25 11:15	1
13C2 4:2 FTS	222	*5+	40 - 200	12/29/25 04:56	12/30/25 11:15	1
13C2 6:2 FTS	190		40 - 200	12/29/25 04:56	12/30/25 11:15	1
13C2 8:2 FTS	214		40 - 300	12/29/25 04:56	12/30/25 11:15	1
13C3 HFPO-DA	91.5		40 - 130	12/29/25 04:56	12/30/25 11:15	1
D7-NMeFOSE	45.3		10 - 130	12/29/25 04:56	12/30/25 11:15	1
D9-NEtFOSE	42.4		10 - 130	12/29/25 04:56	12/30/25 11:15	1
D5-NEtFOSA	51.0		10 - 130	12/29/25 04:56	12/30/25 11:15	1
D3-NMeFOSA	48.0		10 - 130	12/29/25 04:56	12/30/25 11:15	1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.8		3.5	0.33	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoropentanoic acid (PFPeA)	6.5		1.7	0.20	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorohexanoic acid (PFHxA)	11		1.7	0.24	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.7	0.30	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorooctanoic acid (PFOA)	5.6		1.7	0.34	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.40	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.39	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.20	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.50	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.71	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorobutanesulfonic acid (PFBS)	3.1		1.7	0.47	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.7	0.19	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.7	0.21	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorooctanesulfonic acid (PFOS)	3.4		1.7	0.24	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.27	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		12/29/25 04:56	12/30/25 11:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.46	ng/L		12/29/25 04:56	12/30/25 11:31	1
4:2 FTS	ND		3.5	0.38	ng/L		12/29/25 04:56	12/30/25 11:31	1
6:2 FTS	0.75	J	3.5	0.35	ng/L		12/29/25 04:56	12/30/25 11:31	1
8:2 FTS	ND		3.5	0.78	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorooctanesulfonamide (PFOSA)	0.70	J	1.7	0.20	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.34	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.39	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.75	J	1.7	0.31	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	J	1.7	0.38	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.7	2.0	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.7	2.1	ng/L		12/29/25 04:56	12/30/25 11:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.34	ng/L		12/29/25 04:56	12/30/25 11:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.35	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.17	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.23	ng/L		12/29/25 04:56	12/30/25 11:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.63	ng/L		12/29/25 04:56	12/30/25 11:31	1
9Cl-PF3ONS	ND		1.7	0.51	ng/L		12/29/25 04:56	12/30/25 11:31	1
11Cl-PF3OUdS	ND		1.7	0.26	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.7	0.22	ng/L		12/29/25 04:56	12/30/25 11:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.5	0.63	ng/L		12/29/25 04:56	12/30/25 11:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.8	J	8.7	1.5	ng/L		12/29/25 04:56	12/30/25 11:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.7	1.1	ng/L		12/29/25 04:56	12/30/25 11:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	99.7		5 - 130	12/29/25 04:56	12/30/25 11:31	1
13C5 PFPeA	101		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C5 PFHxA	103		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C4 PFHpA	88.3		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C8 PFOA	99.3		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C9 PFNA	92.9		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C6 PFDA	101		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C7 PFUnA	107		30 - 130	12/29/25 04:56	12/30/25 11:31	1
13C2 PFDoA	101		10 - 130	12/29/25 04:56	12/30/25 11:31	1
13C2 PFTeDA	68.0		10 - 130	12/29/25 04:56	12/30/25 11:31	1
13C3 PFBS	105		40 - 135	12/29/25 04:56	12/30/25 11:31	1
13C3 PFHxS	94.2		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C8 PFOS	91.9		40 - 130	12/29/25 04:56	12/30/25 11:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	85.9		40 - 130	12/29/25 04:56	12/30/25 11:31	1
D3-NMeFOSAA	95.0		40 - 170	12/29/25 04:56	12/30/25 11:31	1
D5-NEtFOSAA	113		25 - 135	12/29/25 04:56	12/30/25 11:31	1
13C2 4:2 FTS	151		40 - 200	12/29/25 04:56	12/30/25 11:31	1
13C2 6:2 FTS	115		40 - 200	12/29/25 04:56	12/30/25 11:31	1
13C2 8:2 FTS	135		40 - 300	12/29/25 04:56	12/30/25 11:31	1
13C3 HFPO-DA	87.6		40 - 130	12/29/25 04:56	12/30/25 11:31	1
D7-NMeFOSE	79.0		10 - 130	12/29/25 04:56	12/30/25 11:31	1
D9-NEtFOSE	69.8		10 - 130	12/29/25 04:56	12/30/25 11:31	1
D5-NEtFOSA	76.8		10 - 130	12/29/25 04:56	12/30/25 11:31	1
D3-NMeFOSA	78.7		10 - 130	12/29/25 04:56	12/30/25 11:31	1

Client Sample ID: EB-01-202512

Lab Sample ID: 320-128161-8

Date Collected: 12/08/25 13:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.6	0.34	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.74	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.19	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 11:48	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 11:48	1
6:2 FTS	ND		3.6	0.37	ng/L		12/29/25 04:56	12/30/25 11:48	1
8:2 FTS	ND		3.6	0.82	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 11:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EB-01-202512

Lab Sample ID: 320-128161-8

Date Collected: 12/08/25 13:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		9.1	2.1	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.1	2.2	ng/L		12/29/25 04:56	12/30/25 11:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.36	ng/L		12/29/25 04:56	12/30/25 11:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 11:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.66	ng/L		12/29/25 04:56	12/30/25 11:48	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:48	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 11:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.66	ng/L		12/29/25 04:56	12/30/25 11:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 11:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.1	1.1	ng/L		12/29/25 04:56	12/30/25 11:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130	12/29/25 04:56	12/30/25 11:48	1
13C5 PFPeA	110		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C5 PFHxA	94.9		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C4 PFHpA	88.1		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C8 PFOA	100		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C9 PFNA	100		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C6 PFDA	103		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C7 PFUnA	106		30 - 130	12/29/25 04:56	12/30/25 11:48	1
13C2 PFDoA	99.9		10 - 130	12/29/25 04:56	12/30/25 11:48	1
13C2 PFTeDA	80.0		10 - 130	12/29/25 04:56	12/30/25 11:48	1
13C3 PFBS	102		40 - 135	12/29/25 04:56	12/30/25 11:48	1
13C3 PFHxS	98.2		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C8 PFOS	94.2		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C8 FOSA	82.4		40 - 130	12/29/25 04:56	12/30/25 11:48	1
D3-NMeFOSAA	94.4		40 - 170	12/29/25 04:56	12/30/25 11:48	1
D5-NEtFOSAA	115		25 - 135	12/29/25 04:56	12/30/25 11:48	1
13C2 4:2 FTS	115		40 - 200	12/29/25 04:56	12/30/25 11:48	1
13C2 6:2 FTS	113		40 - 200	12/29/25 04:56	12/30/25 11:48	1
13C2 8:2 FTS	120		40 - 300	12/29/25 04:56	12/30/25 11:48	1
13C3 HFPO-DA	90.4		40 - 130	12/29/25 04:56	12/30/25 11:48	1
D7-NMeFOSE	75.2		10 - 130	12/29/25 04:56	12/30/25 11:48	1
D9-NEtFOSE	65.0		10 - 130	12/29/25 04:56	12/30/25 11:48	1
D5-NEtFOSA	76.0		10 - 130	12/29/25 04:56	12/30/25 11:48	1
D3-NMeFOSA	76.5		10 - 130	12/29/25 04:56	12/30/25 11:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.8		0.76	0.061	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoropentanoic acid (PFPeA)	6.5		0.38	0.093	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorohexanoic acid (PFHxA)	19		0.38	0.076	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoroheptanoic acid (PFHpA)	0.79		0.38	0.063	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorooctanoic acid (PFOA)	7.7		0.38	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorononanoic acid (PFNA)	0.78		0.38	0.055	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorodecanoic acid (PFDA)	5.3		0.38	0.046	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoroundecanoic acid (PFUnA)	0.71		0.38	0.053	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorododecanoic acid (PFDoA)	1.5		0.38	0.051	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.38	0.11	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.38	0.13	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.38	0.076	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorohexanesulfonic acid (PFHxS)	0.59		0.38	0.038	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.38	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorooctanesulfonic acid (PFOS)	8.5		0.38	0.048	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorononanesulfonic acid (PFNS)	ND		0.38	0.044	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorodecanesulfonic acid (PFDS)	0.76		0.38	0.040	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.38	0.070	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorooctanesulfonamide (PFOSA)	0.68		0.38	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.38	0.069	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.38	0.040	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		0.38	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7		0.38	0.032	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.2		1.9	0.17	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.0		1.9	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.38	0.055	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.38	0.048	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.38	0.042	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.38	0.069	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.38	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
9CI-PF3ONS	ND		0.38	0.072	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
11CI-PF3OUdS	ND		0.38	0.14	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.38	0.072	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.76	0.14	ug/Kg	☼	01/05/26 10:53	01/06/26 11:46	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50		1.9	0.47	ug/Kg	☼	01/05/26 10:53	01/06/26 11:46	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20		1.9	0.41	ug/Kg	☼	01/05/26 10:53	01/06/26 11:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	59.0		8 - 130				01/05/26 10:53	01/06/26 11:46	1
13C5 PFPeA	45.5		35 - 130				01/05/26 10:53	01/06/26 11:46	1
13C5 PFHxA	45.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C4 PFHpA	50.9		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C8 PFOA	71.1		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C9 PFNA	76.1		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C6 PFDA	66.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C7 PFUnA	55.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C2 PFDoA	48.9		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C2 PFTeDA	30.6		20 - 130				01/05/26 10:53	01/06/26 11:46	1
13C3 PFBS	67.4		40 - 135				01/05/26 10:53	01/06/26 11:46	1
13C3 PFHxS	70.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C8 PFOS	65.6		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C8 FOSA	45.9		40 - 130				01/05/26 10:53	01/06/26 11:46	1
D3-NMeFOSAA	48.3		40 - 135				01/05/26 10:53	01/06/26 11:46	1
D5-NEtFOSAA	42.3		40 - 150				01/05/26 10:53	01/06/26 11:46	1
13C3 HFPO-DA	53.2		40 - 130				01/05/26 10:53	01/06/26 11:46	1
D7-NMeFOSE	57.3		20 - 130				01/05/26 10:53	01/06/26 11:46	1
D9-NEtFOSE	72.0		15 - 130				01/05/26 10:53	01/06/26 11:46	1
D5-NEtFOSA	34.3		10 - 130				01/05/26 10:53	01/06/26 11:46	1
D3-NMeFOSA	54.0		10 - 130				01/05/26 10:53	01/06/26 11:46	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.34	J	0.38	0.055	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
4:2 FTS	ND		0.76	0.12	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
6:2 FTS	0.25	J	0.76	0.10	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
8:2 FTS	0.87		0.76	0.084	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFDoA	33.5	*5-	40 - 130				01/05/26 10:53	01/06/26 13:28	1
13C2 PFTeDA	29.6		20 - 130				01/05/26 10:53	01/06/26 13:28	1
13C2 4:2 FTS	146		40 - 165				01/05/26 10:53	01/06/26 13:28	1
13C2 6:2 FTS	175		40 - 215				01/05/26 10:53	01/06/26 13:28	1
13C2 8:2 FTS	174		40 - 275				01/05/26 10:53	01/06/26 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	74		0.10	0.10	%			12/16/25 14:12	1
Percent Solids (EPA 1633)	26		0.10	0.10	%			12/16/25 14:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.2		0.75	0.060	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoropentanoic acid (PFPeA)	15		0.37	0.092	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorohexanoic acid (PFHxA)	23		0.37	0.075	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoroheptanoic acid (PFHpA)	1.6		0.37	0.062	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorooctanoic acid (PFOA)	17		0.37	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorononanoic acid (PFNA)	1.2		0.37	0.054	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorodecanoic acid (PFDA)	8.3		0.37	0.045	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoroundecanoic acid (PFUnA)	1.1		0.37	0.052	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorododecanoic acid (PFDoA)	2.8		0.37	0.051	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorotetradecanoic acid (PFTeDA)	0.68		0.37	0.11	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorobutanesulfonic acid (PFBS)	2.3		0.37	0.13	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.37	0.075	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorohexanesulfonic acid (PFHxS)	0.80		0.37	0.037	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.37	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorooctanesulfonic acid (PFOS)	6.2		0.37	0.047	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorononanesulfonic acid (PFNS)	ND		0.37	0.043	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.37	0.039	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.37	0.069	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorooctanesulfonamide (PFOSA)	0.92		0.37	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.25 J		0.37	0.067	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.23 J		0.37	0.039	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	17		0.37	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.1		0.37	0.032	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.3		1.9	0.16	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.9		1.9	0.14	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.37	0.054	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.37	0.047	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.37	0.041	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.37	0.067	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.37	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
9CI-PF3ONS	ND		0.37	0.071	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
11CI-PF3OUdS	ND		0.37	0.14	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.37	0.071	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.75	0.14	ug/Kg	☼	01/05/26 10:53	01/06/26 12:02	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	47		1.9	0.46	ug/Kg	☼	01/05/26 10:53	01/06/26 12:02	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	26		1.9	0.40	ug/Kg	☼	01/05/26 10:53	01/06/26 12:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	65.9		8 - 130				01/05/26 10:53	01/06/26 12:02	1
13C5 PFPeA	52.6		35 - 130				01/05/26 10:53	01/06/26 12:02	1
13C5 PFHxA	49.5		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C4 PFHpA	60.0		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C8 PFOA	70.3		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C9 PFNA	77.8		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C6 PFDA	84.0		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C7 PFUnA	56.3		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C2 PFDoA	51.1		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C2 PFTeDA	37.1		20 - 130				01/05/26 10:53	01/06/26 12:02	1
13C3 PFBS	88.6		40 - 135				01/05/26 10:53	01/06/26 12:02	1
13C3 PFHxS	76.1		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C8 PFOS	100		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C8 FOSA	43.7		40 - 130				01/05/26 10:53	01/06/26 12:02	1
D3-NMeFOSAA	41.0		40 - 135				01/05/26 10:53	01/06/26 12:02	1
D5-NEtFOSAA	33.2	*5-	40 - 150				01/05/26 10:53	01/06/26 12:02	1
13C3 HFPO-DA	59.5		40 - 130				01/05/26 10:53	01/06/26 12:02	1
D7-NMeFOSE	72.8		20 - 130				01/05/26 10:53	01/06/26 12:02	1
D9-NEtFOSE	77.4		15 - 130				01/05/26 10:53	01/06/26 12:02	1
D5-NEtFOSA	38.4		10 - 130				01/05/26 10:53	01/06/26 12:02	1
D3-NMeFOSA	55.2		10 - 130				01/05/26 10:53	01/06/26 12:02	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.49		0.37	0.054	ug/Kg	☼	01/05/26 10:53	01/06/26 13:45	1
4:2 FTS	ND		0.75	0.12	ug/Kg	☼	01/05/26 10:53	01/06/26 13:45	1
6:2 FTS	0.88		0.75	0.10	ug/Kg	☼	01/05/26 10:53	01/06/26 13:45	1
8:2 FTS	0.67	J	0.75	0.082	ug/Kg	☼	01/05/26 10:53	01/06/26 13:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFDoA	31.6	*5-	40 - 130				01/05/26 10:53	01/06/26 13:45	1
13C2 PFTeDA	26.2		20 - 130				01/05/26 10:53	01/06/26 13:45	1
13C2 4:2 FTS	168	*5+	40 - 165				01/05/26 10:53	01/06/26 13:45	1
13C2 6:2 FTS	186		40 - 215				01/05/26 10:53	01/06/26 13:45	1
13C2 8:2 FTS	180		40 - 275				01/05/26 10:53	01/06/26 13:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	74		0.10	0.10	%			12/16/25 14:12	1
Percent Solids (EPA 1633)	26		0.10	0.10	%			12/16/25 14:12	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.90	J	3.6	0.29	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.45	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.36	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.30	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorooctanoic acid (PFOA)	0.91	J	1.8	0.56	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorononanoic acid (PFNA)	0.59	J I	1.8	0.26	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorodecanoic acid (PFDA)	2.2		1.8	0.22	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoroundecanoic acid (PFUnA)	0.36	J	1.8	0.25	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorododecanoic acid (PFDoA)	1.6	J	1.8	0.25	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.53	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.61	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.36	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.70	J	1.8	0.18	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorooctanesulfonic acid (PFOS)	5.1		1.8	0.23	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.21	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.19	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.34	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.57	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.33	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.19	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.9		1.8	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.7		1.8	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8	J	9.1	0.80	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.2	J	9.1	0.70	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.8	0.26	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.23	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.20	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.33	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.56	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
9CI-PF3ONS	ND		1.8	0.35	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
11CI-PF3OUdS	ND		1.8	0.68	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.35	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.68	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		9.1	2.2	ug/Kg	☼	01/05/26 10:53	01/06/26 12:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	14		9.1	1.9	ug/Kg	☼	01/05/26 10:53	01/06/26 12:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	76.2		8 - 130				01/05/26 10:53	01/06/26 12:19	1
13C5 PFPeA	57.4		35 - 130				01/05/26 10:53	01/06/26 12:19	1
13C5 PFHxA	60.3		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C4 PFHpA	71.0		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C8 PFOA	84.8		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C9 PFNA	83.1		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C6 PFDA	82.7		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C7 PFUnA	62.1		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C2 PFDoA	59.4		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C2 PFTeDA	60.0		20 - 130				01/05/26 10:53	01/06/26 12:19	1
13C3 PFBS	91.6		40 - 135				01/05/26 10:53	01/06/26 12:19	1
13C3 PFHxS	92.6		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C8 PFOS	99.3		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C8 FOSA	61.8		40 - 130				01/05/26 10:53	01/06/26 12:19	1
D3-NMeFOSAA	59.8		40 - 135				01/05/26 10:53	01/06/26 12:19	1
D5-NEtFOSAA	64.9		40 - 150				01/05/26 10:53	01/06/26 12:19	1
13C3 HFPO-DA	75.5		40 - 130				01/05/26 10:53	01/06/26 12:19	1
D7-NMeFOSE	86.8		20 - 130				01/05/26 10:53	01/06/26 12:19	1
D9-NEtFOSE	50.8		15 - 130				01/05/26 10:53	01/06/26 12:19	1
D5-NEtFOSA	72.8		10 - 130				01/05/26 10:53	01/06/26 12:19	1
D3-NMeFOSA	77.0		10 - 130				01/05/26 10:53	01/06/26 12:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.33	J	1.8	0.26	ug/Kg	☼	01/05/26 10:53	01/06/26 14:01	1
4:2 FTS	ND		3.6	0.59	ug/Kg	☼	01/05/26 10:53	01/06/26 14:01	1
6:2 FTS	ND		3.6	0.49	ug/Kg	☼	01/05/26 10:53	01/06/26 14:01	1
8:2 FTS	0.40	J	3.6	0.40	ug/Kg	☼	01/05/26 10:53	01/06/26 14:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFDoA	37.7	*5-	40 - 130				01/05/26 10:53	01/06/26 14:01	1
13C2 PFTeDA	36.0		20 - 130				01/05/26 10:53	01/06/26 14:01	1
13C2 4:2 FTS	179	*5+	40 - 165				01/05/26 10:53	01/06/26 14:01	1
13C2 6:2 FTS	201		40 - 215				01/05/26 10:53	01/06/26 14:01	1
13C2 8:2 FTS	226		40 - 275				01/05/26 10:53	01/06/26 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	95		0.10	0.10	%			12/16/25 14:12	1
Percent Solids (EPA 1633)	5.4		0.10	0.10	%			12/16/25 14:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EB-02-202512

Lab Sample ID: 320-128161-12

Date Collected: 12/08/25 14:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.6	0.34	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.31	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.73	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.19	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 12:37	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
6:2 FTS	ND		3.6	0.37	ng/L		12/29/25 04:56	12/30/25 12:37	1
8:2 FTS	ND		3.6	0.81	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		9.1	2.1	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		9.1	2.2	ng/L		12/29/25 04:56	12/30/25 12:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.35	ng/L		12/29/25 04:56	12/30/25 12:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 12:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.65	ng/L		12/29/25 04:56	12/30/25 12:37	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 12:37	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 12:37	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EB-02-202512

Lab Sample ID: 320-128161-12

Date Collected: 12/08/25 14:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.65	ng/L		12/29/25 04:56	12/30/25 12:37	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 12:37	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.1	1.1	ng/L		12/29/25 04:56	12/30/25 12:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	96.3		5 - 130				12/29/25 04:56	12/30/25 12:37	1
13C5 PFPeA	96.9		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C5 PFHxA	88.0		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C4 PFHpA	81.9		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C8 PFOA	98.1		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C9 PFNA	93.2		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C6 PFDA	102		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C7 PFUnA	108		30 - 130				12/29/25 04:56	12/30/25 12:37	1
13C2 PFDoA	101		10 - 130				12/29/25 04:56	12/30/25 12:37	1
13C2 PFTeDA	86.8		10 - 130				12/29/25 04:56	12/30/25 12:37	1
13C3 PFBS	104		40 - 135				12/29/25 04:56	12/30/25 12:37	1
13C3 PFHxS	92.8		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C8 PFOS	87.0		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C8 FOSA	79.6		40 - 130				12/29/25 04:56	12/30/25 12:37	1
D3-NMeFOSAA	89.1		40 - 170				12/29/25 04:56	12/30/25 12:37	1
D5-NEtFOSAA	110		25 - 135				12/29/25 04:56	12/30/25 12:37	1
13C2 4:2 FTS	122		40 - 200				12/29/25 04:56	12/30/25 12:37	1
13C2 6:2 FTS	109		40 - 200				12/29/25 04:56	12/30/25 12:37	1
13C2 8:2 FTS	117		40 - 300				12/29/25 04:56	12/30/25 12:37	1
13C3 HFPO-DA	77.7		40 - 130				12/29/25 04:56	12/30/25 12:37	1
D7-NMeFOSE	80.3		10 - 130				12/29/25 04:56	12/30/25 12:37	1
D9-NEtFOSE	70.6		10 - 130				12/29/25 04:56	12/30/25 12:37	1
D5-NEtFOSA	77.7		10 - 130				12/29/25 04:56	12/30/25 12:37	1
D3-NMeFOSA	77.2		10 - 130				12/29/25 04:56	12/30/25 12:37	1

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (40-130)	PFTDA (20-130)	M242FTS (40-165)	M262FTS (40-215)	M282FTS (40-275)
320-128161-9 - RA	BIO-A-25-202512	33.5 *-	29.6	146	175	174
320-128161-10 - RA	BIO-A-24-202512	31.6 *-	26.2	168 *5+	186	180
320-128161-11 - RA	BIO-B-202512	37.7 *-	36.0	179 *5+	201	226

Surrogate Legend

PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (8-130)	PFPeA (35-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (40-130)
320-128161-9	BIO-A-25-202512	59.0	45.5	45.8	50.9	71.1	76.1	66.8	55.8
320-128161-10	BIO-A-24-202512	65.9	52.6	49.5	60.0	70.3	77.8	84.0	56.3
320-128161-11	BIO-B-202512	76.2	57.4	60.3	71.0	84.8	83.1	82.7	62.1
LCS 320-895399/3-A	Lab Control Sample	99.4	106	103	94.6	97.9	101	85.8	73.9
LCSD 320-895399/4-A	Lab Control Sample Dup	95.5	107	103	107	90.3	97.9	86.8	75.5
LLCS 320-895399/2-A	Lab Control Sample	100	114	114	110	94.5	94.8	101	80.3
MB 320-895399/1-A	Method Blank	99.9	105	99.3	104	94.5	102	98.2	90.3

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (40-130)	PFTDA (20-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-135)	d5NEFOS (40-150)
320-128161-9	BIO-A-25-202512	48.9	30.6	67.4	70.8	65.6	45.9	48.3	42.3
320-128161-10	BIO-A-24-202512	51.1	37.1	88.6	76.1	100	43.7	41.0	33.2 *-
320-128161-11	BIO-B-202512	59.4	60.0	91.6	92.6	99.3	61.8	59.8	64.9
LCS 320-895399/3-A	Lab Control Sample	61.5	58.8	100	97.9	89.3	65.1	84.8	71.2
LCSD 320-895399/4-A	Lab Control Sample Dup	66.3	57.8	102	101	92.4	72.0	91.6	79.7
LLCS 320-895399/2-A	Lab Control Sample	63.8	66.9	107	106	92.3	69.7	89.5	76.5
MB 320-895399/1-A	Method Blank	89.7	76.0	103	103	96.2	93.4	110	102

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (40-165)	M262FTS (40-215)	M282FTS (40-275)	HFPODA (40-130)	NMFM (20-130)	NEFM (15-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
320-128161-9	BIO-A-25-202512				53.2	57.3	72.0	34.3	54.0
320-128161-10	BIO-A-24-202512				59.5	72.8	77.4	38.4	55.2
320-128161-11	BIO-B-202512				75.5	86.8	50.8	72.8	77.0
LCS 320-895399/3-A	Lab Control Sample	140	130	115	106	58.6	48.5	47.3	45.3
LCSD 320-895399/4-A	Lab Control Sample Dup	142	133	125	108	61.6	48.0	51.2	49.4
LLCS 320-895399/2-A	Lab Control Sample	150	136	124	118	60.7	46.8	52.0	48.3
MB 320-895399/1-A	Method Blank	146	139	139	98.0	72.0	65.5	84.8	84.8

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-128161-1

Project/Site: PFAS Sampling

C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
d5NPFSA = D5-NEtFOSA
d3NMFSA = D3-NMeFOSA

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
320-128161-1	INF-02-202512	95.4	80.7	96.9	87.9	93.3	87.5	76.5	42.6
320-128161-2	INF-07-202512	99.7	96.7	96.0	89.7	92.8	93.3	88.9	53.9
320-128161-3	INF-08-202512	98.0	100	97.8	85.7	90.7	87.2	83.8	52.5
320-128161-4	INF-11-202512	95.2	83.3	93.5	87.2	94.8	90.3	81.5	50.2
320-128161-5	INF-18-202512	101	99.3	103	88.4	98.0	94.7	87.7	58.8
320-128161-6	INF-Comp-202512	96.3	97.2	103	89.6	90.4	89.8	81.6	53.7
320-128161-7	EFF-G-202512	99.7	101	103	88.3	99.3	92.9	101	107
320-128161-8	EB-01-202512	101	110	94.9	88.1	100	100	103	106
320-128161-12	EB-02-202512	96.3	96.9	88.0	81.9	98.1	93.2	102	108
LCS 320-894471/3-A	Lab Control Sample	99.9	106	101	89.7	99.7	93.3	96.5	93.5
LCSD 320-894471/4-A	Lab Control Sample Dup	98.4	92.8	88.9	80.8	100	93.7	97.9	102
LLCS 320-894471/2-A	Lab Control Sample	105	102	97.0	81.3	102	94.9	96.7	93.9
MB 320-894471/1-A	Method Blank	117	119	112	95.6	119	112	113	122

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
320-128161-1	INF-02-202512	28.0	43.2	94.5	98.2	72.4	44.0	28.8 *5-	43.3
320-128161-2	INF-07-202512	37.3	46.4	96.1	97.6	80.6	65.4	36.2 *5-	48.5
320-128161-3	INF-08-202512	37.6	45.3	88.6	96.1	81.5	61.6	37.2 *5-	49.9
320-128161-4	INF-11-202512	42.7	58.3	90.3	92.5	80.1	56.5	35.9 *5-	40.6
320-128161-5	INF-18-202512	47.2	61.7	96.2	99.3	82.2	54.8	39.2 *5-	49.5
320-128161-6	INF-Comp-202512	43.1	55.8	87.3	96.1	80.3	59.8	37.3 *5-	49.2
320-128161-7	EFF-G-202512	101	68.0	105	94.2	91.9	85.9	95.0	113
320-128161-8	EB-01-202512	99.9	80.0	102	98.2	94.2	82.4	94.4	115
320-128161-12	EB-02-202512	101	86.8	104	92.8	87.0	79.6	89.1	110
LCS 320-894471/3-A	Lab Control Sample	92.8	80.9	103	96.0	85.6	79.5	83.4	104
LCSD 320-894471/4-A	Lab Control Sample Dup	96.2	81.7	104	95.6	89.7	80.5	87.3	106
LLCS 320-894471/2-A	Lab Control Sample	90.9	75.7	113	96.1	88.0	81.4	84.6	104
MB 320-894471/1-A	Method Blank	106	85.9	125	112	102	88.2	95.7	116

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-128161-1

Project/Site: PFAS Sampling

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSFA (10-130)
320-128161-1	INF-02-202512	217 *5+	225 *5+	210	97.2	23.1	20.5	25.9	26.0
320-128161-2	INF-07-202512	193	155	186	84.8	37.5	32.7	37.1	39.4
320-128161-3	INF-08-202512	171	155	178	89.5	39.8	32.4	35.5	36.6
320-128161-4	INF-11-202512	200	172	188	90.7	52.8	50.8	55.1	52.6
320-128161-5	INF-18-202512	247 *5+	168	228	94.8	48.3	47.1	54.3	52.0
320-128161-6	INF-Comp-202512	222 *5+	190	214	91.5	45.3	42.4	51.0	48.0
320-128161-7	EFF-G-202512	151	115	135	87.6	79.0	69.8	76.8	78.7
320-128161-8	EB-01-202512	115	113	120	90.4	75.2	65.0	76.0	76.5
320-128161-12	EB-02-202512	122	109	117	77.7	80.3	70.6	77.7	77.2
LCS 320-894471/3-A	Lab Control Sample	103	112	115	88.1	77.8	69.4	74.6	72.7
LCSD 320-894471/4-A	Lab Control Sample Dup	122	114	109	79.2	80.2	71.1	76.1	73.1
LLCS 320-894471/2-A	Lab Control Sample	127	115	115	81.4	76.1	66.7	73.5	70.8
MB 320-894471/1-A	Method Blank	138	131	125	92.5	84.9	71.9	83.4	80.3

Surrogate Legend

PFBA = 13C4 PFBA
 PFPeA = 13C5 PFPeA
 13C5PHA = 13C5 PFHxA
 C4PFHA = 13C4 PFHpA
 C8PFOA = 13C8 PFOA
 C9PFNA = 13C9 PFNA
 C6PFDA = 13C6 PFDA
 13C7PUA = 13C7 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 C3PFHS = 13C3 PFHxS
 C8PFOS = 13C8 PFOS
 PFOSA = 13C8 FOSA
 d3NMFOFOS = D3-NMeFOSAA
 d5NEFOS = D5-NEtFOSAA
 M242FTS = 13C2 4:2 FTS
 M262FTS = 13C2 6:2 FTS
 M282FTS = 13C2 8:2 FTS
 HFPODA = 13C3 HFPO-DA
 NMFM = D7-NMeFOSE
 NEFM = D9-NEtFOSE
 d5NPFSA = D5-NEtFOSA
 d3NMFSFA = D3-NMeFOSA

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-894471/1-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 894471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.0	0.37	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.23	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.27	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.35	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.39	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.45	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.23	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.0	0.58	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.0	0.81	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.54	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.21	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.25	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.18	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.28	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.31	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.53	ng/L		12/29/25 04:56	12/30/25 08:31	1
4:2 FTS	ND		4.0	0.44	ng/L		12/29/25 04:56	12/30/25 08:31	1
6:2 FTS	ND		4.0	0.41	ng/L		12/29/25 04:56	12/30/25 08:31	1
8:2 FTS	ND		4.0	0.90	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.23	ng/L		12/29/25 04:56	12/30/25 08:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.0	0.39	ng/L		12/29/25 04:56	12/30/25 08:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.0	0.45	ng/L		12/29/25 04:56	12/30/25 08:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.35	ng/L		12/29/25 04:56	12/30/25 08:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.44	ng/L		12/29/25 04:56	12/30/25 08:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	2.3	ng/L		12/29/25 04:56	12/30/25 08:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		10	2.4	ng/L		12/29/25 04:56	12/30/25 08:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.39	ng/L		12/29/25 04:56	12/30/25 08:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	0.19	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	0.26	ng/L		12/29/25 04:56	12/30/25 08:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	0.72	ng/L		12/29/25 04:56	12/30/25 08:31	1
9CI-PF3ONS	ND		2.0	0.58	ng/L		12/29/25 04:56	12/30/25 08:31	1
11CI-PF3OUdS	ND		2.0	0.30	ng/L		12/29/25 04:56	12/30/25 08:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.0	0.25	ng/L		12/29/25 04:56	12/30/25 08:31	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-894471/1-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 894471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.72	ng/L		12/29/25 04:56	12/30/25 08:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		10	1.7	ng/L		12/29/25 04:56	12/30/25 08:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		10	1.2	ng/L		12/29/25 04:56	12/30/25 08:31	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	117		5 - 130	12/29/25 04:56	12/30/25 08:31	1
13C5 PFPeA	119		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C5 PFHxA	112		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C4 PFHpA	95.6		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C8 PFOA	119		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C9 PFNA	112		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C6 PFDA	113		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C7 PFUnA	122		30 - 130	12/29/25 04:56	12/30/25 08:31	1
13C2 PFDoA	106		10 - 130	12/29/25 04:56	12/30/25 08:31	1
13C2 PFTeDA	85.9		10 - 130	12/29/25 04:56	12/30/25 08:31	1
13C3 PFBS	125		40 - 135	12/29/25 04:56	12/30/25 08:31	1
13C3 PFHxS	112		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C8 PFOS	102		40 - 130	12/29/25 04:56	12/30/25 08:31	1
13C8 FOSA	88.2		40 - 130	12/29/25 04:56	12/30/25 08:31	1
D3-NMeFOSAA	95.7		40 - 170	12/29/25 04:56	12/30/25 08:31	1
D5-NEtFOSAA	116		25 - 135	12/29/25 04:56	12/30/25 08:31	1
13C2 4:2 FTS	138		40 - 200	12/29/25 04:56	12/30/25 08:31	1
13C2 6:2 FTS	131		40 - 200	12/29/25 04:56	12/30/25 08:31	1
13C2 8:2 FTS	125		40 - 300	12/29/25 04:56	12/30/25 08:31	1
13C3 HFPO-DA	92.5		40 - 130	12/29/25 04:56	12/30/25 08:31	1
D7-NMeFOSE	84.9		10 - 130	12/29/25 04:56	12/30/25 08:31	1
D9-NEtFOSE	71.9		10 - 130	12/29/25 04:56	12/30/25 08:31	1
D5-NEtFOSA	83.4		10 - 130	12/29/25 04:56	12/30/25 08:31	1
D3-NMeFOSA	80.3		10 - 130	12/29/25 04:56	12/30/25 08:31	1

Lab Sample ID: LCS 320-894471/3-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 894471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	87.0		ng/L		109	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	41.9		ng/L		105	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	47.4		ng/L		119	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	42.0		ng/L		105	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	37.9		ng/L		95	70 - 150
Perfluorononanoic acid (PFNA)	40.0	41.6		ng/L		104	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	44.9		ng/L		112	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	46.3		ng/L		116	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	43.5		ng/L		109	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-894471/3-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 894471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTTrDA)	40.0	45.1		ng/L		113	65 - 140
Perfluorotetradecanoic acid (PFTTeDA)	40.0	46.5		ng/L		116	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	38.9		ng/L		110	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.2		ng/L		110	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	39.5		ng/L		108	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	44.0		ng/L		115	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	41.6		ng/L		112	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	45.1		ng/L		117	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	41.0		ng/L		106	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	38.8		ng/L		100	50 - 145
4:2 FTS	75.0	91.2		ng/L		122	70 - 145
6:2 FTS	76.2	86.1		ng/L		113	65 - 155
8:2 FTS	76.8	76.2		ng/L		99	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	43.1		ng/L		108	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	41.1		ng/L		103	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	41.7		ng/L		104	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	46.2		ng/L		116	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	44.1		ng/L		110	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	200		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	218		ng/L		109	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	30.1		ng/L		100	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	45.4		ng/L		120	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	38.0		ng/L		95	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	39.4		ng/L		99	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	44.0		ng/L		110	50 - 150
9Cl-PF3ONS	37.4	40.9		ng/L		110	70 - 155
11Cl-PF3OUdS	37.8	39.9		ng/L		106	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	40.3		ng/L		113	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	86.0		ng/L		107	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	217		ng/L		109	70 - 135

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-894471/3-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 894471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	194		ng/L		97	50 - 145
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C4 PFBA	99.9		5 - 130				
13C5 PFPeA	106		40 - 130				
13C5 PFHxA	101		40 - 130				
13C4 PFHpA	89.7		40 - 130				
13C8 PFOA	99.7		40 - 130				
13C9 PFNA	93.3		40 - 130				
13C6 PFDA	96.5		40 - 130				
13C7 PFUnA	93.5		30 - 130				
13C2 PFDoA	92.8		10 - 130				
13C2 PFTeDA	80.9		10 - 130				
13C3 PFBS	103		40 - 135				
13C3 PFHxS	96.0		40 - 130				
13C8 PFOS	85.6		40 - 130				
13C8 FOSA	79.5		40 - 130				
D3-NMeFOSAA	83.4		40 - 170				
D5-NEtFOSAA	104		25 - 135				
13C2 4:2 FTS	103		40 - 200				
13C2 6:2 FTS	112		40 - 200				
13C2 8:2 FTS	115		40 - 300				
13C3 HFPO-DA	88.1		40 - 130				
D7-NMeFOSE	77.8		10 - 130				
D9-NEtFOSE	69.4		10 - 130				
D5-NEtFOSA	74.6		10 - 130				
D3-NMeFOSA	72.7		10 - 130				

Lab Sample ID: LCSD 320-894471/4-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 894471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	84.8		ng/L		106	70 - 140	3	30
Perfluoropentanoic acid (PFPeA)	40.0	42.6		ng/L		106	65 - 135	2	30
Perfluorohexanoic acid (PFHxA)	40.0	49.0		ng/L		122	70 - 145	3	30
Perfluoroheptanoic acid (PFHpA)	40.0	43.1		ng/L		108	70 - 150	3	30
Perfluorooctanoic acid (PFOA)	40.0	38.2		ng/L		96	70 - 150	1	30
Perfluorononanoic acid (PFNA)	40.0	43.5		ng/L		109	70 - 150	4	30
Perfluorodecanoic acid (PFDA)	40.0	46.2		ng/L		115	70 - 140	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	44.5		ng/L		111	70 - 145	4	30
Perfluorododecanoic acid (PFDoA)	40.0	44.7		ng/L		112	70 - 140	3	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	51.3		ng/L		128	65 - 140	13	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	48.3		ng/L		121	60 - 140	4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-894471/4-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 894471

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	35.5	38.7		ng/L		109	60 - 145	1	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.2		ng/L		110	65 - 140	0	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	40.1		ng/L		110	65 - 145	1	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	42.7		ng/L		112	70 - 150	3	30
Perfluorooctanesulfonic acid (PFOS)	37.2	41.1		ng/L		111	55 - 150	1	30
Perfluorononanesulfonic acid (PFNS)	38.5	43.0		ng/L		112	65 - 145	5	30
Perfluorodecanesulfonic acid (PFDS)	38.6	40.4		ng/L		105	60 - 145	1	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	37.5		ng/L		97	50 - 145	3	30
4:2 FTS	75.0	82.3		ng/L		110	70 - 145	10	30
6:2 FTS	76.2	80.6		ng/L		106	65 - 155	7	30
8:2 FTS	76.8	83.5		ng/L		109	60 - 150	9	30
Perfluorooctanesulfonamide (PFOSA)	40.0	44.5		ng/L		111	70 - 145	3	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.7		ng/L		107	60 - 150	4	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	41.9		ng/L		105	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	46.1		ng/L		115	50 - 140	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	44.3		ng/L		111	70 - 145	1	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	202		ng/L		101	70 - 145	1	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	219		ng/L		110	70 - 135	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	30.0	30.3		ng/L		101	70 - 140	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	44.0		ng/L		116	65 - 145	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	38.7		ng/L		97	55 - 140	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	39.2		ng/L		98	60 - 150	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	44.1		ng/L		110	50 - 150	0	30
9Cl-PF3ONS	37.4	41.2		ng/L		110	70 - 155	1	30
11Cl-PF3OUdS	37.8	40.1		ng/L		106	55 - 160	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	40.7		ng/L		114	70 - 140	1	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	89.5		ng/L		112	65 - 130	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	214		ng/L		107	70 - 135	1	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	200		ng/L		100	50 - 145	3	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C4 PFBA	98.4		5 - 130
13C5 PFPeA	92.8		40 - 130
13C5 PFHxA	88.9		40 - 130
13C4 PFHpA	80.8		40 - 130
13C8 PFOA	100		40 - 130
13C9 PFNA	93.7		40 - 130
13C6 PFDA	97.9		40 - 130
13C7 PFUnA	102		30 - 130
13C2 PFDoA	96.2		10 - 130
13C2 PFTeDA	81.7		10 - 130
13C3 PFBS	104		40 - 135
13C3 PFHxS	95.6		40 - 130
13C8 PFOS	89.7		40 - 130
13C8 FOSA	80.5		40 - 130
D3-NMeFOSAA	87.3		40 - 170
D5-NEtFOSAA	106		25 - 135
13C2 4:2 FTS	122		40 - 200
13C2 6:2 FTS	114		40 - 200
13C2 8:2 FTS	109		40 - 300
13C3 HFPO-DA	79.2		40 - 130
D7-NMeFOSE	80.2		10 - 130
D9-NEtFOSE	71.1		10 - 130
D5-NEtFOSA	76.1		10 - 130
D3-NMeFOSA	73.1		10 - 130

Lab Sample ID: LLCS 320-894471/2-A
Matrix: Water
Analysis Batch: 894713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 894471

<i>Analyte</i>	<i>Spike Added</i>	<i>LLCS Result</i>	<i>LLCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluorobutanoic acid (PFBA)	8.00	8.28		ng/L		104	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.02		ng/L		100	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.49		ng/L		112	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.38		ng/L		109	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.12		ng/L		103	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.99		ng/L		100	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.46		ng/L		112	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.56		ng/L		114	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.26		ng/L		107	70 - 140
Perfluorotridecanoic acid (PFTTrDA)	4.00	4.53		ng/L		113	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.33		ng/L		108	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.68		ng/L		104	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.99		ng/L		106	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.09		ng/L		112	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.07		ng/L		107	70 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-894471/2-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 894471

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	3.72	4.06		ng/L		109	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.24		ng/L		110	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.58		ng/L		93	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.35		ng/L		86	50 - 145
4:2 FTS	7.50	7.08		ng/L		94	70 - 145
6:2 FTS	7.62	7.65		ng/L		101	65 - 155
8:2 FTS	7.68	7.45		ng/L		97	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.08		ng/L		102	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.77		ng/L		94	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.00		ng/L		100	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.57		ng/L		114	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.99		ng/L		100	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.4		ng/L		97	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	20.6		ng/L		103	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	3.00	2.97		ng/L		99	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.36		ng/L		115	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.63		ng/L		91	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.63		ng/L		91	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.84		ng/L		96	50 - 150
9CI-PF3ONS	3.74	3.84		ng/L		103	70 - 155
11CI-PF3OUdS	3.78	3.71		ng/L		98	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.74		ng/L		105	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.04		ng/L		100	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.0		ng/L		100	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	17.9		ng/L		90	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	105		5 - 130
13C5 PFPeA	102		40 - 130
13C5 PFHxA	97.0		40 - 130
13C4 PFHpA	81.3		40 - 130
13C8 PFOA	102		40 - 130
13C9 PFNA	94.9		40 - 130
13C6 PFDA	96.7		40 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-894471/2-A

Matrix: Water

Analysis Batch: 894713

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 894471

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C7 PFUnA	93.9		30 - 130
13C2 PFDoA	90.9		10 - 130
13C2 PFTeDA	75.7		10 - 130
13C3 PFBS	113		40 - 135
13C3 PFHxS	96.1		40 - 130
13C8 PFOS	88.0		40 - 130
13C8 FOSA	81.4		40 - 130
D3-NMeFOSAA	84.6		40 - 170
D5-NEtFOSAA	104		25 - 135
13C2 4:2 FTS	127		40 - 200
13C2 6:2 FTS	115		40 - 200
13C2 8:2 FTS	115		40 - 300
13C3 HFPO-DA	81.4		40 - 130
D7-NMeFOSE	76.1		10 - 130
D9-NEtFOSE	66.7		10 - 130
D5-NEtFOSA	73.5		10 - 130
D3-NMeFOSA	70.8		10 - 130

Lab Sample ID: MB 320-895399/1-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 895399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.6	0.13	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoropentanoic acid (PFPeA)	ND		0.80	0.20	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorohexanoic acid (PFHxA)	ND		0.80	0.16	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoroheptanoic acid (PFHpA)	ND		0.80	0.13	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorooctanoic acid (PFOA)	ND		0.80	0.25	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorononanoic acid (PFNA)	ND		0.80	0.12	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorodecanoic acid (PFDA)	ND		0.80	0.096	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoroundecanoic acid (PFUnA)	ND		0.80	0.11	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorododecanoic acid (PFDoA)	ND		0.80	0.11	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.80	0.12	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.80	0.23	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.80	0.27	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.80	0.16	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.80	0.080	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.80	0.064	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.80	0.10	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorononanesulfonic acid (PFNS)	ND		0.80	0.092	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.80	0.084	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.80	0.15	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
4:2 FTS	ND		1.6	0.26	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
6:2 FTS	ND		1.6	0.22	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
8:2 FTS	ND		1.6	0.18	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.80	0.25	ug/Kg		01/05/26 10:53	01/06/26 10:23	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-895399/1-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 895399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.80	0.14	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.80	0.084	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.80	0.064	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.80	0.068	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.0	0.35	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.0	0.31	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.80	0.12	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.80	0.10	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.80	0.088	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.80	0.14	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.80	0.25	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
9CI-PF3ONS	ND		0.80	0.15	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
11CI-PF3OUdS	ND		0.80	0.30	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.80	0.15	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.6	0.30	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.0	0.98	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.0	0.86	ug/Kg		01/05/26 10:53	01/06/26 10:23	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.9		8 - 130				01/05/26 10:53	01/06/26 10:23	1
13C5 PFPeA	105		35 - 130				01/05/26 10:53	01/06/26 10:23	1
13C5 PFHxA	99.3		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C4 PFHpA	104		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C8 PFOA	94.5		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C9 PFNA	102		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C6 PFDA	98.2		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C7 PFUnA	90.3		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C2 PFDoA	89.7		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C2 PFTeDA	76.0		20 - 130				01/05/26 10:53	01/06/26 10:23	1
13C3 PFBS	103		40 - 135				01/05/26 10:53	01/06/26 10:23	1
13C3 PFHxS	103		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C8 PFOS	96.2		40 - 130				01/05/26 10:53	01/06/26 10:23	1
13C8 FOSA	93.4		40 - 130				01/05/26 10:53	01/06/26 10:23	1
D3-NMeFOSAA	110		40 - 135				01/05/26 10:53	01/06/26 10:23	1
D5-NEtFOSAA	102		40 - 150				01/05/26 10:53	01/06/26 10:23	1
13C2 4:2 FTS	146		40 - 165				01/05/26 10:53	01/06/26 10:23	1
13C2 6:2 FTS	139		40 - 215				01/05/26 10:53	01/06/26 10:23	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-895399/1-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 895399

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 8:2 FTS	139		40 - 275	01/05/26 10:53	01/06/26 10:23	1
13C3 HFPO-DA	98.0		40 - 130	01/05/26 10:53	01/06/26 10:23	1
D7-NMeFOSE	72.0		20 - 130	01/05/26 10:53	01/06/26 10:23	1
D9-NEtFOSE	65.5		15 - 130	01/05/26 10:53	01/06/26 10:23	1
D5-NEtFOSA	84.8		10 - 130	01/05/26 10:53	01/06/26 10:23	1
D3-NMeFOSA	84.8		10 - 130	01/05/26 10:53	01/06/26 10:23	1

Lab Sample ID: LCS 320-895399/3-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 895399

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	20.0	21.8		ug/Kg		109	70 - 140
Perfluoropentanoic acid (PFPeA)	10.0	11.2		ug/Kg		112	60 - 150
Perfluorohexanoic acid (PFHxA)	10.0	11.5		ug/Kg		115	65 - 140
Perfluoroheptanoic acid (PFHpA)	10.0	11.8		ug/Kg		118	65 - 145
Perfluorooctanoic acid (PFOA)	10.0	10.8		ug/Kg		108	70 - 150
Perfluorononanoic acid (PFNA)	10.0	11.1		ug/Kg		111	70 - 155
Perfluorodecanoic acid (PFDA)	10.0	11.5		ug/Kg		115	70 - 155
Perfluoroundecanoic acid (PFUnA)	10.0	10.8		ug/Kg		108	70 - 155
Perfluorododecanoic acid (PFDoA)	10.0	11.4		ug/Kg		114	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	10.0	14.5		ug/Kg		145	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	10.0	12.6		ug/Kg		126	65 - 150
Perfluorobutanesulfonic acid (PFBS)	8.88	9.68		ug/Kg		109	65 - 145
Perfluoropentanesulfonic acid (PFPeS)	9.40	11.0		ug/Kg		117	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	9.12	10.8		ug/Kg		119	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	9.54	10.9		ug/Kg		114	65 - 155
Perfluorooctanesulfonic acid (PFOS)	9.30	11.2		ug/Kg		121	65 - 160
Perfluorononanesulfonic acid (PFNS)	9.62	9.45		ug/Kg		98	55 - 140
Perfluorodecanesulfonic acid (PFDS)	9.64	8.01		ug/Kg		83	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	9.70	6.84		ug/Kg		70	25 - 160
4:2 FTS	18.8	19.9		ug/Kg		106	60 - 150
6:2 FTS	19.0	20.6		ug/Kg		108	55 - 200
8:2 FTS	19.2	20.2		ug/Kg		105	70 - 150
Perfluorooctanesulfonamide (PFOSA)	10.0	11.7		ug/Kg		117	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	10.0	11.5		ug/Kg		115	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	10.0	11.8		ug/Kg		118	70 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-895399/3-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 895399

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	10.9		ug/Kg		109	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	12.4		ug/Kg		124	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50.0	48.9		ug/Kg		98	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50.0	55.6		ug/Kg		111	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	7.50	7.24		ug/Kg		97	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.46	9.48		ug/Kg		100	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	10.8		ug/Kg		108	30 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	11.1		ug/Kg		111	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	8.85		ug/Kg		89	60 - 155
9CI-PF3ONS	9.34	10.0		ug/Kg		107	70 - 150
11CI-PF3OUdS	9.44	6.71		ug/Kg		71	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	8.92	8.93		ug/Kg		100	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	20.0	21.3		ug/Kg		106	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50.0	54.2		ug/Kg		108	60 - 130
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50.0	45.6		ug/Kg		91	60 - 150

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	99.4		8 - 130
13C5 PFPeA	106		35 - 130
13C5 PFHxA	103		40 - 130
13C4 PFHpA	94.6		40 - 130
13C8 PFOA	97.9		40 - 130
13C9 PFNA	101		40 - 130
13C6 PFDA	85.8		40 - 130
13C7 PFUnA	73.9		40 - 130
13C2 PFDoA	61.5		40 - 130
13C2 PFTeDA	58.8		20 - 130
13C3 PFBS	100		40 - 135
13C3 PFHxS	97.9		40 - 130
13C8 PFOS	89.3		40 - 130
13C8 FOSA	65.1		40 - 130
D3-NMeFOSAA	84.8		40 - 135
D5-NEtFOSAA	71.2		40 - 150
13C2 4:2 FTS	140		40 - 165
13C2 6:2 FTS	130		40 - 215
13C2 8:2 FTS	115		40 - 275
13C3 HFPO-DA	106		40 - 130
D7-NMeFOSE	58.6		20 - 130
D9-NEtFOSE	48.5		15 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-895399/3-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 895399

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
D5-NEtFOSA	47.3		10 - 130
D3-NMeFOSA	45.3		10 - 130

Lab Sample ID: LCSD 320-895399/4-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 895399

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	20.0	23.1		ug/Kg		115	70 - 140	6	30
Perfluoropentanoic acid (PFPeA)	10.0	11.5		ug/Kg		115	60 - 150	3	30
Perfluorohexanoic acid (PFHxA)	10.0	11.2		ug/Kg		112	65 - 140	2	30
Perfluoroheptanoic acid (PFHpA)	10.0	11.1		ug/Kg		111	65 - 145	6	30
Perfluorooctanoic acid (PFOA)	10.0	11.8		ug/Kg		118	70 - 150	9	30
Perfluorononanoic acid (PFNA)	10.0	10.5		ug/Kg		105	70 - 155	5	30
Perfluorodecanoic acid (PFDA)	10.0	11.8		ug/Kg		118	70 - 155	3	30
Perfluoroundecanoic acid (PFUnA)	10.0	11.6		ug/Kg		116	70 - 155	6	30
Perfluorododecanoic acid (PFDoA)	10.0	11.6		ug/Kg		116	70 - 150	2	30
Perfluorotridecanoic acid (PFTTrDA)	10.0	14.8		ug/Kg		148	65 - 150	2	30
Perfluorotetradecanoic acid (PFTeDA)	10.0	12.3		ug/Kg		123	65 - 150	2	30
Perfluorobutanesulfonic acid (PFBS)	8.88	9.51		ug/Kg		107	65 - 145	2	30
Perfluoropentanesulfonic acid (PFPeS)	9.40	10.5		ug/Kg		112	55 - 160	5	30
Perfluorohexanesulfonic acid (PFHxS)	9.12	10.7		ug/Kg		117	60 - 150	2	30
Perfluoroheptanesulfonic acid (PFHpS)	9.54	11.0		ug/Kg		116	65 - 155	1	30
Perfluorooctanesulfonic acid (PFOS)	9.30	11.3		ug/Kg		121	65 - 160	1	30
Perfluorononanesulfonic acid (PFNS)	9.62	9.68		ug/Kg		101	55 - 140	2	30
Perfluorodecanesulfonic acid (PFDS)	9.64	8.09		ug/Kg		84	30 - 140	1	30
Perfluorododecanesulfonic acid (PFDoS)	9.70	6.87		ug/Kg		71	25 - 160	0	30
4:2 FTS	18.8	20.0		ug/Kg		107	60 - 150	0	30
6:2 FTS	19.0	20.9		ug/Kg		110	55 - 200	1	30
8:2 FTS	19.2	20.2		ug/Kg		105	70 - 150	0	30
Perfluorooctanesulfonamide (PFOSA)	10.0	11.2		ug/Kg		112	70 - 140	4	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	10.0	11.0		ug/Kg		110	70 - 155	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	10.0	10.6		ug/Kg		106	70 - 140	11	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	10.4		ug/Kg		104	65 - 155	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	13.0		ug/Kg		130	65 - 165	5	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCSD 320-895399/4-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 895399

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50.0	48.9		ug/Kg		98	70 - 140	0	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50.0	59.7		ug/Kg		119	70 - 135	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	7.50	7.11		ug/Kg		95	70 - 145	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.46	9.91		ug/Kg		105	70 - 160	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	10.8		ug/Kg		108	30 - 140	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	11.2		ug/Kg		112	60 - 150	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	9.68		ug/Kg		97	60 - 155	9	30
9CI-PF3ONS	9.34	10.0		ug/Kg		107	70 - 150	0	30
11CI-PF3OUdS	9.44	7.28		ug/Kg		77	45 - 160	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	8.92	9.23		ug/Kg		104	70 - 140	3	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	20.0	21.8		ug/Kg		109	45 - 130	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50.0	56.2		ug/Kg		112	60 - 130	3	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50.0	49.5		ug/Kg		99	60 - 150	8	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	95.5		8 - 130
13C5 PFPeA	107		35 - 130
13C5 PFHxA	103		40 - 130
13C4 PFHpA	107		40 - 130
13C8 PFOA	90.3		40 - 130
13C9 PFNA	97.9		40 - 130
13C6 PFDA	86.8		40 - 130
13C7 PFUnA	75.5		40 - 130
13C2 PFDoA	66.3		40 - 130
13C2 PFTeDA	57.8		20 - 130
13C3 PFBS	102		40 - 135
13C3 PFHxS	101		40 - 130
13C8 PFOS	92.4		40 - 130
13C8 FOSA	72.0		40 - 130
D3-NMeFOSAA	91.6		40 - 135
D5-NEtFOSAA	79.7		40 - 150
13C2 4:2 FTS	142		40 - 165
13C2 6:2 FTS	133		40 - 215
13C2 8:2 FTS	125		40 - 275
13C3 HFPO-DA	108		40 - 130
D7-NMeFOSE	61.6		20 - 130
D9-NEtFOSE	48.0		15 - 130
D5-NEtFOSA	51.2		10 - 130
D3-NMeFOSA	49.4		10 - 130

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-895399/2-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 895399

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	3.20	3.30		ug/Kg		103	70 - 140
Perfluoropentanoic acid (PFPeA)	1.60	1.60		ug/Kg		100	60 - 150
Perfluorohexanoic acid (PFHxA)	1.60	1.64		ug/Kg		103	65 - 140
Perfluoroheptanoic acid (PFHpA)	1.60	1.71		ug/Kg		107	65 - 145
Perfluorooctanoic acid (PFOA)	1.60	1.58		ug/Kg		99	70 - 150
Perfluorononanoic acid (PFNA)	1.60	1.48		ug/Kg		93	70 - 155
Perfluorodecanoic acid (PFDA)	1.60	1.43		ug/Kg		89	70 - 155
Perfluoroundecanoic acid (PFUnA)	1.60	1.62		ug/Kg		101	70 - 155
Perfluorododecanoic acid (PFDoA)	1.60	1.72		ug/Kg		108	70 - 150
Perfluorotridecanoic acid (PFTTrDA)	1.60	2.02		ug/Kg		126	65 - 150
Perfluorotetradecanoic acid (PFTeDA)	1.60	1.96		ug/Kg		122	65 - 150
Perfluorobutanesulfonic acid (PFBS)	1.42	1.36		ug/Kg		96	65 - 145
Perfluoropentanesulfonic acid (PFPeS)	1.50	1.60		ug/Kg		107	55 - 160
Perfluorohexanesulfonic acid (PFHxS)	1.46	1.53		ug/Kg		105	60 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.53	1.67		ug/Kg		109	65 - 155
Perfluorooctanesulfonic acid (PFOS)	1.49	1.67		ug/Kg		112	65 - 160
Perfluorononanesulfonic acid (PFNS)	1.54	1.35		ug/Kg		88	55 - 140
Perfluorodecanesulfonic acid (PFDS)	1.54	1.23		ug/Kg		80	30 - 140
Perfluorododecanesulfonic acid (PFDoS)	1.55	1.01		ug/Kg		65	25 - 160
4:2 FTS	3.00	2.85		ug/Kg		95	60 - 150
6:2 FTS	3.05	3.05		ug/Kg		100	55 - 200
8:2 FTS	3.07	2.85		ug/Kg		93	70 - 150
Perfluorooctanesulfonamide (PFOSA)	1.60	1.71		ug/Kg		107	70 - 140
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.60	1.64		ug/Kg		103	70 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.60	1.39		ug/Kg		87	70 - 140
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.60	1.54		ug/Kg		96	65 - 155
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.60	1.83		ug/Kg		114	65 - 165
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.00	7.20		ug/Kg		90	70 - 140
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	8.00	8.49		ug/Kg		106	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.20	0.899		ug/Kg		75	70 - 145
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.51	1.28		ug/Kg		85	70 - 160
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.60	1.55		ug/Kg		97	30 - 140

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method: 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-895399/2-A

Matrix: Solid

Analysis Batch: 895570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 895399

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.60	1.58		ug/Kg		99	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.60	1.32		ug/Kg		82	60 - 155
9CI-PF3ONS	1.49	1.43		ug/Kg		96	70 - 150
11CI-PF3OUdS	1.51	0.943		ug/Kg		62	45 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	1.43	1.28		ug/Kg		90	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.20	3.34		ug/Kg		104	45 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	8.00	7.65		ug/Kg		96	60 - 130
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.00	6.70		ug/Kg		84	60 - 150

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	LLCS Limits
13C4 PFBA	100		8 - 130
13C5 PFPeA	114		35 - 130
13C5 PFHxA	114		40 - 130
13C4 PFHpA	110		40 - 130
13C8 PFOA	94.5		40 - 130
13C9 PFNA	94.8		40 - 130
13C6 PFDA	101		40 - 130
13C7 PFUnA	80.3		40 - 130
13C2 PFDoA	63.8		40 - 130
13C2 PFTeDA	66.9		20 - 130
13C3 PFBS	107		40 - 135
13C3 PFHxS	106		40 - 130
13C8 PFOS	92.3		40 - 130
13C8 FOSA	69.7		40 - 130
D3-NMeFOSAA	89.5		40 - 135
D5-NEtFOSAA	76.5		40 - 150
13C2 4:2 FTS	150		40 - 165
13C2 6:2 FTS	136		40 - 215
13C2 8:2 FTS	124		40 - 275
13C3 HFPO-DA	118		40 - 130
D7-NMeFOSE	60.7		20 - 130
D9-NEtFOSE	46.8		15 - 130
D5-NEtFOSA	52.0		10 - 130
D3-NMeFOSA	48.3		10 - 130

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

LCMS

Prep Batch: 894471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-1	INF-02-202512	Total/NA	Water	1633A	
320-128161-2	INF-07-202512	Total/NA	Water	1633A	
320-128161-3	INF-08-202512	Total/NA	Water	1633A	
320-128161-4	INF-11-202512	Total/NA	Water	1633A	
320-128161-5	INF-18-202512	Total/NA	Water	1633A	
320-128161-6	INF-Comp-202512	Total/NA	Water	1633A	
320-128161-7	EFF-G-202512	Total/NA	Water	1633A	
320-128161-8	EB-01-202512	Total/NA	Water	1633A	
320-128161-12	EB-02-202512	Total/NA	Water	1633A	
MB 320-894471/1-A	Method Blank	Total/NA	Water	1633A	
LCS 320-894471/3-A	Lab Control Sample	Total/NA	Water	1633A	
LCSD 320-894471/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	
LLCS 320-894471/2-A	Lab Control Sample	Total/NA	Water	1633A	

Analysis Batch: 894713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-1	INF-02-202512	Total/NA	Water	1633A	894471
320-128161-2	INF-07-202512	Total/NA	Water	1633A	894471
320-128161-3	INF-08-202512	Total/NA	Water	1633A	894471
320-128161-4	INF-11-202512	Total/NA	Water	1633A	894471
320-128161-5	INF-18-202512	Total/NA	Water	1633A	894471
320-128161-6	INF-Comp-202512	Total/NA	Water	1633A	894471
320-128161-7	EFF-G-202512	Total/NA	Water	1633A	894471
320-128161-8	EB-01-202512	Total/NA	Water	1633A	894471
320-128161-12	EB-02-202512	Total/NA	Water	1633A	894471
MB 320-894471/1-A	Method Blank	Total/NA	Water	1633A	894471
LCS 320-894471/3-A	Lab Control Sample	Total/NA	Water	1633A	894471
LCSD 320-894471/4-A	Lab Control Sample Dup	Total/NA	Water	1633A	894471
LLCS 320-894471/2-A	Lab Control Sample	Total/NA	Water	1633A	894471

Prep Batch: 895399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9	BIO-A-25-202512	Total/NA	Solid	1633A Biosol P	
320-128161-9 - RA	BIO-A-25-202512	Total/NA	Solid	1633A Biosol P	
320-128161-10	BIO-A-24-202512	Total/NA	Solid	1633A Biosol P	
320-128161-10 - RA	BIO-A-24-202512	Total/NA	Solid	1633A Biosol P	
320-128161-11	BIO-B-202512	Total/NA	Solid	1633A Biosol P	
320-128161-11 - RA	BIO-B-202512	Total/NA	Solid	1633A Biosol P	
MB 320-895399/1-A	Method Blank	Total/NA	Solid	1633A Biosol P	
LCS 320-895399/3-A	Lab Control Sample	Total/NA	Solid	1633A Biosol P	
LCSD 320-895399/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A Biosol P	
LLCS 320-895399/2-A	Lab Control Sample	Total/NA	Solid	1633A Biosol P	

Analysis Batch: 895469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9 - RA	BIO-A-25-202512	Total/NA	Solid	1633A	895399
320-128161-10 - RA	BIO-A-24-202512	Total/NA	Solid	1633A	895399
320-128161-11 - RA	BIO-B-202512	Total/NA	Solid	1633A	895399

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

LCMS

Analysis Batch: 895570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9	BIO-A-25-202512	Total/NA	Solid	1633A	895399
320-128161-10	BIO-A-24-202512	Total/NA	Solid	1633A	895399
320-128161-11	BIO-B-202512	Total/NA	Solid	1633A	895399
MB 320-895399/1-A	Method Blank	Total/NA	Solid	1633A	895399
LCS 320-895399/3-A	Lab Control Sample	Total/NA	Solid	1633A	895399
LCSD 320-895399/4-A	Lab Control Sample Dup	Total/NA	Solid	1633A	895399
LLCS 320-895399/2-A	Lab Control Sample	Total/NA	Solid	1633A	895399

General Chemistry

Analysis Batch: 892672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9	BIO-A-25-202512	Total/NA	Solid	1633	
320-128161-10	BIO-A-24-202512	Total/NA	Solid	1633	
320-128161-11	BIO-B-202512	Total/NA	Solid	1633	

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-02-202512

Lab Sample ID: 320-128161-1

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			137.7 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 09:53	JTD	EET SAC

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			137.4 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 10:09	JTD	EET SAC

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			139.5 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 10:26	JTD	EET SAC

Client Sample ID: INF-11-202512

Lab Sample ID: 320-128161-4

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			141.9 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 10:42	JTD	EET SAC

Client Sample ID: INF-18-202512

Lab Sample ID: 320-128161-5

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			129.5 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 10:58	JTD	EET SAC

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			135.9 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 11:15	JTD	EET SAC

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			142.9 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 11:31	JTD	EET SAC

Client Sample ID: EB-01-202512

Lab Sample ID: 320-128161-8

Date Collected: 12/08/25 13:30

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			137.1 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 11:48	JTD	EET SAC

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			892672	12/16/25 14:12	JCB	EET SAC

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			4.02 g	5.0 mL	895399	01/05/26 10:53	M1G	EET SAC
Total/NA	Analysis	1633A		1			895570	01/06/26 11:46	JTD	EET SAC
Total/NA	Prep	1633A Biosol P	RA		4.02 g	5.0 mL	895399	01/05/26 10:53	M1G	EET SAC
Total/NA	Analysis	1633A	RA	1			895469	01/06/26 13:28	JTD	EET SAC

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			892672	12/16/25 14:12	JCB	EET SAC

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			4.09 g	5.0 mL	895399	01/05/26 10:53	M1G	EET SAC
Total/NA	Analysis	1633A		1			895570	01/06/26 12:02	JTD	EET SAC
Total/NA	Prep	1633A Biosol P	RA		4.09 g	5.0 mL	895399	01/05/26 10:53	M1G	EET SAC
Total/NA	Analysis	1633A	RA	1			895469	01/06/26 13:45	JTD	EET SAC

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Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1633		1			892672	12/16/25 14:12	JCB	EET SAC

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A Biosol P			4.07 g	5.0 mL	895399	01/05/26 10:53	M1G	EET SAC
Total/NA	Analysis	1633A		1			895570	01/06/26 12:19	JTD	EET SAC
Total/NA	Prep	1633A Biosol P	RA		4.07 g	5.0 mL	895399	01/05/26 10:53	M1G	EET SAC
Total/NA	Analysis	1633A	RA	1			895469	01/06/26 14:01	JTD	EET SAC

Client Sample ID: EB-02-202512

Lab Sample ID: 320-128161-12

Date Collected: 12/08/25 14:30

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1633A			137.5 mL	5.0 mL	894471	12/29/25 04:56	BMS	EET SAC
Total/NA	Analysis	1633A		1	1 mL	1 mL	894713	12/30/25 12:37	JTD	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1633		Solid	Percent Moisture
1633		Solid	Percent Solids



Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Method	Method Description	Protocol	Laboratory
1633A	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET SAC
1633	Percent Moisture	EPA	EET SAC
1633A	Solid-Phase Extraction (SPE)	EPA	EET SAC
1633A Biosol P	Shake Extraction with SPE	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-128161-1	INF-02-202512	Water	12/08/25 23:59	12/11/25 09:50	Wisconsin
320-128161-2	INF-07-202512	Water	12/08/25 23:59	12/11/25 09:50	Wisconsin
320-128161-3	INF-08-202512	Water	12/08/25 23:59	12/11/25 09:50	Wisconsin
320-128161-4	INF-11-202512	Water	12/08/25 23:59	12/11/25 09:50	Wisconsin
320-128161-5	INF-18-202512	Water	12/08/25 23:59	12/11/25 09:50	Wisconsin
320-128161-6	INF-Comp-202512	Water	12/08/25 23:59	12/11/25 09:50	Wisconsin
320-128161-7	EFF-G-202512	Water	12/09/25 07:17	12/11/25 09:50	Wisconsin
320-128161-8	EB-01-202512	Water	12/08/25 13:30	12/11/25 09:50	Wisconsin
320-128161-9	BIO-A-25-202512	Solid	12/08/25 14:15	12/11/25 09:50	Wisconsin
320-128161-10	BIO-A-24-202512	Solid	12/08/25 14:56	12/11/25 09:50	Wisconsin
320-128161-11	BIO-B-202512	Solid	12/08/25 13:49	12/11/25 09:50	Wisconsin
320-128161-12	EB-02-202512	Water	12/08/25 14:30	12/11/25 09:50	Wisconsin

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environment Testing

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1/7/2026

Client Information		Sampler: <u>Jennifer Faust</u>		Lab PM: <u>Jessica McCannon</u>		Carrier Tracking No(s): <u>Fed Ex</u>		COC No:							
Client Contact: <u>Mike Ursin mursin</u>		Phone: <u>608 222-1201</u>		E-Mail: <u>jessicameccannon@eurofins.com</u>		State of Origin: <u>WI</u>		Page: <u>1</u> of <u>2</u>							
Company: <u>TRC 999 Fourier Dr Suite 101 Madison, WI 53717</u>		PWSID:		Analysis Requested				Job #:							
Address: <u>mmso</u> <u>1616 Moorland Rd</u>		Due Date Requested:		 320-128161 Chain of Custody				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)							
City: <u>Madison</u>		TAT Requested (days): <u>20 business days / Contract</u>													
State, Zip: <u>WI 53713</u>		Compliance Project: ☐ Yes ☒ No													
Phone: <u>608 222-1201</u>		PO #: <u>2400419</u>													
Email: <u>mursin@trccompanies.com</u>		WO #:													
Project Name: <u>MMSD PFAS PHASE 3</u>		Project #:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <u>PEAS 1633</u> <u>TDP</u>				Total Number of containers							
Site: <u>MMSD</u>		SSOW#:													
Sample Identification		Sample Date								Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	
Preservation Code:															
<u>INF-02-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>							
<u>INF-07-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>							
<u>INF-08-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>							
<u>INF-11-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>							
<u>INF-18-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>							
<u>INF-COMP 202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>							
<u>EFF-G-202512</u>		<u>12/9/25</u>		<u>7 17</u>		<u>G</u>		<u>W</u>							
<u>EB 01-202512</u>		<u>12/8/25</u>		<u>13 30</u>		<u>G</u>		<u>W</u>							
<u>B10-A-25-202512</u>		<u>12/8/25</u>		<u>14 15</u>		<u>G/C</u>		<u>S</u>							
<u>B10-A-24-202512</u>		<u>12/8/25</u>		<u>14 56</u>		<u>G/C</u>		<u>S</u>							
<u>B10-B-202512</u>		<u>12/8/25</u>		<u>13 49</u>		<u>G</u>		<u>S</u>							
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months										
Deliverable Requested I, II, III, IV, Other (specify)					Special Instructions/QC Requirements.										
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:							
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>12/9/25 07 45</u>		Company: <u>mmso</u>		Received by: <u>8</u>		Date/Time: <u>12/11/25 950</u>							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:							
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: <u>1.5</u>											

Chain of Custody Record

[illegible]

ANALYTICAL REPORT

PREPARED FOR

Attn: Jessica McCammon
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Generated 1/6/2026 12:35:53 PM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

320-128161-2

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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1/6/2026 12:35:53 PM

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
(916)374-4302

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Definitions/Glossary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-128161-2

Job ID: 320-128161-2

Eurofins Sacramento

Job Narrative 320-128161-2

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 12/11/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C.

PFAS

Method 537 (modified) Pre- and Post-Treatment: The following sample was discolored prior to extraction, and yielded discolored extracts: EFF-G-202512 (320-128161-7).

Method 537 (modified) Pre- and Post-Treatment: The following samples yielded discolored extracts: BIO-A-25-202512 (320-128161-9), BIO-A-24-202512 (320-128161-10) and BIO-B-202512 (320-128161-11)

Method 537 (modified) Pre- and Post-Treatment: The labeled analyte M2-4:2 FTS is employed in this analysis as a "Reverse Surrogate" in order to monitor the oxidation efficiency of the TOP assay. This analyte is added to all sample fractions prior to any processing. The recovery of this analyte should be 0 – 10% in Post-Treatment fractions, indicating effective oxidation of the sample. The oxidation of M2-4:2 FTS yields PFBA as conversion product and this contribution is included in the reported results for PFBA in Post-Treatment fractions of both samples and QC aliquots.

Method 537 (modified) Post-Treatment: Enhanced recoveries of PFCAs and 0 - 15% recovery of precursor analytes (such as 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NetFOSAA, etc.) are observed in the Post-Treatment Laboratory Control Sample aliquots (LCS/LCSD) associated with these samples, consistent with the expected oxidation of precursor analytes to PFCAs. The Post-Treatment LCS control limits are pending update and are considered advisory at this time. Sample results are qualified where variances to the advisory limits are observed, but no corrective action is required.

Method 537 (modified) Post-Treatment: The method blank (MB) for preparation batches 320-892893 and 320-893005 contained Perfluoropentanoic acid (PFPeA) and/or Perfluorooctanesulfonic acid (PFOS) above the method detection limit (MDL). The MB concentrations are below the reporting limit (RL) and positive results for these analytes in associated samples have been qualified (B). No further corrective actions are required for this circumstance.

Method 537 (modified) Pre- and Post-Treatment: One or more continuing calibration verifications (CCV) in analytical batch 320-893952 exhibited a transition mass ratio outside the established limit for Perfluorododecanoic acid (PFDoA), as indicated in the raw data. No adverse impact on sample results are associated with this observation.

Method 537 (modified) Pre-Treatment: Isotope Dilution Analyte (IDA) recoveries are outside the method recommended limit in one or more samples, as indicated in the Isotope Dilution Summary. Generally, data quality is not considered to be affected if the IDA signal to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 537 (modified) Pre-Treatment: The "I" qualifier has been applied to one or more analytes in one or more samples, which indicates that the transition mass ratio for the analyte was outside the established ratio limits. The reported results for the qualified analyte(s) have an increased degree of uncertainty.

Method 537 (modified) Pre-Treatment: One or more laboratory control samples (LCS/LCSD) for preparation batches 320-893003 and 320-892887 recovered below control limits for Perfluorododecanesulfonic acid (PFDoS) and/or 11Cl-PF3OUdS. The affected LCS aliquots were re-analyzed with concurring results. The associated samples were non-detect (ND) for these analytes and each sample was manually examined to ensure that the ND results did not reflect a low bias versus the method detection limit (MDL). No

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Case Narrative

Client: Madison Metropolitan Sewerage District
Project: PFAS Sampling

Job ID: 320-128161-2

Job ID: 320-128161-2 (Continued)

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such results were identified and therefore there is no adverse impact on the reported results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.6	J	13	3.1	ng/L	1			537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	4.9	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	12		5.0	1.5	ng/L	1			537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	1.4	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	5.9		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.7	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	7.1		5.0	1.4	ng/L	1			537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	6.0		5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.4	J	5.0	1.3	ng/L	1			537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	23	B	13	3.1	ng/L	1			537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	15	*+	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	14	*+	5.0	1.5	ng/L	1			537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	8.1	*+	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	3.4	J	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	6.5		5.0	1.4	ng/L	1			537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	4.9	J B	5.0	1.3	ng/L	1			537 (modified)	Post-Treatment

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.8	J	3.8	0.88	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	4.7		3.8	0.79	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	18		3.8	0.59	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	0.83	J	3.8	0.73	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanoic acid (PFOA)	11		3.8	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.3	J	3.8	0.42	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	4.3		3.8	0.92	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	1.3	J	3.8	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	1.5	J	3.8	0.73	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.7	J	3.8	0.56	ug/Kg	1		✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512 (Continued)

Lab Sample ID: 320-128161-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	11		3.8	0.83	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	0.89	J	3.8	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		3.8	0.44	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.6	J	3.8	0.92	ug/Kg	1		✱	537 (modified)	Pre-Treatment
8:2 FTS	1.1	J	3.8	0.67	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.1		3.8	0.90	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.6	J	3.8	0.54	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	27		3.8	0.73	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		3.8	0.79	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	97	B	3.8	0.86	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	52	*+ B	3.8	0.77	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	44	*+	3.8	0.58	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	19		3.8	0.71	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	39		3.8	1.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	10		3.8	0.41	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	9.1		3.8	0.90	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	3.8		3.8	0.79	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	3.6	J	3.8	0.56	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	0.74	J	3.8	0.39	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	1.1	J	3.8	0.69	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	16		3.8	0.71	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	3.8	0.54	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	10		3.8	0.81	ug/Kg	1		✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.6		3.8	0.88	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoropentanoic acid (PFPeA)	12		3.8	0.79	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanoic acid (PFHxA)	26		3.8	0.59	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluoroheptanoic acid (PFHpA)	1.8	J	3.8	0.73	ug/Kg	1		✱	537 (modified)	Pre-Treatment

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512 (Continued)

Lab Sample ID: 320-128161-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	19		3.8	1.0	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorononanoic acid (PFNA)	1.6	J	3.8	0.42	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorodecanoic acid (PFDA)	7.6		3.8	0.92	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorododecanoic acid (PFDoA)	2.5	J	3.8	0.57	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorotetradecanoic acid (PFTeDA)	0.81	J	3.8	0.71	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanesulfonic acid (PFBS)	5.3		3.8	0.73	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorohexanesulfonic acid (PFHxS)	2.0	J	3.8	0.56	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonic acid (PFOS)	11		3.8	0.83	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorooctanesulfonamide (PFOSA)	1.1	J	3.8	0.63	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	15		3.8	0.44	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.6		3.8	0.92	ug/Kg	1		✱	537 (modified)	Pre-Treatment
6:2 FTS	1.1	J	3.8	0.52	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8		3.8	0.90	ug/Kg	1		✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.9		3.8	0.54	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	35		3.8	0.73	ug/Kg	1		✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		3.8	0.79	ug/Kg	1		✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	130	B	3.8	0.88	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	79	*+ B	3.8	0.79	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	56	*+	3.8	0.59	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	27		3.8	0.73	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	48		3.8	1.0	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	15		3.8	0.42	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	13		3.8	0.92	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	6.1		3.8	0.80	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	5.4		3.8	0.57	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	1.3	J	3.8	0.40	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorotetradecanoic acid (PFTeDA)	2.1	J	3.8	0.71	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	17		3.8	0.73	ug/Kg	1		✱	537 (modified)	Post-Treatment
Perfluorohexanesulfonic acid (PFHxS)	2.0	J	3.8	0.56	ug/Kg	1		✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512 (Continued)

Lab Sample ID: 320-128161-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	27		3.8	0.83	ug/Kg	1	✱	537 (modified)	Post-Treatment

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	17	J I	18	4.0	ug/Kg	1	✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	7.7	J	18	2.1	ug/Kg	1	✱	537 (modified)	Pre-Treatment
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	6.5	J	18	4.4	ug/Kg	1	✱	537 (modified)	Pre-Treatment
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	6.5	J	18	2.6	ug/Kg	1	✱	537 (modified)	Pre-Treatment
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		18	3.5	ug/Kg	1	✱	537 (modified)	Pre-Treatment
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.3	J	18	3.8	ug/Kg	1	✱	537 (modified)	Pre-Treatment
Perfluorobutanoic acid (PFBA)	160	B	18	4.3	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluoropentanoic acid (PFPeA)	110	*+ B	18	3.8	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorohexanoic acid (PFHxA)	45	*+	18	2.9	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluoroheptanoic acid (PFHpA)	31		18	3.5	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorooctanoic acid (PFOA)	38		18	4.9	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorononanoic acid (PFNA)	17	J	18	2.0	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorodecanoic acid (PFDA)	9.3	J	18	4.4	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluoroundecanoic acid (PFUnA)	6.1	J	18	3.9	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorododecanoic acid (PFDoA)	5.1	J	18	2.8	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorotridecanoic acid (PFTTrDA)	2.1	J	18	1.9	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorobutanesulfonic acid (PFBS)	6.8	J	18	3.5	ug/Kg	1	✱	537 (modified)	Post-Treatment
Perfluorooctanesulfonic acid (PFOS)	8.1	J	18	4.0	ug/Kg	1	✱	537 (modified)	Post-Treatment

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.6	J	13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoropentanoic acid (PFPeA)	4.9	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorohexanoic acid (PFHxA)	12		5.0	1.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorooctanoic acid (PFOA)	5.9		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorobutanesulfonic acid (PFBS)	3.7	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorooctanesulfonic acid (PFOS)	6.0		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*-	5.0	2.4	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
4:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
6:2 FTS	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
8:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
11CI-PF3OUdS	ND	*-	5.0	1.7	ng/L		12/17/25 19:48	12/23/25 06:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.4	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 06:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	51		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFBA	63		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C5 PFPeA	75		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFHxA	64		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFHpA	68		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFOA	64		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C5 PFNA	58		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFDA	50		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFUnA	41		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFDoA	28		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFTeDA	26		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C3 PFBS	66		25 - 150				12/17/25 19:48	12/23/25 06:54	1
18O2 PFHxS	64		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFOS	63		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D3-NMeFOSAA	47		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D5-NEtFOSAA	47		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 4:2 FTS	70		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 6:2 FTS	61		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 8:2 FTS	55		25 - 150				12/17/25 19:48	12/23/25 06:54	1
d-N-MeFOSA-M	31		25 - 150				12/17/25 19:48	12/23/25 06:54	1
d-N-EtFOSA-M	31		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D7-NMeFOSE	29		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D9-NEtFOSE	24	*5-	25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C3 HFPO-DA	60		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C-6:2 FTCA	54		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C-8:2 FTCA	67		25 - 150				12/17/25 19:48	12/23/25 06:54	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23	B	13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoropentanoic acid (PFPeA)	15	*+	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorohexanoic acid (PFHxA)	14	*+	5.0	1.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorooctanoic acid (PFOA)	8.1	*+	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorononanoic acid (PFNA)	ND	*+	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorotridecanoic acid (PFTeDA)	ND	*- *1	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorotetradecanoic acid (PFTeDA)	ND	*- *1	5.0	1.8	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorobutanesulfonic acid (PFBS)	3.4	J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorooctanesulfonic acid (PFOS)	4.9	J B	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorononanesulfonic acid (PFNS)	ND	*-	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorodecanesulfonic acid (PFDS)	ND	*- *1	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*- *1	5.0	2.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
4:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
6:2 FTS	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
8:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	*+	10	2.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
11CI-PF3OUdS	ND	*- *1	5.0	1.7	ng/L		12/17/25 19:51	12/23/25 11:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	82		25 - 150				12/17/25 19:51	12/23/25 11:34	1
13C4 PFBA	93		25 - 150				12/17/25 19:51	12/23/25 11:34	1
13C5 PFPeA	87		25 - 150				12/17/25 19:51	12/23/25 11:34	1
13C2 PFHxA	95		25 - 150				12/17/25 19:51	12/23/25 11:34	1
13C4 PFHpA	88		25 - 150				12/17/25 19:51	12/23/25 11:34	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	87		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C5 PFNA	83		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFDA	80		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFUnA	69		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFDoA	56		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFTeDA	40		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C3 PFBS	83		25 - 150	12/17/25 19:51	12/23/25 11:34	1
18O2 PFHxS	79		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C4 PFOS	93		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D3-NMeFOSAA	75		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D5-NEtFOSAA	79		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 4:2 FTS	0		0 - 10	12/17/25 19:51	12/23/25 11:34	1
13C2 6:2 FTS	77		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 8:2 FTS	73		25 - 150	12/17/25 19:51	12/23/25 11:34	1
d-N-MeFOSA-M	56		25 - 150	12/17/25 19:51	12/23/25 11:34	1
d-N-EtFOSA-M	49		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D7-NMeFOSE	46		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D9-NEtFOSE	41		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C3 HFPO-DA	81		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C-6:2 FTCA	77		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C-8:2 FTCA	94		25 - 150	12/17/25 19:51	12/23/25 11:34	1

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.8	J	3.8	0.88	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoropentanoic acid (PFPeA)	4.7		3.8	0.79	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorohexanoic acid (PFHxA)	18		3.8	0.59	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoroheptanoic acid (PFHpA)	0.83	J	3.8	0.73	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorooctanoic acid (PFOA)	11		3.8	1.0	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorononanoic acid (PFNA)	1.3	J	3.8	0.42	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorodecanoic acid (PFDA)	4.3		3.8	0.92	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoroundecanoic acid (PFUnA)	ND		3.8	0.80	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorododecanoic acid (PFDoA)	1.3	J	3.8	0.57	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorotridecanoic acid (PFTeDA)	ND		3.8	0.40	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		3.8	0.71	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorobutanesulfonic acid (PFBS)	1.5	J	3.8	0.73	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.71	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	J	3.8	0.56	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.94	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorooctanesulfonic acid (PFOS)	11		3.8	0.83	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.56	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	1.0	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*	3.8	0.90	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluorooctanesulfonamide (PFOSA)	0.89	J	3.8	0.63	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		3.8	0.44	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.6	J	3.8	0.92	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
4:2 FTS	ND		3.8	0.98	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
6:2 FTS	ND		3.8	0.52	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
8:2 FTS	1.1	J	3.8	0.67	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.94	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.1		3.8	0.90	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.6	J	3.8	0.54	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
9CI-PF3ONS	ND		3.8	0.67	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.79	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
11CI-PF3OUdS	ND		3.8	0.59	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.75	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.79	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	27		3.8	0.73	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		3.8	0.79	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.77	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.87	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	76		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFBA	88		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C5 PFPeA	97		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFHxA	96		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFHpA	105		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFOA	103		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C5 PFNA	93		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFDA	100		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFUnA	105		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFDoA	82		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFTeDA	38		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C3 PFBS	94		25 - 150	12/17/25 12:57	12/26/25 03:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFOS	110		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D3-NMeFOSAA	108		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D5-NEtFOSAA	125		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 4:2 FTS	131		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 6:2 FTS	124		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 8:2 FTS	146		25 - 150	12/17/25 12:57	12/26/25 03:31	1
d-N-MeFOSA-M	56		25 - 150	12/17/25 12:57	12/26/25 03:31	1
d-N-EtFOSA-M	60		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D7-NMeFOSE	58		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D9-NEtFOSE	77		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C3 HFPO-DA	103		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C-6:2 FTCA	80		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C-8:2 FTCA	100		25 - 150	12/17/25 12:57	12/26/25 03:31	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	97	B	3.8	0.86	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoropentanoic acid (PFPeA)	52	++ B	3.8	0.77	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorohexanoic acid (PFHxA)	44	++	3.8	0.58	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoroheptanoic acid (PFHpA)	19		3.8	0.71	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorooctanoic acid (PFOA)	39		3.8	1.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorononanoic acid (PFNA)	10		3.8	0.41	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorodecanoic acid (PFDA)	9.1		3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoroundecanoic acid (PFUnA)	3.8		3.8	0.79	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorododecanoic acid (PFDoA)	3.6	J	3.8	0.56	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorotridecanoic acid (PFTTrDA)	0.74	J	3.8	0.39	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorotetradecanoic acid (PFTeDA)	1.1	J	3.8	0.69	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorobutanesulfonic acid (PFBS)	16		3.8	0.71	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.69	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	3.8	0.54	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.92	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorooctanesulfonic acid (PFOS)	10		3.8	0.81	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.54	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorodecanesulfonic acid (PFDS)	ND	*-	3.8	0.98	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*-	3.8	0.89	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorooctanesulfonamide (PFOSA)	ND		3.8	0.62	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		3.8	0.43	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
4:2 FTS	ND		3.8	0.96	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
6:2 FTS	ND		3.8	0.51	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	ND		3.8	0.66	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.89	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.92	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		3.8	0.89	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		3.8	0.53	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
9CI-PF3ONS	ND	*-	3.8	0.66	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
11CI-PF3OUdS	ND	*-	3.8	0.58	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.73	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		3.8	0.71	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.75	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.85	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	3.8	0.45	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		3.8	0.60	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	53		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFBA	96		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C5 PFPeA	95		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFHxA	101		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFHpA	99		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFOA	94		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C5 PFNA	82		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFDA	64		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFUnA	54		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFDoA	48		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFTeDA	55		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C3 PFBS	92		25 - 150	12/17/25 13:04	12/26/25 06:05	1
18O2 PFHxS	95		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFOS	80		25 - 150	12/17/25 13:04	12/26/25 06:05	1
D3-NMeFOSAA	62		25 - 150	12/17/25 13:04	12/26/25 06:05	1
D5-NEtFOSAA	64		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 06:05	1
13C2 6:2 FTS	99		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 8:2 FTS	75		25 - 150	12/17/25 13:04	12/26/25 06:05	1
d-N-MeFOSA-M	51		25 - 150	12/17/25 13:04	12/26/25 06:05	1
d-N-EtFOSA-M	53		25 - 150	12/17/25 13:04	12/26/25 06:05	1
D7-NMeFOSE	46		25 - 150	12/17/25 13:04	12/26/25 06:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D9-NEtFOSE	43		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C3 HFPO-DA	86		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C-6:2 FTCA	94		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C-8:2 FTCA	82		25 - 150	12/17/25 13:04	12/26/25 06:05	1

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.6		3.8	0.88	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoropentanoic acid (PFPeA)	12		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorohexanoic acid (PFHxA)	26		3.8	0.59	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoroheptanoic acid (PFHpA)	1.8 J		3.8	0.73	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorooctanoic acid (PFOA)	19		3.8	1.0	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorononanoic acid (PFNA)	1.6 J		3.8	0.42	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorodecanoic acid (PFDA)	7.6		3.8	0.92	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoroundecanoic acid (PFUnA)	ND		3.8	0.80	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorododecanoic acid (PFDoA)	2.5 J		3.8	0.57	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorotridecanoic acid (PFTTrDA)	ND		3.8	0.40	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorotetradecanoic acid (PFTTeDA)	0.81 J		3.8	0.71	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorobutanesulfonic acid (PFBS)	5.3		3.8	0.73	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.71	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorohexanesulfonic acid (PFHxS)	2.0 J		3.8	0.56	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.94	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorooctanesulfonic acid (PFOS)	11		3.8	0.83	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.56	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	1.0	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND *-		3.8	0.90	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorooctanesulfonamide (PFOSA)	1.1 J		3.8	0.63	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	15		3.8	0.44	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.6		3.8	0.92	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
4:2 FTS	ND		3.8	0.98	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
6:2 FTS	1.1 J		3.8	0.52	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
8:2 FTS	ND		3.8	0.67	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.94	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8		3.8	0.90	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.9		3.8	0.54	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
9CI-PF3ONS	ND		3.8	0.67	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
11CI-PF3OUdS	ND		3.8	0.59	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.75	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	35		3.8	0.73	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.87	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	73		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFBA	90		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C5 PFPeA	101		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFHxA	94		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFHpA	98		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFOA	98		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C5 PFNA	99		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFDA	99		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFUnA	98		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFDoA	77		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFTeDA	36		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C3 PFBS	95		25 - 150	12/17/25 12:57	12/26/25 03:45	1
18O2 PFHxS	91		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFOS	108		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D3-NMeFOSAA	85		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D5-NEtFOSAA	99		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 4:2 FTS	138		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 6:2 FTS	125		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 8:2 FTS	143		25 - 150	12/17/25 12:57	12/26/25 03:45	1
d-N-MeFOSA-M	54		25 - 150	12/17/25 12:57	12/26/25 03:45	1
d-N-EtFOSA-M	55		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D7-NMeFOSE	58		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D9-NEtFOSE	74		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C3 HFPO-DA	81		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C-6:2 FTCA	74		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C-8:2 FTCA	88		25 - 150	12/17/25 12:57	12/26/25 03:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	130	B	3.8	0.88	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluoropentanoic acid (PFPeA)	79	*+ B	3.8	0.79	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorohexanoic acid (PFHxA)	56	*+	3.8	0.59	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluoroheptanoic acid (PFHpA)	27		3.8	0.73	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorooctanoic acid (PFOA)	48		3.8	1.0	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorononanoic acid (PFNA)	15		3.8	0.42	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorodecanoic acid (PFDA)	13		3.8	0.92	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluoroundecanoic acid (PFUnA)	6.1		3.8	0.80	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorododecanoic acid (PFDoA)	5.4		3.8	0.57	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorotridecanoic acid (PFTrDA)	1.3	J	3.8	0.40	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorotetradecanoic acid (PFTeDA)	2.1	J	3.8	0.71	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorobutanesulfonic acid (PFBS)	17		3.8	0.73	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.71	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	J	3.8	0.56	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.94	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorooctanesulfonic acid (PFOS)	27		3.8	0.83	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.56	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorodecanesulfonic acid (PFDS)	ND	*-	3.8	1.0	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*-	3.8	0.90	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Perfluorooctanesulfonamide (PFOSA)	ND		3.8	0.63	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		3.8	0.44	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.8	0.92	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
4:2 FTS	ND		3.8	0.98	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
6:2 FTS	ND		3.8	0.52	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
8:2 FTS	ND		3.8	0.67	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.94	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		3.8	0.90	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		3.8	0.54	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
9CI-PF3ONS	ND	*-	3.8	0.67	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.79	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
11CI-PF3OUdS	ND	*-	3.8	0.59	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.75	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.79	ug/Kg	✧	12/17/25 13:04	12/26/25 06:19	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		3.8	0.73	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		3.8	0.79	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.87	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	+	3.8	0.46	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	66		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFBA	98		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C5 PFPeA	94		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFHxA	97		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFHpA	97		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFOA	96		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C5 PFNA	82		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFDA	76		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFUnA	65		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFDoA	51		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFTeDA	56		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C3 PFBS	106		25 - 150	12/17/25 13:04	12/26/25 06:19	1
18O2 PFHxS	93		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFOS	101		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D3-NMeFOSAA	75		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D5-NEtFOSAA	77		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 06:19	1
13C2 6:2 FTS	97		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 8:2 FTS	88		25 - 150	12/17/25 13:04	12/26/25 06:19	1
d-N-MeFOSA-M	52		25 - 150	12/17/25 13:04	12/26/25 06:19	1
d-N-EtFOSA-M	54		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D7-NMeFOSE	48		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D9-NEtFOSE	47		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C3 HFPO-DA	85		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C-6:2 FTCA	87		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C-8:2 FTCA	98		25 - 150	12/17/25 13:04	12/26/25 06:19	1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		18	4.3	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluoropentanoic acid (PFPeA)	ND		18	3.8	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluorohexanoic acid (PFHxA)	ND		18	2.9	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluoroheptanoic acid (PFHpA)	ND		18	3.5	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluorooctanoic acid (PFOA)	ND		18	4.9	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		18	2.0	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorodecanoic acid (PFDA)	ND		18	4.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluoroundecanoic acid (PFUnA)	ND		18	3.9	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorododecanoic acid (PFDoA)	ND		18	2.8	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		18	1.9	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		18	3.5	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.7	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.5	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorooctanesulfonic acid (PFOS)	17	J I	18	4.0	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.7	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.8	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*	18	4.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	3.1	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	7.7	J	18	2.1	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
4:2 FTS	ND		18	4.7	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
6:2 FTS	ND		18	2.5	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
8:2 FTS	ND		18	3.2	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.5	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.5	J	18	4.4	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.5	J	18	2.6	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
9CI-PF3ONS	ND		18	3.2	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.8	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
11CI-PF3OUdS	ND		18	2.9	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.6	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.8	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		18	3.5	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.3	J	18	3.8	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.7	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.2	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		18	2.2	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	3.0	ug/Kg	✱	12/17/25 12:57	12/26/25 03:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	90		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFBA	94		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C5 PFPeA	100		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFHxA	104		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFHpA	103		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFOA	104		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C5 PFNA	102		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFDA	107		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFUnA	109		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFDoA	87		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFTeDA	33		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C3 PFBS	97		25 - 150	12/17/25 12:57	12/26/25 03:59	1
18O2 PFHxS	97		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFOS	117		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D3-NMeFOSAA	120		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D5-NEtFOSAA	119		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 4:2 FTS	133		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 6:2 FTS	142		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 8:2 FTS	160	*5+	25 - 150	12/17/25 12:57	12/26/25 03:59	1
d-N-MeFOSA-M	67		25 - 150	12/17/25 12:57	12/26/25 03:59	1
d-N-EtFOSA-M	62		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D7-NMeFOSE	61		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D9-NEtFOSE	79		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C3 HFPO-DA	86		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C-6:2 FTCA	83		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C-8:2 FTCA	103		25 - 150	12/17/25 12:57	12/26/25 03:59	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	160	B	18	4.3	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoropentanoic acid (PFPeA)	110	*+ B	18	3.8	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorohexanoic acid (PFHxA)	45	*+	18	2.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoroheptanoic acid (PFHpA)	31		18	3.5	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorooctanoic acid (PFOA)	38		18	4.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorononanoic acid (PFNA)	17	J	18	2.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorodecanoic acid (PFDA)	9.3	J	18	4.4	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoroundecanoic acid (PFUnA)	6.1	J	18	3.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorododecanoic acid (PFDoA)	5.1	J	18	2.8	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorotridecanoic acid (PFTeDA)	2.1	J	18	1.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.4	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorobutanesulfonic acid (PFBS)	6.8	J	18	3.5	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.4	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.7	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.5	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorooctanesulfonic acid (PFOS)	8.1	J	18	4.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanesulfonic acid (PFNS)	ND		18	2.7	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluorodecanesulfonic acid (PFDS)	ND	*-	18	4.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*-	18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	3.1	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.1	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
4:2 FTS	ND		18	4.7	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
6:2 FTS	ND		18	2.5	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
8:2 FTS	ND		18	3.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.5	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.6	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
9CI-PF3ONS	ND	*-	18	3.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
11CI-PF3OUdS	ND	*-	18	2.9	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.6	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		18	3.5	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		18	3.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.7	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	18	2.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	3.0	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	57		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFBA	100		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C5 PFPeA	91		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFHxA	98		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFHpA	100		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFOA	97		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C5 PFNA	85		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFDA	71		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFUnA	55		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFDoA	45		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFTeDA	58		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C3 PFBS	98		25 - 150	12/17/25 13:04	12/26/25 06:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFOS	94		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D3-NMeFOSAA	62		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D5-NEtFOSAA	63		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 06:33	1
13C2 6:2 FTS	103		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 8:2 FTS	79		25 - 150	12/17/25 13:04	12/26/25 06:33	1
d-N-MeFOSA-M	49		25 - 150	12/17/25 13:04	12/26/25 06:33	1
d-N-EtFOSA-M	48		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D7-NMeFOSE	44		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D9-NEtFOSE	40		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C3 HFPO-DA	88		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C-6:2 FTCA	91		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C-8:2 FTCA	91		25 - 150	12/17/25 13:04	12/26/25 06:33	1

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7
Matrix: Water

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	Total PFCA-Sum			Total PFCA-Sum			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	7.6	J	ng/L	23		ng/L	15	ng/L
Perfluorobutanoic acid (PFBA)	7.6	J	ng/L	23		ng/L	15	ng/L
Perfluoropentanoic acid (PFPeA)	4.9	J	ng/L	15		ng/L	10	ng/L
Perfluoropentanoic acid (PFPeA)	4.9	J	ng/L	15		ng/L	10	ng/L
Perfluorohexanoic acid (PFHxA)	12		ng/L	14		ng/L	1.6	ng/L
Perfluorohexanoic acid (PFHxA)	12		ng/L	14		ng/L	1.6	ng/L
Perfluoroheptanoic acid (PFHpA)	1.4	J	ng/L	2.3	J	ng/L	0.86	ng/L
Perfluoroheptanoic acid (PFHpA)	1.4	J	ng/L	2.3	J	ng/L	0.86	ng/L
Perfluorooctanoic acid (PFOA)	5.9		ng/L	8.1		ng/L	2.2	ng/L
Perfluorooctanoic acid (PFOA)	5.9		ng/L	8.1		ng/L	2.2	ng/L
Perfluorononanoic acid (PFNA)	ND		ng/L	ND		ng/L	0.00	ng/L
Perfluorononanoic acid (PFNA)	ND		ng/L	ND		ng/L	0.00	ng/L
Total Perfluoroalkyl carboxylic acid	32		ng/L	62		ng/L	31	ng/L

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	2.8	J	ug/Kg	97		ug/Kg	95	ug/Kg
Perfluoropentanoic acid (PFPeA)	4.7		ug/Kg	52		ug/Kg	48	ug/Kg
Perfluorohexanoic acid (PFHxA)	18		ug/Kg	44		ug/Kg	27	ug/Kg
Perfluoroheptanoic acid (PFHpA)	0.83	J	ug/Kg	19		ug/Kg	18	ug/Kg
Perfluorooctanoic acid (PFOA)	11		ug/Kg	39		ug/Kg	28	ug/Kg
Perfluorononanoic acid (PFNA)	1.3	J	ug/Kg	10		ug/Kg	9.2	ug/Kg
Total Perfluoroalkyl carboxylic acid	39		ug/Kg	260		ug/Kg	220	ug/Kg

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)			Result	Unit
	Result	Qualifier	Unit	Result	Qualifier	Unit		
Perfluorobutanoic acid (PFBA)	5.6		ug/Kg	130		ug/Kg	120	ug/Kg
Perfluoropentanoic acid (PFPeA)	12		ug/Kg	79		ug/Kg	68	ug/Kg
Perfluorohexanoic acid (PFHxA)	26		ug/Kg	56		ug/Kg	30	ug/Kg
Perfluoroheptanoic acid (PFHpA)	1.8	J	ug/Kg	27		ug/Kg	26	ug/Kg
Perfluorooctanoic acid (PFOA)	19		ug/Kg	48		ug/Kg	29	ug/Kg
Perfluorononanoic acid (PFNA)	1.6	J	ug/Kg	15		ug/Kg	14	ug/Kg
Total Perfluoroalkyl carboxylic acid	66		ug/Kg	360		ug/Kg	290	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Total Oxidation Precursors

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

TestAmerica Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11
Matrix: Solid

Analyte	Pre-Treatment Method			Post-Treatment Method			Difference ¹	
	537 (modified)			537 (modified)				
	Result	Qualifier	Unit	Result	Qualifier	Unit	Result	Unit
Perfluorobutanoic acid (PFBA)	ND		ug/Kg	160		ug/Kg	160	ug/Kg
Perfluoropentanoic acid (PFPeA)	ND		ug/Kg	110		ug/Kg	110	ug/Kg
Perfluorohexanoic acid (PFHxA)	ND		ug/Kg	45		ug/Kg	45	ug/Kg
Perfluoroheptanoic acid (PFHpA)	ND		ug/Kg	31		ug/Kg	31	ug/Kg
Perfluorooctanoic acid (PFOA)	ND		ug/Kg	38		ug/Kg	38	ug/Kg
Perfluorononanoic acid (PFNA)	ND		ug/Kg	17	J	ug/Kg	17	ug/Kg
Total Perfluoroalkyl carboxylic acid	0.00		ug/Kg	400		ug/Kg	400	ug/Kg

¹ Difference = Post-Treatment - Pre-Treatment

Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-128161-9	BIO-A-25-202512	76	88	97	96	105	103	93	100
320-128161-10	BIO-A-24-202512	73	90	101	94	98	98	99	99
320-128161-11	BIO-B-202512	90	94	100	104	103	104	102	107
LCS 320-892887/2-A	Lab Control Sample	100	98	94	98	104	100	94	85
LCSD 320-892887/3-A	Lab Control Sample Dup	88	100	96	100	105	103	100	99
MB 320-892887/1-A	Method Blank	71	107	112	105	107	92	71	71

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFS (25-150)	d5NEFS (25-150)
320-128161-9	BIO-A-25-202512	105	82	38	94	90	110	108	125
320-128161-10	BIO-A-24-202512	98	77	36	95	91	108	85	99
320-128161-11	BIO-B-202512	109	87	33	97	97	117	120	119
LCS 320-892887/2-A	Lab Control Sample	97	86	69	97	95	117	105	114
LCSD 320-892887/3-A	Lab Control Sample Dup	98	80	68	101	99	118	111	112
MB 320-892887/1-A	Method Blank	60	52	68	104	98	93	72	72

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-128161-9	BIO-A-25-202512	131	124	146	56	60	58	77	103
320-128161-10	BIO-A-24-202512	138	125	143	54	55	58	74	81
320-128161-11	BIO-B-202512	133	142	160 *5+	67	62	61	79	86
LCS 320-892887/2-A	Lab Control Sample	96	90	100	60	56	73	68	88
LCSD 320-892887/3-A	Lab Control Sample Dup	102	93	107	61	60	61	56	92
MB 320-892887/1-A	Method Blank	90	78	68	65	61	56	56	93

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-128161-9	BIO-A-25-202512	80	100
320-128161-10	BIO-A-24-202512	74	88
320-128161-11	BIO-B-202512	83	103
LCS 320-892887/2-A	Lab Control Sample	89	110
LCSD 320-892887/3-A	Lab Control Sample Dup	95	113
MB 320-892887/1-A	Method Blank	71	75

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Job ID: 320-128161-2

Project/Site: PFAS Sampling

d3NMFOS = D3-NMeFOSAA

d5NEFOS = D5-NEtFOSAA

M242FTS = 13C2 4:2 FTS

M262FTS = 13C2 6:2 FTS

M282FTS = 13C2 8:2 FTS

dMeFOSA = d-N-MeFOSA-M

dEtFOSA = d-N-EtFOSA-M

NMFM = D7-NMeFOSE

NEFM = D9-NEtFOSE

HFPODA = 13C3 HFPO-DA

MFHEA = 13C-6:2 FTCA

MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-128161-9	BIO-A-25-202512	53	96	95	101	99	94	82	64
320-128161-10	BIO-A-24-202512	66	98	94	97	97	96	82	76
320-128161-11	BIO-B-202512	57	100	91	98	100	97	85	71
LCS 320-892893/2-A	Lab Control Sample	56	104	88	95	98	93	83	74
LCSD 320-892893/3-A	Lab Control Sample Dup	59	91	84	94	93	93	85	71
MB 320-892893/1-A	Method Blank	74	96	94	98	104	95	83	73

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-128161-9	BIO-A-25-202512	54	48	55	92	95	80	62	64
320-128161-10	BIO-A-24-202512	65	51	56	106	93	101	75	77
320-128161-11	BIO-B-202512	55	45	58	98	94	94	62	63
LCS 320-892893/2-A	Lab Control Sample	61	53	54	92	86	92	57	58
LCSD 320-892893/3-A	Lab Control Sample Dup	55	48	57	92	74	91	57	60
MB 320-892893/1-A	Method Blank	66	56	36	92	111	97	66	72

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-128161-9	BIO-A-25-202512	0	99	75	51	53	46	43	86
320-128161-10	BIO-A-24-202512	0	97	88	52	54	48	47	85
320-128161-11	BIO-B-202512	0	103	79	49	48	44	40	88
LCS 320-892893/2-A	Lab Control Sample	0	87	72	49	45	48	46	88
LCSD 320-892893/3-A	Lab Control Sample Dup	0	87	71	47	47	46	41	89
MB 320-892893/1-A	Method Blank	0	97	74	66	67	62	62	90

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-128161-9	BIO-A-25-202512	94	82
320-128161-10	BIO-A-24-202512	87	98
320-128161-11	BIO-B-202512	91	91
LCS 320-892893/2-A	Lab Control Sample	86	71
LCSD 320-892893/3-A	Lab Control Sample Dup	88	84
MB 320-892893/1-A	Method Blank	92	97

Surrogate Legend

PFOSA = 13C8 FOSA

PFBA = 13C4 PFBA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOs = D3-NMeFOsAA
d5NEFOs = D5-NEtFOsAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOsA = d-N-MeFOsA-M
dEtFOsA = d-N-EtFOsA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-128161-7	EFF-G-202512	51	63	75	64	68	64	58	50
LCS 320-893003/2-A	Lab Control Sample	79	94	89	92	90	95	88	92
LCS 320-893003/2-A - RA	Lab Control Sample								
LCSD 320-893003/3-A	Lab Control Sample Dup	51	68	66	68	70	66	66	67
LCSD 320-893003/3-A - RA	Lab Control Sample Dup								
MB 320-893003/1-A	Method Blank	64	89	88	89	87	89	84	86

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOs (25-150)	d5NEFOs (25-150)
320-128161-7	EFF-G-202512	41	28	26	66	64	63	47	47
LCS 320-893003/2-A	Lab Control Sample	91	70	57	93	92	116	87	90
LCS 320-893003/2-A - RA	Lab Control Sample								
LCSD 320-893003/3-A	Lab Control Sample Dup	63	49	41	72	67	84	62	65
LCSD 320-893003/3-A - RA	Lab Control Sample Dup								
MB 320-893003/1-A	Method Blank	75	57	45	85	83	103	78	75

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOsA (25-150)	dEtFOsA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-128161-7	EFF-G-202512	70	61	55	31	31	29	24 *5-	60
LCS 320-893003/2-A	Lab Control Sample	94	88	100		72	66	63	90
LCS 320-893003/2-A - RA	Lab Control Sample				70				
LCSD 320-893003/3-A	Lab Control Sample Dup	66	63	74		52	44	42	65
LCSD 320-893003/3-A - RA	Lab Control Sample Dup				61				
MB 320-893003/1-A	Method Blank	83	84	91	51	53	44	48	77

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water

Prep Type: Pre-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-128161-7	EFF-G-202512	54	67
LCS 320-893003/2-A	Lab Control Sample	79	95
LCS 320-893003/2-A - RA	Lab Control Sample		
LCSD 320-893003/3-A	Lab Control Sample Dup	59	63
LCSD 320-893003/3-A - RA	Lab Control Sample Dup		
MB 320-893003/1-A	Method Blank	78	91

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = D3-NMeFOSAA
d5NEFOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-128161-7	EFF-G-202512	82	93	87	95	88	87	83	80
LCS 320-893005/2-A	Lab Control Sample	82	84	101	86	87	85	79	79
LCS 320-893005/2-A - RA	Lab Control Sample					86			
LCSD 320-893005/3-A	Lab Control Sample Dup	58	89	88	88	92	90	79	68
LCSD 320-893005/3-A - RA	Lab Control Sample Dup					97			
MB 320-893005/1-A	Method Blank	83	89	90	92	90	94	87	81

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-128161-7	EFF-G-202512	69	56	40	83	79	93	75	79

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water

Prep Type: Post-Treatment

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PfUnA (25-150)	PfDoA (25-150)	PfTDA (25-150)	C3PFBS (25-150)	PfHxS (25-150)	PfOS (25-150)	d3NMfOS (25-150)	d5NEfOS (25-150)
LCS 320-893005/2-A	Lab Control Sample	74	67	53	86	85	97	80	84
LCS 320-893005/2-A - RA	Lab Control Sample						91		
LCSD 320-893005/3-A	Lab Control Sample Dup	56	46	45	84	83	83	54	52
LCSD 320-893005/3-A - RA	Lab Control Sample Dup						89		
MB 320-893005/1-A	Method Blank	81	69	58	93	87	112	83	89

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (0-10)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (25-150)	NEFM (25-150)	HFPODA (25-150)
320-128161-7	EFF-G-202512	0	77	73	56	49	46	41	81
LCS 320-893005/2-A	Lab Control Sample	0	81	74	74	72	59	52	77
LCS 320-893005/2-A - RA	Lab Control Sample		77						
LCSD 320-893005/3-A	Lab Control Sample Dup	0	73	66	51	48	44	44	84
LCSD 320-893005/3-A - RA	Lab Control Sample Dup		77						
MB 320-893005/1-A	Method Blank	0	79	79	61	57	68	59	86

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	MFHEA (25-150)	MFOEA (25-150)
320-128161-7	EFF-G-202512	77	94
LCS 320-893005/2-A	Lab Control Sample	77	88
LCS 320-893005/2-A - RA	Lab Control Sample		
LCSD 320-893005/3-A	Lab Control Sample Dup	74	67
LCSD 320-893005/3-A - RA	Lab Control Sample Dup		
MB 320-893005/1-A	Method Blank	84	88

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMfOS = D3-NMeFOSAA
d5NEfOS = D5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = D7-NMeFOSE
NEFM = D9-NEtFOSE
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA

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Isotope Dilution Summary

Client: Madison Metropolitan Sewerage District

Project/Site: PFAS Sampling

MFOEA = 13C-8:2 FTCA

Job ID: 320-128161-2

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-892887/1-A

Matrix: Solid

Analysis Batch: 894298

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.0	0.23	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoropentanoic acid (PFPeA)	ND		1.0	0.21	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.0	0.11	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
4:2 FTS	ND		1.0	0.26	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
6:2 FTS	ND		1.0	0.14	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
8:2 FTS	ND		1.0	0.18	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		12/17/25 12:57	12/26/25 01:53	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-892887/1-A

Matrix: Solid

Analysis Batch: 894298

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		12/17/25 12:57	12/26/25 01:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		12/17/25 12:57	12/26/25 01:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	71		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C4 PFBA	107		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C5 PFPeA	112		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 PFHxA	105		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C4 PFHpA	107		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C4 PFOA	92		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C5 PFNA	71		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 PFDA	71		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 PFUnA	60		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 PFDoA	52		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 PFTeDA	68		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C3 PFBS	104		25 - 150	12/17/25 12:57	12/26/25 01:53	1
18O2 PFHxS	98		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C4 PFOS	93		25 - 150	12/17/25 12:57	12/26/25 01:53	1
D3-NMeFOSAA	72		25 - 150	12/17/25 12:57	12/26/25 01:53	1
D5-NEtFOSAA	72		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 4:2 FTS	90		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 6:2 FTS	78		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C2 8:2 FTS	68		25 - 150	12/17/25 12:57	12/26/25 01:53	1
d-N-MeFOSA-M	65		25 - 150	12/17/25 12:57	12/26/25 01:53	1
d-N-EtFOSA-M	61		25 - 150	12/17/25 12:57	12/26/25 01:53	1
D7-NMeFOSE	56		25 - 150	12/17/25 12:57	12/26/25 01:53	1
D9-NEtFOSE	56		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C3 HFPO-DA	93		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C-6:2 FTCA	71		25 - 150	12/17/25 12:57	12/26/25 01:53	1
13C-8:2 FTCA	75		25 - 150	12/17/25 12:57	12/26/25 01:53	1

Lab Sample ID: LCS 320-892887/2-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	3.85		ug/Kg		96	76 - 136
Perfluoropentanoic acid (PFPeA)	4.00	4.47		ug/Kg		112	69 - 129
Perfluorohexanoic acid (PFHxA)	4.00	4.31		ug/Kg		108	71 - 131
Perfluoroheptanoic acid (PFHpA)	4.00	4.13		ug/Kg		103	71 - 131
Perfluorooctanoic acid (PFOA)	4.00	4.22		ug/Kg		106	72 - 132
Perfluorononanoic acid (PFNA)	4.00	4.22		ug/Kg		105	73 - 133
Perfluorodecanoic acid (PFDA)	4.00	5.10		ug/Kg		128	72 - 132
Perfluoroundecanoic acid (PFUnA)	4.00	4.42		ug/Kg		111	66 - 126

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-892887/2-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	4.00	4.50		ug/Kg		112	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.85		ug/Kg		96	71 - 131
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.97		ug/Kg		124	67 - 127
Perfluorobutanesulfonic acid (PFBS)	3.55	3.85		ug/Kg		108	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.09		ug/Kg		109	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.80		ug/Kg		104	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.08		ug/Kg		81	76 - 136
Perfluorooctanesulfonic acid (PFOS)	3.72	3.38		ug/Kg		91	68 - 141
Perfluorononanesulfonic acid (PFNS)	3.85	3.45		ug/Kg		90	72 - 132
Perfluorodecanesulfonic acid (PFDS)	3.86	3.41		ug/Kg		88	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.77		ug/Kg		72	70 - 130
Perfluorooctanesulfonamide (PFOSA)	4.00	4.15		ug/Kg		104	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.33		ug/Kg		108	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.74		ug/Kg		94	72 - 132
4:2 FTS	3.75	5.00		ug/Kg		133	68 - 143
6:2 FTS	3.81	4.79		ug/Kg		126	73 - 139
8:2 FTS	3.84	4.51		ug/Kg		117	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.54		ug/Kg		114	47 - 161
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.25		ug/Kg		106	63 - 148
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.26		ug/Kg		106	43 - 153
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	3.92		ug/Kg		98	44 - 155
9CI-PF3ONS	3.74	3.17		ug/Kg		85	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.52		ug/Kg		113	53 - 158
11CI-PF3OUdS	3.78	2.95		ug/Kg		78	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.46		ug/Kg		91	79 - 139
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	3.62		ug/Kg		91	50 - 150
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	3.20		ug/Kg		80	50 - 150
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	4.32		ug/Kg		108	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.70		ug/Kg		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.51		ug/Kg		113	50 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-892887/2-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.59		ug/Kg		115	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.88		ug/Kg		109	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	100		25 - 150
13C4 PFBA	98		25 - 150
13C5 PFPeA	94		25 - 150
13C2 PFHxA	98		25 - 150
13C4 PFHpA	104		25 - 150
13C4 PFOA	100		25 - 150
13C5 PFNA	94		25 - 150
13C2 PFDA	85		25 - 150
13C2 PFUnA	97		25 - 150
13C2 PFDoA	86		25 - 150
13C2 PFTeDA	69		25 - 150
13C3 PFBS	97		25 - 150
18O2 PFHxS	95		25 - 150
13C4 PFOS	117		25 - 150
D3-NMeFOSAA	105		25 - 150
D5-NEtFOSAA	114		25 - 150
13C2 4:2 FTS	96		25 - 150
13C2 6:2 FTS	90		25 - 150
13C2 8:2 FTS	100		25 - 150
d-N-MeFOSA-M	60		25 - 150
d-N-EtFOSA-M	56		25 - 150
D7-NMeFOSE	73		25 - 150
D9-NEtFOSE	68		25 - 150
13C3 HFPO-DA	88		25 - 150
13C-6:2 FTCA	89		25 - 150
13C-8:2 FTCA	110		25 - 150

Lab Sample ID: LCSD 320-892887/3-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	4.09		ug/Kg		102	76 - 136	6	30
Perfluoropentanoic acid (PFPeA)	4.00	4.93		ug/Kg		123	69 - 129	10	30
Perfluorohexanoic acid (PFHxA)	4.00	4.49		ug/Kg		112	71 - 131	4	30
Perfluoroheptanoic acid (PFHpA)	4.00	4.20		ug/Kg		105	71 - 131	2	30
Perfluorooctanoic acid (PFOA)	4.00	4.23		ug/Kg		106	72 - 132	0	30
Perfluorononanoic acid (PFNA)	4.00	4.29		ug/Kg		107	73 - 133	2	30
Perfluorodecanoic acid (PFDA)	4.00	4.35		ug/Kg		109	72 - 132	16	30
Perfluoroundecanoic acid (PFUnA)	4.00	4.34		ug/Kg		109	66 - 126	2	30
Perfluorododecanoic acid (PFDoA)	4.00	4.67		ug/Kg		117	71 - 131	4	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-892887/3-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.69		ug/Kg		92	71 - 131	4	30
Perfluorotetradecanoic acid (PFTTeDA)	4.00	4.59		ug/Kg		115	67 - 127	8	30
Perfluorobutanesulfonic acid (PFBS)	3.55	4.01		ug/Kg		113	69 - 129	4	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.25		ug/Kg		113	66 - 126	4	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.92		ug/Kg		107	62 - 122	3	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.13		ug/Kg		82	76 - 136	2	30
Perfluorooctanesulfonic acid (PFOS)	3.72	4.57		ug/Kg		123	68 - 141	30	30
Perfluorononanesulfonic acid (PFNS)	3.85	3.71		ug/Kg		97	72 - 132	7	30
Perfluorodecanesulfonic acid (PFDS)	3.86	3.44		ug/Kg		89	71 - 131	1	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.46	*	ug/Kg		63	70 - 130	12	30
Perfluorooctanesulfonamide (PFOSA)	4.00	4.42		ug/Kg		110	77 - 137	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.30		ug/Kg		107	72 - 132	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.94		ug/Kg		98	72 - 132	5	30
4:2 FTS	3.75	4.73		ug/Kg		126	68 - 143	6	30
6:2 FTS	3.81	5.04		ug/Kg		132	73 - 139	5	30
8:2 FTS	3.84	4.52		ug/Kg		118	75 - 135	0	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.26		ug/Kg		106	47 - 161	6	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.36		ug/Kg		109	63 - 148	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	4.15		ug/Kg		104	43 - 153	3	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	3.73		ug/Kg		93	44 - 155	5	30
9CI-PF3ONS	3.74	3.39		ug/Kg		91	74 - 134	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.88		ug/Kg		122	53 - 158	8	30
11CI-PF3OUdS	3.78	2.74		ug/Kg		73	66 - 136	7	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.65		ug/Kg		97	79 - 139	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	3.74		ug/Kg		94	50 - 150	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	3.43		ug/Kg		86	50 - 150	7	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	4.35		ug/Kg		109	50 - 150	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.76		ug/Kg		94	50 - 150	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.87		ug/Kg		97	50 - 150	15	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	5.88		ug/Kg		147	50 - 150	25	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-892887/3-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 892887

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.97		ug/Kg		111	50 - 150	2	30
Isotope Dilution									
	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
13C8 FOSA	88		25 - 150						
13C4 PFBA	100		25 - 150						
13C5 PFPeA	96		25 - 150						
13C2 PFHxA	100		25 - 150						
13C4 PFHpA	105		25 - 150						
13C4 PFOA	103		25 - 150						
13C5 PFNA	100		25 - 150						
13C2 PFDA	99		25 - 150						
13C2 PFUnA	98		25 - 150						
13C2 PFDoA	80		25 - 150						
13C2 PFTeDA	68		25 - 150						
13C3 PFBS	101		25 - 150						
18O2 PFHxS	99		25 - 150						
13C4 PFOS	118		25 - 150						
D3-NMeFOSAA	111		25 - 150						
D5-NEtFOSAA	112		25 - 150						
13C2 4:2 FTS	102		25 - 150						
13C2 6:2 FTS	93		25 - 150						
13C2 8:2 FTS	107		25 - 150						
d-N-MeFOSA-M	61		25 - 150						
d-N-EtFOSA-M	60		25 - 150						
D7-NMeFOSE	61		25 - 150						
D9-NEtFOSE	56		25 - 150						
13C3 HFPO-DA	92		25 - 150						
13C-6:2 FTCA	95		25 - 150						
13C-8:2 FTCA	113		25 - 150						

Lab Sample ID: MB 320-893003/1-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 893003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-893003/1-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 893003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorooctanesulfonic acid (PFOS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		12/17/25 19:48	12/23/25 05:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 05:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 05:58	1
4:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
6:2 FTS	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 05:58	1
8:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		12/17/25 19:48	12/23/25 05:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		12/17/25 19:48	12/23/25 05:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		12/17/25 19:48	12/23/25 05:58	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		12/17/25 19:48	12/23/25 05:58	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		12/17/25 19:48	12/23/25 05:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 05:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 05:58	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	64		25 - 150				12/17/25 19:48	12/23/25 05:58	1
13C4 PFBA	89		25 - 150				12/17/25 19:48	12/23/25 05:58	1
13C5 PFPeA	88		25 - 150				12/17/25 19:48	12/23/25 05:58	1
13C2 PFHxA	89		25 - 150				12/17/25 19:48	12/23/25 05:58	1
13C4 PFHpA	87		25 - 150				12/17/25 19:48	12/23/25 05:58	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-893003/1-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Method Blank

Prep Type: Pre-Treatment

Prep Batch: 893003

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	89		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C5 PFNA	84		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 PFDA	86		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 PFUnA	75		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 PFDoA	57		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 PFTeDA	45		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C3 PFBS	85		25 - 150	12/17/25 19:48	12/23/25 05:58	1
18O2 PFHxS	83		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C4 PFOS	103		25 - 150	12/17/25 19:48	12/23/25 05:58	1
D3-NMeFOSAA	78		25 - 150	12/17/25 19:48	12/23/25 05:58	1
D5-NEtFOSAA	75		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 4:2 FTS	83		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 6:2 FTS	84		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C2 8:2 FTS	91		25 - 150	12/17/25 19:48	12/23/25 05:58	1
d-N-MeFOSA-M	51		25 - 150	12/17/25 19:48	12/23/25 05:58	1
d-N-EtFOSA-M	53		25 - 150	12/17/25 19:48	12/23/25 05:58	1
D7-NMeFOSE	44		25 - 150	12/17/25 19:48	12/23/25 05:58	1
D9-NEtFOSE	48		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C3 HFPO-DA	77		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C-6:2 FTCA	78		25 - 150	12/17/25 19:48	12/23/25 05:58	1
13C-8:2 FTCA	91		25 - 150	12/17/25 19:48	12/23/25 05:58	1

Lab Sample ID: LCS 320-893003/2-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 893003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	40.6		ng/L		101	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	46.7		ng/L		117	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	44.7		ng/L		112	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	42.5		ng/L		106	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.1		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	40.0	43.9		ng/L		110	68 - 135
Perfluorodecanoic acid (PFDA)	40.0	42.3		ng/L		106	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	42.9		ng/L		107	75 - 135
Perfluorododecanoic acid (PFDoA)	40.0	47.4		ng/L		118	76 - 136
Perfluorotridecanoic acid (PFTTrDA)	40.0	37.1		ng/L		93	70 - 130
Perfluorotetradecanoic acid (PFTeDA)	40.0	48.6		ng/L		122	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	38.5		ng/L		108	76 - 136
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.8		ng/L		111	75 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.2		ng/L		94	68 - 128
Perfluoroheptanesulfonic acid (PFHpS)	38.2	29.4		ng/L		77	76 - 136

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-893003/2-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 893003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	37.2	31.5		ng/L		85	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.5	32.8		ng/L		85	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	31.9		ng/L		83	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	22.8		ng/L		59	59 - 142
Perfluorooctanesulfonamide (PFOSA)	40.0	39.9		ng/L		100	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	44.5		ng/L		111	71 - 131
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.1		ng/L		98	71 - 129
4:2 FTS	37.5	41.5		ng/L		111	71 - 131
6:2 FTS	38.1	44.0		ng/L		116	71 - 131
8:2 FTS	38.4	41.2		ng/L		107	75 - 135
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	36.3		ng/L		91	65 - 127
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	43.2		ng/L		108	70 - 130
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	37.6		ng/L		94	71 - 131
9CI-PF3ONS	37.4	29.1		ng/L		78	75 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	45.5		ng/L		114	74 - 134
11CI-PF3OUdS	37.8	26.6		ng/L		70	70 - 142
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	33.3		ng/L		88	66 - 146
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	37.3		ng/L		93	68 - 144
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	39.4		ng/L		99	61 - 132
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	37.6		ng/L		94	61 - 132
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	36.6		ng/L		92	63 - 139
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.3		ng/L		113	73 - 133
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	45.1		ng/L		113	72 - 132
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	37.0		ng/L		104	75 - 144

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	79		25 - 150
13C4 PFBA	94		25 - 150
13C5 PFPeA	89		25 - 150
13C2 PFHxA	92		25 - 150
13C4 PFHpA	90		25 - 150
13C4 PFOA	95		25 - 150
13C5 PFNA	88		25 - 150
13C2 PFDA	92		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-893003/2-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 893003

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFUnA	91		25 - 150
13C2 PFDoA	70		25 - 150
13C2 PFTeDA	57		25 - 150
13C3 PFBS	93		25 - 150
18O2 PFHxS	92		25 - 150
13C4 PFOS	116		25 - 150
D3-NMeFOSAA	87		25 - 150
D5-NEtFOSAA	90		25 - 150
13C2 4:2 FTS	94		25 - 150
13C2 6:2 FTS	88		25 - 150
13C2 8:2 FTS	100		25 - 150
d-N-EtFOSA-M	72		25 - 150
D7-NMeFOSE	66		25 - 150
D9-NEtFOSE	63		25 - 150
13C3 HFPO-DA	90		25 - 150
13C-6:2 FTCA	79		25 - 150
13C-8:2 FTCA	95		25 - 150

Lab Sample ID: LCSD 320-893003/3-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 893003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	40.3		ng/L		101	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)	40.0	45.4		ng/L		113	71 - 131	3	30
Perfluorohexanoic acid (PFHxA)	40.0	42.9		ng/L		107	73 - 133	4	30
Perfluoroheptanoic acid (PFHpA)	40.0	44.4		ng/L		111	72 - 132	4	30
Perfluorooctanoic acid (PFOA)	40.0	43.2		ng/L		108	70 - 130	7	30
Perfluorononanoic acid (PFNA)	40.0	41.1		ng/L		103	68 - 135	6	30
Perfluorodecanoic acid (PFDA)	40.0	43.1		ng/L		108	76 - 136	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	42.9		ng/L		107	75 - 135	0	30
Perfluorododecanoic acid (PFDoA)	40.0	42.8		ng/L		107	76 - 136	10	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	32.5		ng/L		81	70 - 130	13	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	43.4		ng/L		108	70 - 130	11	30
Perfluorobutanesulfonic acid (PFBS)	35.5	38.1		ng/L		107	76 - 136	1	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.3		ng/L		105	75 - 135	6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.5		ng/L		100	68 - 128	7	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	30.3		ng/L		80	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)	37.2	31.8		ng/L		86	70 - 130	1	30
Perfluorononanesulfonic acid (PFNS)	38.5	32.4		ng/L		84	75 - 135	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	27.5		ng/L		71	71 - 131	15	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-893003/3-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 893003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorododecanesulfonic acid (PFDoS)	38.8	18.9	*-	ng/L		49	59 - 142	18	30
Perfluorooctanesulfonamide (PFOSA)	40.0	40.9		ng/L		102	73 - 133	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	47.8		ng/L		119	71 - 131	7	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.7		ng/L		97	71 - 129	1	30
4:2 FTS	37.5	37.5		ng/L		100	71 - 131	10	30
6:2 FTS	38.1	46.2		ng/L		121	71 - 131	5	30
8:2 FTS	38.4	40.4		ng/L		105	75 - 135	2	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	31.0		ng/L		78	65 - 127	16	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	38.7		ng/L		97	70 - 130	11	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	33.1		ng/L		83	71 - 131	13	30
9CI-PF3ONS	37.4	28.9		ng/L		77	75 - 135	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	45.2		ng/L		113	74 - 134	1	30
11CI-PF3OUdS	37.8	24.1	*-	ng/L		64	70 - 142	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	34.8		ng/L		92	66 - 146	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	36.0		ng/L		90	68 - 144	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	36.5		ng/L		91	61 - 132	8	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	35.9		ng/L		90	61 - 132	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	37.1		ng/L		93	63 - 139	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.3		ng/L		113	73 - 133	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	45.7		ng/L		114	72 - 132	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	35.2		ng/L		99	75 - 144	5	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C8 FOSA	51		25 - 150
13C4 PFBA	68		25 - 150
13C5 PFPeA	66		25 - 150
13C2 PFHxA	68		25 - 150
13C4 PFHpA	70		25 - 150
13C4 PFOA	66		25 - 150
13C5 PFNA	66		25 - 150
13C2 PFDA	67		25 - 150
13C2 PFUnA	63		25 - 150
13C2 PFDoA	49		25 - 150
13C2 PFTeDA	41		25 - 150
13C3 PFBS	72		25 - 150
18O2 PFHxS	67		25 - 150
13C4 PFOS	84		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-893003/3-A

Matrix: Water

Analysis Batch: 893953

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 893003

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
D3-NMeFOSAA	62		25 - 150
D5-NEtFOSAA	65		25 - 150
13C2 4:2 FTS	66		25 - 150
13C2 6:2 FTS	63		25 - 150
13C2 8:2 FTS	74		25 - 150
d-N-EtFOSA-M	52		25 - 150
D7-NMeFOSE	44		25 - 150
D9-NEtFOSE	42		25 - 150
13C3 HFPO-DA	65		25 - 150
13C-6:2 FTCA	59		25 - 150
13C-8:2 FTCA	63		25 - 150

Lab Sample ID: MB 320-892893/1-A

Matrix: Solid

Analysis Batch: 894298

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 892893

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.745	J	1.0	0.23	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoropentanoic acid (PFPeA)	0.279	J	1.0	0.21	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorohexanoic acid (PFHxA)	ND		1.0	0.16	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoroheptanoic acid (PFHpA)	ND		1.0	0.19	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorooctanoic acid (PFOA)	ND		1.0	0.27	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorononanoic acid (PFNA)	ND		1.0	0.11	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorodecanoic acid (PFDA)	ND		1.0	0.24	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoroundecanoic acid (PFUnA)	ND		1.0	0.21	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorododecanoic acid (PFDoA)	ND		1.0	0.15	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.0	0.11	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.0	0.19	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.0	0.19	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.0	0.19	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.0	0.15	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.0	0.25	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.0	0.22	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorononanesulfonic acid (PFNS)	ND		1.0	0.15	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.0	0.26	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.0	0.24	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.0	0.17	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.0	0.12	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.0	0.24	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
4:2 FTS	ND		1.0	0.26	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
6:2 FTS	ND		1.0	0.14	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
8:2 FTS	ND		1.0	0.18	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.0	0.24	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.0	0.25	ug/Kg		12/17/25 13:04	12/26/25 04:27	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-892893/1-A

Matrix: Solid

Analysis Batch: 894298

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 892893

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		1.0	0.24	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		1.0	0.14	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
9CI-PF3ONS	ND		1.0	0.18	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.0	0.21	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
11CI-PF3OUdS	ND		1.0	0.16	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.20	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.21	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		1.0	0.19	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		1.0	0.21	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.0	0.20	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.0	0.23	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.0	0.12	ug/Kg		12/17/25 13:04	12/26/25 04:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.0	0.16	ug/Kg		12/17/25 13:04	12/26/25 04:27	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	74		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C4 PFBA	96		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C5 PFPeA	94		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 PFHxA	98		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C4 PFHpA	104		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C4 PFOA	95		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C5 PFNA	83		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 PFDA	73		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 PFUnA	66		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 PFDoA	56		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 PFTeDA	36		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C3 PFBS	92		25 - 150	12/17/25 13:04	12/26/25 04:27	1
18O2 PFHxS	111		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C4 PFOS	97		25 - 150	12/17/25 13:04	12/26/25 04:27	1
D3-NMeFOSAA	66		25 - 150	12/17/25 13:04	12/26/25 04:27	1
D5-NEtFOSAA	72		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 04:27	1
13C2 6:2 FTS	97		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C2 8:2 FTS	74		25 - 150	12/17/25 13:04	12/26/25 04:27	1
d-N-MeFOSA-M	66		25 - 150	12/17/25 13:04	12/26/25 04:27	1
d-N-EtFOSA-M	67		25 - 150	12/17/25 13:04	12/26/25 04:27	1
D7-NMeFOSE	62		25 - 150	12/17/25 13:04	12/26/25 04:27	1
D9-NEtFOSE	62		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C3 HFPO-DA	90		25 - 150	12/17/25 13:04	12/26/25 04:27	1
13C-6:2 FTCA	92		25 - 150	12/17/25 13:04	12/26/25 04:27	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-892893/1-A

Matrix: Solid

Analysis Batch: 894298

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 892893

Isotope Dilution	MB MB %Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-8:2 FTCA	97	25 - 150	12/17/25 13:04	12/26/25 04:27	1

Lab Sample ID: LCS 320-892893/2-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 892893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	4.00	8.54	B	ug/Kg		213	167 - 261
Perfluoropentanoic acid (PFPeA)	4.00	10.4	B *+	ug/Kg		260	159 - 221
Perfluorohexanoic acid (PFHxA)	4.00	10.9	*+	ug/Kg		272	208 - 257
Perfluoroheptanoic acid (PFHpA)	4.00	8.64		ug/Kg		216	189 - 267
Perfluorooctanoic acid (PFOA)	4.00	18.3		ug/Kg		458	372 - 496
Perfluorononanoic acid (PFNA)	4.00	7.52		ug/Kg		188	154 - 205
Perfluorodecanoic acid (PFDA)	4.00	5.94		ug/Kg		149	130 - 190
Perfluoroundecanoic acid (PFUnA)	4.00	4.52		ug/Kg		113	81 - 141
Perfluorododecanoic acid (PFDoA)	4.00	3.97		ug/Kg		99	84 - 144
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.30		ug/Kg		82	78 - 138
Perfluorotetradecanoic acid (PFTTeDA)	4.00	3.56		ug/Kg		89	72 - 132
Perfluorobutanesulfonic acid (PFBS)	3.55	3.77		ug/Kg		106	89 - 149
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.14		ug/Kg		110	94 - 154
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.87		ug/Kg		106	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.43		ug/Kg		90	68 - 128
Perfluorooctanesulfonic acid (PFOS)	3.72	3.33		ug/Kg		90	70 - 138
Perfluorononanesulfonic acid (PFNS)	3.85	2.86		ug/Kg		74	66 - 126
Perfluorodecanesulfonic acid (PFDS)	3.86	2.71		ug/Kg		70	66 - 126
Perfluorododecanesulfonic acid (PFDoS)	3.88	1.74	*-	ug/Kg		45	47 - 107
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		0.9	0 - 10
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-892893/2-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 892893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctane sulfonamidoethanol (NETFOSE)	4.00	ND		ug/Kg		0	0 - 10
9CI-PF3ONS	3.74	2.68	*-	ug/Kg		72	74 - 134
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.43		ug/Kg		111	53 - 158
11CI-PF3OUdS	3.78	1.34	*-	ug/Kg		35	46 - 106
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.93		ug/Kg		98	60 - 138
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.49		ug/Kg		112	62 - 122
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	7.41	*+	ug/Kg		185	112 - 172
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	3.57	3.85		ug/Kg		108	84 - 152

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	56		25 - 150
13C4 PFBA	104		25 - 150
13C5 PFPeA	88		25 - 150
13C2 PFHxA	95		25 - 150
13C4 PFHpA	98		25 - 150
13C4 PFOA	93		25 - 150
13C5 PFNA	83		25 - 150
13C2 PFDA	74		25 - 150
13C2 PFUnA	61		25 - 150
13C2 PFDoA	53		25 - 150
13C2 PFTeDA	54		25 - 150
13C3 PFBS	92		25 - 150
18O2 PFHxS	86		25 - 150
13C4 PFOS	92		25 - 150
D3-NMeFOSAA	57		25 - 150
D5-NEtFOSAA	58		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	87		25 - 150
13C2 8:2 FTS	72		25 - 150
d-N-MeFOSA-M	49		25 - 150
d-N-EtFOSA-M	45		25 - 150
D7-NMeFOSE	48		25 - 150
D9-NEtFOSE	46		25 - 150
13C3 HFPO-DA	88		25 - 150
13C-6:2 FTCA	86		25 - 150
13C-8:2 FTCA	71		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-892893/3-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 892893

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	4.00	9.73	B	ug/Kg		243	167 - 261	13	30
Perfluoropentanoic acid (PFPeA)	4.00	9.11	*+ B	ug/Kg		228	159 - 221	13	30
Perfluorohexanoic acid (PFHxA)	4.00	11.5	*+	ug/Kg		287	208 - 257	5	30
Perfluoroheptanoic acid (PFHpA)	4.00	9.23		ug/Kg		231	189 - 267	7	30
Perfluorooctanoic acid (PFOA)	4.00	18.3		ug/Kg		459	372 - 496	0	30
Perfluorononanoic acid (PFNA)	4.00	7.23		ug/Kg		181	154 - 205	4	30
Perfluorodecanoic acid (PFDA)	4.00	5.97		ug/Kg		149	130 - 190	0	30
Perfluoroundecanoic acid (PFUnA)	4.00	4.15		ug/Kg		104	81 - 141	8	30
Perfluorododecanoic acid (PFDoA)	4.00	3.61		ug/Kg		90	84 - 144	9	30
Perfluorotridecanoic acid (PFTTrDA)	4.00	3.27		ug/Kg		82	78 - 138	1	30
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.40		ug/Kg		85	72 - 132	4	30
Perfluorobutanesulfonic acid (PFBS)	3.55	3.86		ug/Kg		109	89 - 149	2	30
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.22		ug/Kg		112	94 - 154	2	30
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.76		ug/Kg		131	73 - 133	21	30
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.42		ug/Kg		90	68 - 128	0	30
Perfluorooctanesulfonic acid (PFOS)	3.72	3.43		ug/Kg		92	70 - 138	3	30
Perfluorononanesulfonic acid (PFNS)	3.85	2.53		ug/Kg		66	66 - 126	12	30
Perfluorodecanesulfonic acid (PFDS)	3.86	2.01	*-	ug/Kg		52	66 - 126	30	30
Perfluorododecanesulfonic acid (PFDoS)	3.88	1.70	*-	ug/Kg		44	47 - 107	2	30
Perfluorooctanesulfonamide (PFOSA)	4.00	ND		ug/Kg		1	0 - 10	8	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
4:2 FTS	3.75	ND		ug/Kg		0	0 - 10	NC	30
6:2 FTS	3.81	ND		ug/Kg		0	0 - 10	NC	30
8:2 FTS	3.84	ND		ug/Kg		0	0 - 12	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.00	ND		ug/Kg		0	0 - 10	NC	30
9CI-PF3ONS	3.74	2.59	*-	ug/Kg		69	74 - 134	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	4.00	4.21		ug/Kg		105	53 - 158	5	30
11CI-PF3OUdS	3.78	1.21	*-	ug/Kg		32	46 - 106	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	ND		ug/Kg		0	0 - 10	NC	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-892893/3-A

Matrix: Solid

Analysis Batch: 894426

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 892893

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.00	ND		ug/Kg		0	0 - 10	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	3.53		ug/Kg		88	60 - 138	11	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.86		ug/Kg		122	62 - 122	8	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	7.44	*+	ug/Kg		186	112 - 172	0	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	3.57	3.93		ug/Kg		110	84 - 152	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C8 FOSA	59		25 - 150
13C4 PFBA	91		25 - 150
13C5 PFPeA	84		25 - 150
13C2 PFHxA	94		25 - 150
13C4 PFHpA	93		25 - 150
13C4 PFOA	93		25 - 150
13C5 PFNA	85		25 - 150
13C2 PFDA	71		25 - 150
13C2 PFUnA	55		25 - 150
13C2 PFDoA	48		25 - 150
13C2 PFTeDA	57		25 - 150
13C3 PFBS	92		25 - 150
18O2 PFHxS	74		25 - 150
13C4 PFOS	91		25 - 150
D3-NMeFOSAA	57		25 - 150
D5-NEtFOSAA	60		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	87		25 - 150
13C2 8:2 FTS	71		25 - 150
d-N-MeFOSA-M	47		25 - 150
d-N-EtFOSA-M	47		25 - 150
D7-NMeFOSE	46		25 - 150
D9-NEtFOSE	41		25 - 150
13C3 HFPO-DA	89		25 - 150
13C-6:2 FTCA	88		25 - 150
13C-8:2 FTCA	84		25 - 150

Lab Sample ID: MB 320-893005/1-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.38	J	13	3.1	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluoropentanoic acid (PFPeA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorohexanoic acid (PFHxA)	ND		5.0	1.5	ng/L		12/17/25 19:51	12/23/25 10:38	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-893005/1-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorooctanoic acid (PFOA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorooctanesulfonic acid (PFOS)	1.89	J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		12/17/25 19:51	12/23/25 10:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 10:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 10:38	1
4:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
6:2 FTS	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 10:38	1
8:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		12/17/25 19:51	12/23/25 10:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		12/17/25 19:51	12/23/25 10:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		12/17/25 19:51	12/23/25 10:38	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		12/17/25 19:51	12/23/25 10:38	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		12/17/25 19:51	12/23/25 10:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 10:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-893005/1-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Method Blank

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 10:38	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	83		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C4 PFBA	89		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C5 PFPeA	90		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 PFHxA	92		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C4 PFHpA	90		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C4 PFOA	94		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C5 PFNA	87		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 PFDA	81		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 PFUnA	81		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 PFDaA	69		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 PFTeDA	58		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C3 PFBS	93		25 - 150				12/17/25 19:51	12/23/25 10:38	1
18O2 PFHxS	87		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C4 PFOS	112		25 - 150				12/17/25 19:51	12/23/25 10:38	1
D3-NMeFOSAA	83		25 - 150				12/17/25 19:51	12/23/25 10:38	1
D5-NEtFOSAA	89		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 4:2 FTS	0		0 - 10				12/17/25 19:51	12/23/25 10:38	1
13C2 6:2 FTS	79		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C2 8:2 FTS	79		25 - 150				12/17/25 19:51	12/23/25 10:38	1
d-N-MeFOSA-M	61		25 - 150				12/17/25 19:51	12/23/25 10:38	1
d-N-EtFOSA-M	57		25 - 150				12/17/25 19:51	12/23/25 10:38	1
D7-NMeFOSE	68		25 - 150				12/17/25 19:51	12/23/25 10:38	1
D9-NEtFOSE	59		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C3 HFPO-DA	86		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C-6:2 FTCA	84		25 - 150				12/17/25 19:51	12/23/25 10:38	1
13C-8:2 FTCA	88		25 - 150				12/17/25 19:51	12/23/25 10:38	1

Lab Sample ID: LCS 320-893005/2-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	104		ng/L		261	157 - 278
Perfluoropentanoic acid (PFPeA)	40.0	89.0	*+	ng/L		223	151 - 208
Perfluorohexanoic acid (PFHxA)	40.0	132	*+	ng/L		330	194 - 269
Perfluorooctanoic acid (PFOA)	40.0	208	*+	ng/L		521	351 - 490
Perfluorononanoic acid (PFNA)	40.0	92.8	*+	ng/L		232	145 - 205
Perfluorodecanoic acid (PFDA)	40.0	75.0		ng/L		187	130 - 190
Perfluoroundecanoic acid (PFUnA)	40.0	50.2		ng/L		126	82 - 142
Perfluorododecanoic acid (PFDaA)	40.0	45.8		ng/L		114	82 - 142
Perfluorotridecanoic acid (PFTTrDA)	40.0	40.3		ng/L		101	85 - 145
Perfluorotetradecanoic acid (PFTeDA)	40.0	47.2		ng/L		118	72 - 132

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-893005/2-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	35.5	41.6		ng/L		117	84 - 144
Perfluoropentanesulfonic acid (PFPeS)	37.6	48.6		ng/L		129	83 - 143
Perfluorohexanesulfonic acid (PFHxS)	36.5	46.2		ng/L		127	73 - 133
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.0		ng/L		97	80 - 140
Perfluorooctanesulfonic acid (PFOS)	37.2	44.2		ng/L		119	82 - 142
Perfluorononanesulfonic acid (PFNS)	38.5	35.9		ng/L		93	79 - 139
Perfluorodecanesulfonic acid (PFDS)	38.6	34.6		ng/L		90	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.8	25.4		ng/L		65	52 - 139
Perfluorooctanesulfonamide (PFOSA)	40.0	ND		ng/L		1	0 - 10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10
4:2 FTS	37.5	ND		ng/L		0	0 - 10
8:2 FTS	38.4	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10
9CI-PF3ONS	37.4	28.5		ng/L		76	66 - 126
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	47.1	+	ng/L		118	52 - 112
11CI-PF3OUdS	37.8	17.8		ng/L		47	45 - 105
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	45.5		ng/L		114	67 - 127
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.0		ng/L		103	60 - 120
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	67.3		ng/L		168	111 - 174
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	43.4		ng/L		122	81 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	82		25 - 150
13C4 PFBA	84		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-893005/2-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 893005

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C5 PFPeA	101		25 - 150
13C2 PFHxA	86		25 - 150
13C4 PFHpA	87		25 - 150
13C4 PFOA	85		25 - 150
13C5 PFNA	79		25 - 150
13C2 PFDA	79		25 - 150
13C2 PFUnA	74		25 - 150
13C2 PFDaA	67		25 - 150
13C2 PFTeDA	53		25 - 150
13C3 PFBS	86		25 - 150
18O2 PFHxS	85		25 - 150
13C4 PFOS	97		25 - 150
D3-NMeFOSAA	80		25 - 150
D5-NEtFOSAA	84		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	81		25 - 150
13C2 8:2 FTS	74		25 - 150
d-N-MeFOSA-M	74		25 - 150
d-N-EtFOSA-M	72		25 - 150
D7-NMeFOSE	59		25 - 150
D9-NEtFOSE	52		25 - 150
13C3 HFPO-DA	77		25 - 150
13C-6:2 FTCA	77		25 - 150
13C-8:2 FTCA	88		25 - 150

Lab Sample ID: LCSD 320-893005/3-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	96.5		ng/L		241	157 - 278	8	30
Perfluoropentanoic acid (PFPeA)	40.0	91.4	*+	ng/L		228	151 - 208	3	30
Perfluorohexanoic acid (PFHxA)	40.0	112	*+	ng/L		281	194 - 269	16	30
Perfluorooctanoic acid (PFOA)	40.0	175		ng/L		438	351 - 490	17	30
Perfluorononanoic acid (PFNA)	40.0	75.8		ng/L		190	145 - 205	20	30
Perfluorodecanoic acid (PFDA)	40.0	61.2		ng/L		153	130 - 190	20	30
Perfluoroundecanoic acid (PFUnA)	40.0	40.9		ng/L		102	82 - 142	20	30
Perfluorododecanoic acid (PFDaA)	40.0	34.6		ng/L		86	82 - 142	28	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	26.3	*- *1	ng/L		66	85 - 145	42	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	28.1	*- *1	ng/L		70	72 - 132	51	30
Perfluorobutanesulfonic acid (PFBS)	35.5	42.1		ng/L		118	84 - 144	1	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	43.4		ng/L		116	83 - 143	11	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	38.8		ng/L		106	73 - 133	17	30

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-893005/3-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 893005

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanesulfonic acid (PFHpS)	38.2	35.4		ng/L		93	80 - 140	4	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.0		ng/L		102	82 - 142	15	30
Perfluorononanesulfonic acid (PFNS)	38.5	26.9	*-	ng/L		70	79 - 139	28	30
Perfluorodecanesulfonic acid (PFDS)	38.6	22.7	*- *1	ng/L		59	71 - 131	41	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	14.4	*- *1	ng/L		37	52 - 139	55	30
Perfluorooctanesulfonamide (PFOSA)	40.0	ND		ng/L		1	0 - 10	30	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	ND		ng/L		0	0 - 10	NC	30
4:2 FTS	37.5	ND		ng/L		0	0 - 10	NC	30
8:2 FTS	38.4	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	ND		ng/L		0	0 - 10	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	40.0	ND		ng/L		0	0 - 10	NC	30
9Cl-PF3ONS	37.4	25.1		ng/L		67	66 - 126	13	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	40.0	45.1	*+	ng/L		113	52 - 112	4	30
11Cl-PF3OUdS	37.8	9.75	*- *1	ng/L		26	45 - 105	58	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	40.0	ND		ng/L		0	0 - 10	NC	30
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	40.0	38.1		ng/L		95	67 - 127	18	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	42.3		ng/L		106	60 - 120	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	70.2	*+	ng/L		176	111 - 174	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	38.6		ng/L		108	81 - 141	12	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C8 FOSA	58		25 - 150
13C4 PFBA	89		25 - 150
13C5 PFPeA	88		25 - 150
13C2 PFHxA	88		25 - 150
13C4 PFHpA	92		25 - 150
13C4 PFOA	90		25 - 150
13C5 PFNA	79		25 - 150
13C2 PFDA	68		25 - 150

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QC Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-893005/3-A

Matrix: Water

Analysis Batch: 893954

Client Sample ID: Lab Control Sample Dup

Prep Type: Post-Treatment

Prep Batch: 893005

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C2 PFUnA	56		25 - 150
13C2 PFDoA	46		25 - 150
13C2 PFTeDA	45		25 - 150
13C3 PFBS	84		25 - 150
18O2 PFHxS	83		25 - 150
13C4 PFOS	83		25 - 150
D3-NMeFOSAA	54		25 - 150
D5-NEtFOSAA	52		25 - 150
13C2 4:2 FTS	0		0 - 10
13C2 6:2 FTS	73		25 - 150
13C2 8:2 FTS	66		25 - 150
d-N-MeFOSA-M	51		25 - 150
d-N-EtFOSA-M	48		25 - 150
D7-NMeFOSE	44		25 - 150
D9-NEtFOSE	44		25 - 150
13C3 HFPO-DA	84		25 - 150
13C-6:2 FTCA	74		25 - 150
13C-8:2 FTCA	67		25 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances - RA

Lab Sample ID: LCS 320-893003/2-A

Matrix: Water

Analysis Batch: 893963

Client Sample ID: Lab Control Sample

Prep Type: Pre-Treatment

Prep Batch: 893003

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
N-methylperfluorooctane sulfonamide (NMeFOSA) - RA			40.0	33.0		ng/L		83	72 - 132		
Isotope Dilution	LCS	LCS									
	%Recovery	Qualifier	Limits								
d-N-MeFOSA-M - RA	70		25 - 150								

Lab Sample ID: LCSD 320-893003/3-A

Matrix: Water

Analysis Batch: 893963

Client Sample ID: Lab Control Sample Dup

Prep Type: Pre-Treatment

Prep Batch: 893003

Report Data: 000000											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctane sulfonamide (NMeFOSA) - RA			40.0	30.4		ng/L		76	72 - 132	8	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits								
d-N-MeFOSA-M - RA	61		25 - 150								

Lab Sample ID: LCS 320-893005/2-A

Matrix: Water

Analysis Batch: 893963

Client Sample ID: Lab Control Sample

Prep Type: Post-Treatment

Prep Batch: 893005

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluoroheptanoic acid (PFHpA) - RA	40.0	98.6		ng/L		246	199 - 252

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Job ID: 320-128161-2

Lab Sample ID: LCS 320-893005/2-A Client Sample ID: Lab Control Sample
Matrix: Water Prep Type: Post-Treatment
Analysis Batch: 893963 Prep Batch: 893005

Lab Sample ID: LCSD 320-893005/3-A
Matrix: Water
Analysis Batch: 893963

Analysis Data: 00000							Rep Data: 00000				
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limits
Perfluoroheptanoic acid (PFHpA)			40.0	89.0		ng/L	-	222	199 - 252	10	30
- RA											
6:2 FTS - RA			38.1	ND		ng/L		0	0 - 10	NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA) - RA			37.8	ND		ng/L		0	0 - 10	NC	30
	<i>LCSD</i>	<i>LCSD</i>									
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>								
13C4 PFHpA - RA	97		25 - 150								
13C4 PFOS - RA	89		25 - 150								
13C2 6:2 FTS - RA	77		25 - 150								

QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

LCMS

Prep Batch: 892887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9	BIO-A-25-202512	Pre-Treatment	Solid	TOP Pre-Prep	
320-128161-10	BIO-A-24-202512	Pre-Treatment	Solid	TOP Pre-Prep	
320-128161-11	BIO-B-202512	Pre-Treatment	Solid	TOP Pre-Prep	
MB 320-892887/1-A	Method Blank	Pre-Treatment	Solid	TOP Pre-Prep	
LCS 320-892887/2-A	Lab Control Sample	Pre-Treatment	Solid	TOP Pre-Prep	
LCSD 320-892887/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	TOP Pre-Prep	

Prep Batch: 892893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9	BIO-A-25-202512	Post-Treatment	Solid	TOP Post-Prep	
320-128161-10	BIO-A-24-202512	Post-Treatment	Solid	TOP Post-Prep	
320-128161-11	BIO-B-202512	Post-Treatment	Solid	TOP Post-Prep	
MB 320-892893/1-A	Method Blank	Post-Treatment	Solid	TOP Post-Prep	
LCS 320-892893/2-A	Lab Control Sample	Post-Treatment	Solid	TOP Post-Prep	
LCSD 320-892893/3-A	Lab Control Sample Dup	Post-Treatment	Solid	TOP Post-Prep	

Prep Batch: 893003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-7	EFF-G-202512	Pre-Treatment	Water	TOP Pre - Prep	
MB 320-893003/1-A	Method Blank	Pre-Treatment	Water	TOP Pre - Prep	
LCS 320-893003/2-A - RA	Lab Control Sample	Pre-Treatment	Water	TOP Pre - Prep	
LCS 320-893003/2-A	Lab Control Sample	Pre-Treatment	Water	TOP Pre - Prep	
LCSD 320-893003/3-A - RA	Lab Control Sample Dup	Pre-Treatment	Water	TOP Pre - Prep	
LCSD 320-893003/3-A	Lab Control Sample Dup	Pre-Treatment	Water	TOP Pre - Prep	

Prep Batch: 893005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-7	EFF-G-202512	Post-Treatment	Water	TOP Post Prep	
MB 320-893005/1-A	Method Blank	Post-Treatment	Water	TOP Post Prep	
LCS 320-893005/2-A	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCS 320-893005/2-A - RA	Lab Control Sample	Post-Treatment	Water	TOP Post Prep	
LCSD 320-893005/3-A	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	
LCSD 320-893005/3-A - RA	Lab Control Sample Dup	Post-Treatment	Water	TOP Post Prep	

Analysis Batch: 893953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-7	EFF-G-202512	Pre-Treatment	Water	537 (modified)	893003
MB 320-893003/1-A	Method Blank	Pre-Treatment	Water	537 (modified)	893003
LCS 320-893003/2-A	Lab Control Sample	Pre-Treatment	Water	537 (modified)	893003
LCSD 320-893003/3-A	Lab Control Sample Dup	Pre-Treatment	Water	537 (modified)	893003

Analysis Batch: 893954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-7	EFF-G-202512	Post-Treatment	Water	537 (modified)	893005
MB 320-893005/1-A	Method Blank	Post-Treatment	Water	537 (modified)	893005
LCS 320-893005/2-A	Lab Control Sample	Post-Treatment	Water	537 (modified)	893005
LCSD 320-893005/3-A	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	893005

Analysis Batch: 893963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-893003/2-A - RA	Lab Control Sample	Pre-Treatment	Water	537 (modified)	893003

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QC Association Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

LCMS (Continued)

Analysis Batch: 893963 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-893005/2-A - RA	Lab Control Sample	Post-Treatment	Water	537 (modified)	893005
LCSD 320-893003/3-A - RA	Lab Control Sample Dup	Pre-Treatment	Water	537 (modified)	893003
LCSD 320-893005/3-A - RA	Lab Control Sample Dup	Post-Treatment	Water	537 (modified)	893005

Analysis Batch: 894298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-128161-9	BIO-A-25-202512	Post-Treatment	Solid	537 (modified)	892893
320-128161-9	BIO-A-25-202512	Pre-Treatment	Solid	537 (modified)	892887
320-128161-10	BIO-A-24-202512	Post-Treatment	Solid	537 (modified)	892893
320-128161-10	BIO-A-24-202512	Pre-Treatment	Solid	537 (modified)	892887
320-128161-11	BIO-B-202512	Post-Treatment	Solid	537 (modified)	892893
320-128161-11	BIO-B-202512	Pre-Treatment	Solid	537 (modified)	892887
MB 320-892887/1-A	Method Blank	Pre-Treatment	Solid	537 (modified)	892887
MB 320-892893/1-A	Method Blank	Post-Treatment	Solid	537 (modified)	892893

Analysis Batch: 894426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-892887/2-A	Lab Control Sample	Pre-Treatment	Solid	537 (modified)	892887
LCS 320-892893/2-A	Lab Control Sample	Post-Treatment	Solid	537 (modified)	892893
LCSD 320-892887/3-A	Lab Control Sample Dup	Pre-Treatment	Solid	537 (modified)	892887
LCSD 320-892893/3-A	Lab Control Sample Dup	Post-Treatment	Solid	537 (modified)	892893

Lab Chronicle

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post Prep			100.0 mL	10.0 mL	893005	12/17/25 19:51	CJS	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	893954	12/23/25 11:34	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre - Prep			100.0 mL	10.0 mL	893003	12/17/25 19:48	CJS	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	893953	12/23/25 06:54	P1P	EET SAC

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.02 g	10.0 mL	892893	12/17/25 13:04	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	894298	12/26/25 06:05	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	892887	12/17/25 12:57	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	894298	12/26/25 03:31	P1P	EET SAC

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.00 g	10.0 mL	892893	12/17/25 13:04	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	894298	12/26/25 06:19	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	892887	12/17/25 12:57	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	894298	12/26/25 03:45	P1P	EET SAC

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Post-Treatment	Prep	TOP Post-Prep			1.00 g	10.0 mL	892893	12/17/25 13:04	F1D	EET SAC
Post-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	894298	12/26/25 06:33	P1P	EET SAC
Pre-Treatment	Prep	TOP Pre-Prep			1.00 g	10.0 mL	892887	12/17/25 12:57	F1D	EET SAC
Pre-Treatment	Analysis	537 (modified)		1	1 mL	1 mL	894298	12/26/25 03:59	P1P	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Post Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Post-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Post-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre - Prep	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre - Prep	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoroheptylpropanoic acid (7:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropentylpropanoic acid (5:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	3-Perfluoropropylpropanoic acid (3:3 FTCA)
537 (modified)	TOP Pre-Prep	Solid	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)

Eurofins Sacramento

Accreditation/Certification Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Laboratory: Eurofins Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 (modified)	TOP Pre-Prep	Solid	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
TOP Post Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Post-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC
TOP Pre - Prep	Solid-Phase Extraction (SPE)	SW846	EET SAC
TOP Pre-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
320-128161-7	EFF-G-202512	Water	12/09/25 07:17	12/11/25 09:50	Wisconsin
320-128161-9	BIO-A-25-202512	Solid	12/08/25 14:15	12/11/25 09:50	Wisconsin
320-128161-10	BIO-A-24-202512	Solid	12/08/25 14:56	12/11/25 09:50	Wisconsin
320-128161-11	BIO-B-202512	Solid	12/08/25 13:49	12/11/25 09:50	Wisconsin

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600

Chain of Custody Record



Environment Testing

Client Information		Sampler: <u>Jennifer Faust</u>		Lab PM: <u>Jessica McCannon</u>		Carrier Tracking No(s): <u>Fed Ex</u>		COC No:	
Client Contact: <u>Mike Ursin mursin</u>		Phone: <u>608 222-1201</u>		E-Mail: <u>jessicameccannon@eurofins.com</u>		State of Origin: <u>WI</u>		Page: <u>1</u> of <u>2</u>	
Company: <u>TRC 999 Fourier Dr Suite 101 Madison, WI 53717</u>		PWSID:		Analysis Requested				Job #:	
Address: <u>mmso</u> <u>1616 Moorland Rd</u>		Due Date Requested:		 320-128161 Chain of Custody				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)	
City: <u>Madison</u>		TAT Requested (days): <u>20 business days / Contract</u>							
State, Zip: <u>WI 53713</u>		Compliance Project: ☐ Yes ☒ No							
Phone: <u>608 222-1201</u>		PO #: <u>2400419</u>							
Email: <u>mursin@trccompanies.com</u>		WO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers	
Project Name: <u>MMSD PFAS PHASE 3</u>		Project #:		PEAS 1633		TOP		Special Instructions/Note:	
Site: <u>MMSD</u>		SSOW#:							
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	
						Preservation Code:			
<u>INF-02-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>	
<u>INF-07-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>	
<u>INF-08-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>	
<u>INF-11-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>	
<u>INF-18-202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>	
<u>INF-COMP 202512</u>		<u>12/8/25</u>		<u>23 59</u>		<u>C</u>		<u>W</u>	
<u>EFF-G-202512</u>		<u>12/9/25</u>		<u>7 17</u>		<u>G</u>		<u>W</u>	
<u>EB 01-202512</u>		<u>12/8/25</u>		<u>13 30</u>		<u>G</u>		<u>W</u>	
<u>B10-A-25-202512</u>		<u>12/8/25</u>		<u>14 15</u>		<u>G/C</u>		<u>S</u>	
<u>B10-A-24-202512</u>		<u>12/8/25</u>		<u>14 56</u>		<u>G/C</u>		<u>S</u>	
<u>B10-B-202512</u>		<u>12/8/25</u>		<u>13 49</u>		<u>G</u>		<u>S</u>	
Possible Hazard Identification		☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested I, II, III, IV, Other (specify)				☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <u>Jennifer Faust</u>		Date/Time: <u>12/9/25 07 45</u>		Company: <u>mmso</u>		Received by: <u>8</u>		Date/Time: <u>12/11/25 950</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: <u>1.5</u>					

send reports to

reports

Chain of Custody Record

[illegible]

Appendix B: Data Quality and Usability Reviews

January 2025

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoropentanoic acid (PFPeA)	4.0		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorohexanoic acid (PFHxA)	4.6		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoroheptanoic acid (PFHpA)	1.3	U J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorooctanoic acid (PFOA)	4.9		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorononanoic acid (PFNA)	0.53	J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorobutanesulfonic acid (PFBS)	2.6		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorooctanesulfonic acid (PFOS)	7.3	I J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		01/22/25 11:50	01/23/25 22:06	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.2	U J	3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.53	U J	1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	U J	8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.32	ng/L		01/22/25 11:50	01/23/25 22:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	U J	1.6	0.58	ng/L		01/22/25 11:50	01/23/25 22:06	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.6	0.47	ng/L		01/22/25 11:50	01/23/25 22:06	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: INF-COMP-202501

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:06	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.81	ng/L		01/22/25 11:50	01/23/25 22:06	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	14		8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	2.0	ng/L		01/22/25 11:50	01/23/25 22:06	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88.8	*3	5 - 130	01/22/25 11:50	01/23/25 22:06	1
13C5 PFPeA	90.0		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C5 PFHxA	119		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C4 PFHpA	141	*5+	40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C8 PFOA	96.1		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C9 PFNA	100		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C6 PFDA	86.7		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C7 PFUnA	61.2		30 - 130	01/22/25 11:50	01/23/25 22:06	1
13C2 PFDoA	46.3		10 - 130	01/22/25 11:50	01/23/25 22:06	1
13C2 PFTeDA	34.9		10 - 130	01/22/25 11:50	01/23/25 22:06	1
13C3 PFBS	92.3		40 - 135	01/22/25 11:50	01/23/25 22:06	1
13C3 PFHxS	102		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C8 PFOS	94.8		40 - 130	01/22/25 11:50	01/23/25 22:06	1
13C8 FOSA	88.9		40 - 130	01/22/25 11:50	01/23/25 22:06	1
d3-NMeFOSAA	39.4	*5-	40 - 170	01/22/25 11:50	01/23/25 22:06	1
d5-NEtFOSAA	47.3		25 - 135	01/22/25 11:50	01/23/25 22:06	1
13C2 6:2 FTS	232	*5+	40 - 200	01/22/25 11:50	01/23/25 22:06	1
13C2 8:2 FTS	152		40 - 300	01/22/25 11:50	01/23/25 22:06	1
13C3 HFPO-DA	136	*5+	40 - 130	01/22/25 11:50	01/23/25 22:06	1
d7-N-MeFOSE-M	57.9		10 - 130	01/22/25 11:50	01/23/25 22:06	1
d9-N-EtFOSE-M	59.0		10 - 130	01/22/25 11:50	01/23/25 22:06	1
d5-NEtPFOSA	75.3		10 - 130	01/22/25 11:50	01/23/25 22:06	1
d3-NMePFOSA	77.0		10 - 130	01/22/25 11:50	01/23/25 22:06	1

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.2	0.81	ng/L		01/22/25 11:50	01/24/25 15:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	158		40 - 200				01/22/25 11:50	01/24/25 15:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	250		13	13	mg/L			01/20/25 14:17	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-202501

Lab Sample ID: 320-118296-2

Date Collected: 01/14/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoropentanoic acid (PFPeA)	9.4		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorohexanoic acid (PFHxA)	12		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorooctanoic acid (PFOA)	6.0		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorononanoic acid (PFNA)	0.47	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorodecanoic acid (PFDA)	0.45	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorotridecanoic acid (PFTriDA)	ND		1.5	0.45	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	0.55	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		01/21/25 05:14	01/21/25 14:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluorooctanesulfonamide (PFOSA)	0.51	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.30	ng/L		01/21/25 05:14	01/21/25 14:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		01/21/25 05:14	01/21/25 14:39	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-202501

Lab Sample ID: 320-118296-2

Date Collected: 01/14/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND	✖	1.5	0.45	ng/L		01/21/25 05:14	01/21/25 14:39	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.38	ng/L		01/21/25 05:14	01/21/25 14:39	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.77	ng/L		01/21/25 05:14	01/21/25 14:39	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	1.9	ng/L		01/21/25 05:14	01/21/25 14:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130	01/21/25 05:14	01/21/25 14:39	1
13C5 PFPeA	103		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C5 PFHxA	99.0		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C4 PFHpA	110		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C8 PFOA	95.7		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C9 PFNA	86.8		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C6 PFDA	82.8		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C7 PFUnA	76.8		30 - 130	01/21/25 05:14	01/21/25 14:39	1
13C2 PFDoA	88.3		10 - 130	01/21/25 05:14	01/21/25 14:39	1
13C2 PFTeDA	49.9		10 - 130	01/21/25 05:14	01/21/25 14:39	1
13C3 PFBS	108		40 - 135	01/21/25 05:14	01/21/25 14:39	1
13C3 PFHxS	107		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C8 PFOS	91.6		40 - 130	01/21/25 05:14	01/21/25 14:39	1
13C8 FOSA	98.7		40 - 130	01/21/25 05:14	01/21/25 14:39	1
d3-NMeFOSAA	87.7		40 - 170	01/21/25 05:14	01/21/25 14:39	1
d5-NEtFOSAA	78.1		25 - 135	01/21/25 05:14	01/21/25 14:39	1
13C2 4:2 FTS	150		40 - 200	01/21/25 05:14	01/21/25 14:39	1
13C2 6:2 FTS	125		40 - 200	01/21/25 05:14	01/21/25 14:39	1
13C2 8:2 FTS	104		40 - 300	01/21/25 05:14	01/21/25 14:39	1
13C3 HFPO-DA	106		40 - 130	01/21/25 05:14	01/21/25 14:39	1
d7-N-MeFOSE-M	74.0		10 - 130	01/21/25 05:14	01/21/25 14:39	1
d9-N-EtFOSE-M	69.9		10 - 130	01/21/25 05:14	01/21/25 14:39	1
d5-NEtPFOSA	77.9		10 - 130	01/21/25 05:14	01/21/25 14:39	1
d3-NMePFOSA	77.0		10 - 130	01/21/25 05:14	01/21/25 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.7		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.9		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoropentanoic acid (PFPeA)	8.6		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorohexanoic acid (PFHxA)	9.7		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorooctanoic acid (PFOA)	5.4		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorononanoic acid (PFNA)	0.40	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorodecanoic acid (PFDA)	0.43	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.41	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.43	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.60	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorobutanesulfonic acid (PFBS)	2.7		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoropentanesulfonic acid (PFPeS)	0.50	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorohexanesulfonic acid (PFHxS)	5.3		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.39	ng/L		01/21/25 05:14	01/21/25 14:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.60	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.1	0.29	ng/L		01/21/25 05:14	01/21/25 14:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.53	ng/L		01/21/25 05:14	01/21/25 14:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.5	0.43	ng/L		01/21/25 05:14	01/21/25 14:56	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G1-202501

Lab Sample ID: 320-118296-3

Date Collected: 01/14/25 05:50

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 14:56	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 14:56	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 14:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.7		5 - 130				01/21/25 05:14	01/21/25 14:56	1
13C5 PFPeA	90.7		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C5 PFHxA	112		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C4 PFHpA	115		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C8 PFOA	104		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C9 PFNA	92.2		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C6 PFDA	83.1		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C7 PFUnA	78.5		30 - 130				01/21/25 05:14	01/21/25 14:56	1
13C2 PFDoA	75.3		10 - 130				01/21/25 05:14	01/21/25 14:56	1
13C2 PFTeDA	40.1		10 - 130				01/21/25 05:14	01/21/25 14:56	1
13C3 PFBS	97.5		40 - 135				01/21/25 05:14	01/21/25 14:56	1
13C3 PFHxS	107		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C8 PFOS	85.1		40 - 130				01/21/25 05:14	01/21/25 14:56	1
13C8 FOSA	80.1		40 - 130				01/21/25 05:14	01/21/25 14:56	1
d3-NMeFOSAA	68.1		40 - 170				01/21/25 05:14	01/21/25 14:56	1
d5-NEtFOSAA	74.5		25 - 135				01/21/25 05:14	01/21/25 14:56	1
13C2 4:2 FTS	139		40 - 200				01/21/25 05:14	01/21/25 14:56	1
13C2 6:2 FTS	110		40 - 200				01/21/25 05:14	01/21/25 14:56	1
13C2 8:2 FTS	86.9		40 - 300				01/21/25 05:14	01/21/25 14:56	1
13C3 HFPO-DA	98.8		40 - 130				01/21/25 05:14	01/21/25 14:56	1
d7-N-MeFOSE-M	65.4		10 - 130				01/21/25 05:14	01/21/25 14:56	1
d9-N-EtFOSE-M	57.9		10 - 130				01/21/25 05:14	01/21/25 14:56	1
d5-NEtPFOSA	64.3		10 - 130				01/21/25 05:14	01/21/25 14:56	1
d3-NMePFOSA	67.5		10 - 130				01/21/25 05:14	01/21/25 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	3.6		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.2		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoropentanoic acid (PFPeA)	8.3		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorohexanoic acid (PFHxA)	8.9		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoroheptanoic acid (PFHpA)	1.4 J		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorooctanoic acid (PFOA)	5.8		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorononanoic acid (PFNA)	0.48 J		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.42	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.40	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.43	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.60	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorobutanesulfonic acid (PFBS)	3.2		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorooctanesulfonic acid (PFOS)	2.4		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.39	ng/L		01/21/25 05:14	01/21/25 15:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND	✖	2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluorooctanesulfonamide (PFOSA)	0.42	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.1	0.29	ng/L		01/21/25 05:14	01/21/25 15:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	✖	1.5	0.53	ng/L		01/21/25 05:14	01/21/25 15:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	✖	1.5	0.43	ng/L		01/21/25 05:14	01/21/25 15:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUDS)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.37	ng/L		01/21/25 05:14	01/21/25 15:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G2-202501

Lab Sample ID: 320-118296-4

Date Collected: 01/14/25 08:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.74	ng/L		01/21/25 05:14	01/21/25 15:12	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.4	1.8	ng/L		01/21/25 05:14	01/21/25 15:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.7		5 - 130				01/21/25 05:14	01/21/25 15:12	1
13C5 PFPeA	110		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C5 PFHxA	107		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C4 PFHpA	116		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C8 PFOA	92.7		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C9 PFNA	99.8		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C6 PFDA	96.0		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C7 PFUnA	89.2		30 - 130				01/21/25 05:14	01/21/25 15:12	1
13C2 PFDoA	81.1		10 - 130				01/21/25 05:14	01/21/25 15:12	1
13C2 PFTeDA	51.0		10 - 130				01/21/25 05:14	01/21/25 15:12	1
13C3 PFBS	93.9		40 - 135				01/21/25 05:14	01/21/25 15:12	1
13C3 PFHxS	106		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C8 PFOS	97.4		40 - 130				01/21/25 05:14	01/21/25 15:12	1
13C8 FOSA	93.3		40 - 130				01/21/25 05:14	01/21/25 15:12	1
d3-NMeFOSAA	79.6		40 - 170				01/21/25 05:14	01/21/25 15:12	1
d5-NEtFOSAA	81.5		25 - 135				01/21/25 05:14	01/21/25 15:12	1
13C2 4:2 FTS	178		40 - 200				01/21/25 05:14	01/21/25 15:12	1
13C2 6:2 FTS	138		40 - 200				01/21/25 05:14	01/21/25 15:12	1
13C2 8:2 FTS	106		40 - 300				01/21/25 05:14	01/21/25 15:12	1
13C3 HFPO-DA	108		40 - 130				01/21/25 05:14	01/21/25 15:12	1
d7-N-MeFOSE-M	78.5		10 - 130				01/21/25 05:14	01/21/25 15:12	1
d9-N-EtFOSE-M	73.5		10 - 130				01/21/25 05:14	01/21/25 15:12	1
d5-NEtPFOSA	80.1		10 - 130				01/21/25 05:14	01/21/25 15:12	1
d3-NMePFOSA	77.3		10 - 130				01/21/25 05:14	01/21/25 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.5		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoropentanoic acid (PFPeA)	8.5		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorohexanoic acid (PFHxA)	8.2		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorooctanoic acid (PFOA)	5.6		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorononanoic acid (PFNA)	0.41	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorodecanoic acid (PFDA)	0.41	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorobutanesulfonic acid (PFBS)	3.1		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoropentanesulfonic acid (PFPeS)	0.49	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorooctanesulfonic acid (PFOS)	2.2		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		01/21/25 05:14	01/21/25 15:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluorooctanesulfonamide (PFOSA)	0.39	XI J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.59	J	1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.30	ng/L		01/21/25 05:14	01/21/25 15:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		01/21/25 05:14	01/21/25 15:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.6	0.45	ng/L		01/21/25 05:14	01/21/25 15:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.39	ng/L		01/21/25 05:14	01/21/25 15:29	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.78	ng/L		01/21/25 05:14	01/21/25 15:29	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G3-202501

Lab Sample ID: 320-118296-5

Date Collected: 01/14/25 11:45

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	1.9	ng/L		01/21/25 05:14	01/21/25 15:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130				01/21/25 05:14	01/21/25 15:29	1
13C5 PFPeA	106		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C5 PFHxA	120		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C4 PFHpA	112		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C8 PFOA	89.5		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C9 PFNA	100		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C6 PFDA	85.2		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C7 PFUnA	73.7		30 - 130				01/21/25 05:14	01/21/25 15:29	1
13C2 PFDoA	82.6		10 - 130				01/21/25 05:14	01/21/25 15:29	1
13C2 PFTeDA	48.6		10 - 130				01/21/25 05:14	01/21/25 15:29	1
13C3 PFBS	108		40 - 135				01/21/25 05:14	01/21/25 15:29	1
13C3 PFHxS	117		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C8 PFOS	91.7		40 - 130				01/21/25 05:14	01/21/25 15:29	1
13C8 FOSA	90.6		40 - 130				01/21/25 05:14	01/21/25 15:29	1
d3-NMeFOSAA	82.3		40 - 170				01/21/25 05:14	01/21/25 15:29	1
d5-NEtFOSAA	82.2		25 - 135				01/21/25 05:14	01/21/25 15:29	1
13C2 4:2 FTS	182		40 - 200				01/21/25 05:14	01/21/25 15:29	1
13C2 6:2 FTS	112		40 - 200				01/21/25 05:14	01/21/25 15:29	1
13C2 8:2 FTS	110		40 - 300				01/21/25 05:14	01/21/25 15:29	1
13C3 HFPO-DA	111		40 - 130				01/21/25 05:14	01/21/25 15:29	1
d7-N-MeFOSE-M	75.5		10 - 130				01/21/25 05:14	01/21/25 15:29	1
d9-N-EtFOSE-M	70.1		10 - 130				01/21/25 05:14	01/21/25 15:29	1
d5-NEtPFOSA	76.0		10 - 130				01/21/25 05:14	01/21/25 15:29	1
d3-NMePFOSA	76.3		10 - 130				01/21/25 05:14	01/21/25 15:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.8		1.3	1.3	mg/L			01/20/25 14:17	1

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Date Collected: 01/14/25 14:55

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoropentanoic acid (PFPeA)	7.4		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorohexanoic acid (PFHxA)	9.5		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoroheptanoic acid (PFHpA)	1.4		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorooctanoic acid (PFOA)	4.8		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorononanoic acid (PFNA)	0.47 J		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorodecanoic acid (PFDA)	0.42 J		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoroundecanoic acid (PFUnA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorododecanoic acid (PFDoA)	ND		1.4	0.40	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.4	0.42	ng/L		01/21/25 05:14	01/21/25 15:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Date Collected: 01/14/25 14:55

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	ND		1.4	0.59	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorohexanesulfonic acid (PFHxS)	5.2		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorononanesulfonic acid (PFNS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.4	0.38	ng/L		01/21/25 05:14	01/21/25 15:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluorooctanesulfonamide (PFOSA)	0.36	J	1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.73	J	1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.1	0.28	ng/L		01/21/25 05:14	01/21/25 15:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.4	0.52	ng/L		01/21/25 05:14	01/21/25 15:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.4	0.42	ng/L		01/21/25 05:14	01/21/25 15:45	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUDS)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.4	0.36	ng/L		01/21/25 05:14	01/21/25 15:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.72	ng/L		01/21/25 05:14	01/21/25 15:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-1

Client Sample ID: Eff-G4-202501

Lab Sample ID: 320-118296-6

Date Collected: 01/14/25 14:55

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.2	1.8	ng/L		01/21/25 05:14	01/21/25 15:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130				01/21/25 05:14	01/21/25 15:45	1
13C5 PFPeA	84.9		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C5 PFHxA	98.1		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C4 PFHpA	94.7		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C8 PFOA	106		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C9 PFNA	94.6		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C6 PFDA	83.5		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C7 PFUnA	74.4		30 - 130				01/21/25 05:14	01/21/25 15:45	1
13C2 PFDoA	81.6		10 - 130				01/21/25 05:14	01/21/25 15:45	1
13C2 PFTeDA	39.7		10 - 130				01/21/25 05:14	01/21/25 15:45	1
13C3 PFBS	102		40 - 135				01/21/25 05:14	01/21/25 15:45	1
13C3 PFHxS	108		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C8 PFOS	92.2		40 - 130				01/21/25 05:14	01/21/25 15:45	1
13C8 FOSA	94.6		40 - 130				01/21/25 05:14	01/21/25 15:45	1
d3-NMeFOSAA	79.6		40 - 170				01/21/25 05:14	01/21/25 15:45	1
d5-NEtFOSAA	77.2		25 - 135				01/21/25 05:14	01/21/25 15:45	1
13C2 4:2 FTS	137		40 - 200				01/21/25 05:14	01/21/25 15:45	1
13C2 6:2 FTS	126		40 - 200				01/21/25 05:14	01/21/25 15:45	1
13C2 8:2 FTS	102		40 - 300				01/21/25 05:14	01/21/25 15:45	1
13C3 HFPO-DA	90.3		40 - 130				01/21/25 05:14	01/21/25 15:45	1
d7-N-MeFOSE-M	75.1		10 - 130				01/21/25 05:14	01/21/25 15:45	1
d9-N-EtFOSE-M	72.5		10 - 130				01/21/25 05:14	01/21/25 15:45	1
d5-NEtPFOSA	76.6		10 - 130				01/21/25 05:14	01/21/25 15:45	1
d3-NMePFOSA	77.7		10 - 130				01/21/25 05:14	01/21/25 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	4.6		1.3	1.3	mg/L			01/20/25 14:17	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Client Sample ID: INF-COMP-202501 **_ALTERNATE**

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoropentanoic acid (PFPeA)	4.0		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorohexanoic acid (PFHxA)	4.9		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorooctanoic acid (PFOA)	4.8		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorononanoic acid (PFNA)	0.61	U I J	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorobutanesulfonic acid (PFBS)	2.6		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorohexanesulfonic acid (PFHxS)	6.7		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorooctanesulfonic acid (PFOS)	6.7	I J	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		01/22/25 11:50	01/23/25 22:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.3	U J	3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.53	U J	1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	U J	7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.31	ng/L		01/22/25 11:50	01/23/25 22:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	U J	1.6	0.56	ng/L		01/22/25 11:50	01/23/25 22:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	ND		1.6	0.45	ng/L		01/22/25 11:50	01/23/25 22:23	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-118296-2

Client Sample ID: INF-COMP-202501 **_ALTERNATE**

Lab Sample ID: 320-118296-1

Date Collected: 01/13/25 23:59

Matrix: Water

Date Received: 01/16/25 09:30

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.39	ng/L		01/22/25 11:50	01/23/25 22:23	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.78	ng/L		01/22/25 11:50	01/23/25 22:23	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	2.0	ng/L		01/22/25 11:50	01/23/25 22:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	91.3	*3	5 - 130	01/22/25 11:50	01/23/25 22:23	1
13C5 PFPeA	78.8		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C5 PFHxA	104		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C4 PFHpA	122		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C8 PFOA	102		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C9 PFNA	94.7		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C6 PFDA	94.8		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C7 PFUnA	63.0		30 - 130	01/22/25 11:50	01/23/25 22:23	1
13C2 PFDoA	48.3		10 - 130	01/22/25 11:50	01/23/25 22:23	1
13C2 PFTeDA	34.9		10 - 130	01/22/25 11:50	01/23/25 22:23	1
13C3 PFBS	87.1		40 - 135	01/22/25 11:50	01/23/25 22:23	1
13C3 PFHxS	109		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C8 PFOS	102		40 - 130	01/22/25 11:50	01/23/25 22:23	1
13C8 FOSA	91.8		40 - 130	01/22/25 11:50	01/23/25 22:23	1
d3-NMeFOSAA	40.6		40 - 170	01/22/25 11:50	01/23/25 22:23	1
d5-NEtFOSAA	48.6		25 - 135	01/22/25 11:50	01/23/25 22:23	1
13C2 6:2 FTS	249	*5+	40 - 200	01/22/25 11:50	01/23/25 22:23	1
13C2 8:2 FTS	158		40 - 300	01/22/25 11:50	01/23/25 22:23	1
13C3 HFPO-DA	124		40 - 130	01/22/25 11:50	01/23/25 22:23	1
d7-N-MeFOSE-M	63.6		10 - 130	01/22/25 11:50	01/23/25 22:23	1
d9-N-EtFOSE-M	67.0		10 - 130	01/22/25 11:50	01/23/25 22:23	1
d5-NEtPFOSA	79.1		10 - 130	01/22/25 11:50	01/23/25 22:23	1
d3-NMePFOSA	78.7		10 - 130	01/22/25 11:50	01/23/25 22:23	1

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.78	ng/L		01/22/25 11:50	01/24/25 15:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	153		40 - 200				01/22/25 11:50	01/24/25 15:37	1

Eurofins Sacramento

Data Quality and Usability Review – January 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 3/3/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on January 13 and 14, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDGs 320-118296-1 (Revision 1, dated 2/27/25) and 320-118296-2 (Revision 1, dated 2/27/25).

Samples included in this review are listed below:

SDG 320-118296-1

- INF-COMP-202501
- Eff-G1-202501
- Eff-G3-202501
- Eff-202501
- Eff-G2-202501
- Eff-G4-202501

SDG 320-118296-2

- INF-COMP-202501_ALTERNATE¹

¹ The suffix “_ALTERNATE” was added to this sample during this review to distinguish this sample from the one in SDG 320-118296-1. This sample was extracted using project-specific instructions discussed later in this report.

Each sample was analyzed for the following constituents, with one exception. Sample INF-COMP-202501_ALTERNATE was not analyzed for TSS. The TSS result from the analysis of sample INF-COMP-202501 in SDG-320-118296-1 is also applicable to sample INF-COMP-202501_ALTERNATE.

Analyte Group	Method
PFAS (40 Analytes)	EPA Method 1633
TSS*	Standard Method (SM) 2540D

Notes:

* The laboratory does not hold NELAP or Wisconsin accreditation for TSS.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633 as guidance for data

review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS and TSS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the QA/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The revised data packages were found to be complete as received from the laboratory.
- The TSS analyses in SDG 320-118296-1 were performed by the Eurofins West Sacramento, California laboratory without NELAP or Wisconsin certification. TSS analyses were conducted by this laboratory in order to meet the recommended holding time and to allow sufficient time for the TSS results to be used in the consideration of the appropriate preparation procedure for method 1633. No validation actions were taken on this basis.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Samples were not shipped to the laboratory until one to two days after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS and TSS. Target analytes were not detected in the method blanks.
- All samples were extracted and/or prepared and analyzed within the holding time, with the following exception.
 - Samples INF-COMP-202501 and INF-COMP-202501_ALTERNATE were extracted for PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The nondetect results for NMeFOSE and NEtFOSE in samples INF-COMP-202501 and INF-COMP-202501_ALTERNATE were qualified as estimated (UJ) with a potential low bias.
 - The positive results for NMeFOSAA in samples INF-COMP-202501 and INF-COMP-202501_ALTERNATE were qualified as estimated (J). No direction of bias was applied to these results since these results were detected < the QL.
 - No qualification was required for NEtFOSAA because this analyte was not detected in samples INF-COMP-202501 and INF-COMP-202501_ALTERNATE.
- The LCS (including low-level LCS for PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the method acceptance limits except as noted in the table below.

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	RPD (%)	LCS/LCSD %R/RPD Limits	Validation Actions
LCS 320-828473/3-A/ LCSD 320-828473/4-A	8:2 FTS	-/-	33	-/30	No validation action was required on this basis since 8:2 FTS and NFDHA were not detected in the associated samples.
	NFDHA	-/-	50	-/30	
Associated samples: Eff-202501, Eff-G1-202501, Eff-G2-202501, Eff-G3-202501, Eff-G4-202501					
-: Met criteria					

- MS/MSD analyses were not performed on a sample from this data set.

- The following table summarizes the EIS %Rs that were outside of the method acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-COMP-202501	13C4 PFHpA	141	40-130	The positive result for PFHpA was qualified as estimated (J) in sample INF-COMP-202501.
	13C3 HFPO-DA	136		No validation action was required on this basis since HFPO-DA, ADONA, 9CI-PF3ONS, and 11CI-PF3OUdS were not detected in this sample.
	13C2 6:2 FTS	232	40-200	The positive result for 6:2 FTS was qualified as estimated (J) in sample INF-COMP-202501.
	d3-NMeFOSAA	39.4	40-170	The positive result for NMeFOSAA was qualified as estimated (J) in sample INF-COMP-202501.
INF-COMP-202501_ALTERNATE	13C2 6:2 FTS	249	40-200	The positive result for 6:2 FTS was qualified as estimated (J) in sample INF-COMP-202501_ALTERNATE.

*Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was performed on sample INF-COMP-202501 for TSS. The RPD was within the laboratory's acceptance limit.
- The laboratory noted the following observations in the case narrative for the PFAS analyses. No validation actions were taken on this basis.
 - Samples Eff-202501, Eff-G1-202501, Eff-G2-202501, Eff-G3-202501, and Eff-G4-202501 were discolored following extraction.
 - Sample INF-COMP-202501_ALTERNATE was prepared using project-specified instructions. The sample was fortified with EIS and then centrifuged. The supernatant was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual solids were then extracted via solvent rinse with basic methanol. The resulting methanolic extract was added to the SPE column used for the supernatant to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate fractions, underwent analysis. In the standard preparation procedure used for all other samples in this data set, the samples were fortified with EIS and the entire contents of the sample container was extracted per SPE procedures without being centrifuged.
- No dilutions were performed on the samples in this data set for PFAS.
- The QL for TSS in sample INF-COMP-202501 was approximately 2.5x higher than the associated method blank due to a reduced volume (100 mLs versus the typical 250 mL) used in the sample analysis; the case narrative noted that this sample was prepared at a reduced volume due to the nature of the sample matrix. In addition, the QLs for TSS in samples Eff-202501, Eff-G1-202501, Eff-G2-202501, Eff-G3-202501, and Eff-G4-202501 were approximately 4x lower than the associated method blank due to an increased volume (1,000 mLs versus the typical 250 mL) used in the sample analysis; the laboratory stated during previous reviews that an increased volume is used for clean samples to ensure that they meet the minimum method requirement of 2.5 mg of filtered solids. There is no adverse impact on the data usability due to these issues since TSS was detected

above the QL in all samples in this data set. No validation action was required on this basis.

- The results for the following PFAS in the samples listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - PFNA in sample INF-COMP-202501_ALTERNATE*;
 - PFOS in samples INF-COMP-202501 and INF-COMP-202501_ALTERNATE; and
 - PFOSA in sample Eff-G3-202501*.
- * This result was also qualified as estimated (J) by the laboratory due to detection < the QL.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narratives. No validation actions were taken on this basis since the actual CCV results were not provided for review.
 - The laboratory noted internal standard nonconformances in the case narratives and through the use of a “*3” qualifier associated with 13C4 PFBA in samples INF-COMP-202501 and INF-COMP-202501_ALTERNATE. No validation actions were taken on this basis since the associated EIS recoveries for 13C4 PFBA were within the method acceptance limits in these samples.

February 2025

Data Quality and Usability Review – February 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 3/20/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on February 17 and 18, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDG 320-119248-1 (Revision Date: 3/18/25, as noted in the Job Narrative).

Samples included in this review are listed below:

- INF-Comp 202502
- Eff-G 202502

Each sample was analyzed for the following constituents.

Analyte Group	Method
PFAS (40 Analytes)*	EPA Method 1633A
TSS**	Standard Method (SM) 2540D

Notes:

* The laboratory does not hold NELAP accreditation for PFAS by Method 1633A.

** The laboratory does not hold NELAP or Wisconsin accreditation for TSS.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;

- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS and TSS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the QA/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The revised data package was found to be complete as received from the laboratory.
- The TSS analyses were performed by the Eurofins West Sacramento, California laboratory without NELAP or Wisconsin certification. TSS analyses were conducted by this laboratory in order to meet the recommended holding time and to allow sufficient time for the TSS results to be used in the consideration of the appropriate preparation procedure for method 1633A. Further, the PFAS analysis were performed by the Eurofins West Sacramento, California laboratory without NELAP certification. However, since the laboratory was certified in Wisconsin for PFAS by method 1633A, there is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.

- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample INF-Comp 202502 was not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS and TSS. Target analytes were not detected in the method blanks.
- All samples were extracted and/or prepared and analyzed within the holding time, with the following exception.
 - Samples INF-Comp 202502 and Eff-G 202502 were extracted for PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive result for NMeFOSE in sample INF-Comp 202502 was qualified as estimated (J); no direction of bias was applied since this result was detected < the QL. The nondetect results for NMeFOSE in sample Eff-G 202502 and NEtFOSE in samples INF-Comp 202502 and Eff-G 202502 were qualified as estimated (UJ).
 - The positive results for NMeFOSAA in samples INF-Comp 202502 and Eff-G 202502 and NEtFOSAA in sample INF-Comp 202502 were qualified as estimated (J); no direction of bias was applied since these results were detected < the QL. No qualification was required for NEtFOSAA in sample Eff-G 202502 since this analyte was not detected in this sample.
- The LCS (including low-level LCS for PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The following table summarizes the EIS %Rs that were outside of the method acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-Comp 202502	13C2 6:2 FTS	267	40-200	The positive result for 6:2 FTS was qualified as estimated (J) in sample INF-Comp 202502.
Eff-G 202502	13C2 4:2 FTS	261	40-200	No validation action was required on this basis since 4:2 FTS was not detected in this sample.

* Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was performed on sample INF-Comp 202502 for TSS. The RPD was within the laboratory's acceptance limit.

- The laboratory noted the following observations in the case narrative for the PFAS and TSS analyses. No validation actions were taken on this basis.
 - Samples INF-Comp 202502 and Eff-G 202502 were yellow in color prior to and following extraction for PFAS.
 - Sample INF-Comp 202502 had a thin layer of sediment present in the bottom of the bottle prior to extraction for PFAS.
 - Sample INF-Comp 202502 was visibly non-homogenous with particulate matter of various sizes and was difficult to filter for the TSS analysis.
- No dilutions were performed on the samples in this data set for PFAS.
- The QL for TSS in sample INF-Comp 202502 was approximately 2.5x higher than the associated method blank due to a reduced volume (100 mLs versus the typical 250 mL) used in the sample analysis; the case narrative noted that this sample was prepared at a reduced volume due to the nature of the sample matrix. In addition, the QL for TSS in sample Eff-G 202502 was approximately 4x lower than the associated method blank due to an increased volume (1,000 mLs versus the typical 250 mL) used in the sample analysis; the laboratory stated during previous reviews that an increased volume is used for clean samples to ensure that they meet the minimum method requirement of 2.5 mg of filtered solids. There is no adverse impact on the data usability due to these issues since TSS was detected above the QL in both samples in this data set. No validation action was required on this basis.
- The results for the following PFAS in the samples listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - PFNA in samples INF-Comp 202502* and Eff-G 202502*;
 - PFBS in sample Eff-G 202502; and
 - PFOS in sample INF-Comp 202502.

* This result was also qualified as estimated (J) by the laboratory due to detection < the QL.
- The laboratory noted internal standard nonconformances in the case narrative and through the use of a “*3” qualifier associated with 13C4 PFBA in sample INF-Comp 202502. No validation action was taken on this basis since the EIS recovery for 13C4 PFBA was within the method acceptance limits in this sample.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: INF-Comp 202502

Lab Sample ID: 320-119248-1

Date Collected: 02/17/25 23:59

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.9		3.4	0.32	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoropentanoic acid (PFPeA)	3.3		1.7	0.20	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorohexanoic acid (PFHxA)	3.9		1.7	0.23	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.7	0.29	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorooctanoic acid (PFOA)	4.1		1.7	0.33	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorononanoic acid (PFNA)	0.56	X I J	1.7	0.38	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.37	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.49	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorobutanesulfonic acid (PFBS)	4.3		1.7	0.24	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.7	0.21	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorooctanesulfonic acid (PFOS)	4.5	I J	1.7	0.23	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.45	ng/L		02/26/25 04:29	02/26/25 18:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.4	0.37	ng/L		02/26/25 04:29	02/26/25 18:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.0	X J	3.4	0.34	ng/L		02/26/25 04:29	02/26/25 18:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.4	0.76	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.33	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.38	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	X J	1.7	0.30	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.57	X J	1.7	0.37	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.1	X J	8.5	1.9	ng/L		02/26/25 04:29	02/26/25 18:18	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	8.5	2.1	ng/L		02/26/25 04:29	02/26/25 18:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.3	0.33	ng/L		02/26/25 04:29	02/26/25 18:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	J	1.7	0.16	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		02/26/25 04:29	02/26/25 18:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.61	ng/L		02/26/25 04:29	02/26/25 18:18	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: INF-Comp 202502

Lab Sample ID: 320-119248-1

Date Collected: 02/17/25 23:59

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		1.7	0.49	ng/L		02/26/25 04:29	02/26/25 18:18	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.7	0.25	ng/L		02/26/25 04:29	02/26/25 18:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		02/26/25 04:29	02/26/25 18:18	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.61	ng/L		02/26/25 04:29	02/26/25 18:18	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	13		8.5	1.5	ng/L		02/26/25 04:29	02/26/25 18:18	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.5	1.1	ng/L		02/26/25 04:29	02/26/25 18:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88.1	*3	5 - 130	02/26/25 04:29	02/26/25 18:18	1
13C5 PFPeA	62.4		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C5 PFHxA	103		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C4 PFHpA	87.2		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C8 PFOA	99.8		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C9 PFNA	89.2		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C6 PFDA	87.0		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C7 PFUnA	70.8		30 - 130	02/26/25 04:29	02/26/25 18:18	1
13C2 PFDoA	61.7		10 - 130	02/26/25 04:29	02/26/25 18:18	1
13C2 PFTeDA	49.4		10 - 130	02/26/25 04:29	02/26/25 18:18	1
13C3 PFBS	79.8		40 - 135	02/26/25 04:29	02/26/25 18:18	1
13C3 PFHxS	102		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C8 PFOS	90.1		40 - 130	02/26/25 04:29	02/26/25 18:18	1
13C8 FOSA	86.1		40 - 130	02/26/25 04:29	02/26/25 18:18	1
D3-NMeFOSAA	48.1		40 - 170	02/26/25 04:29	02/26/25 18:18	1
D5-NEtFOSAA	28.2		25 - 135	02/26/25 04:29	02/26/25 18:18	1
13C2 4:2 FTS	182		40 - 200	02/26/25 04:29	02/26/25 18:18	1
13C2 6:2 FTS	267	*5+	40 - 200	02/26/25 04:29	02/26/25 18:18	1
13C2 8:2 FTS	168		40 - 300	02/26/25 04:29	02/26/25 18:18	1
13C3 HFPO-DA	106		40 - 130	02/26/25 04:29	02/26/25 18:18	1
D7-NMeFOSE	63.3		10 - 130	02/26/25 04:29	02/26/25 18:18	1
D9-NEtFOSE	41.3		10 - 130	02/26/25 04:29	02/26/25 18:18	1
D5-NEtFOSA	13.9		10 - 130	02/26/25 04:29	02/26/25 18:18	1
D3-NMeFOSA	69.2		10 - 130	02/26/25 04:29	02/26/25 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	200		13	13	mg/L			02/24/25 16:04	1

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.5		3.1	0.29	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoropentanoic acid (PFPeA)	8.9		1.5	0.18	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorohexanoic acid (PFHxA)	5.9		1.5	0.21	ng/L		02/26/25 04:29	02/26/25 18:35	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.5	0.27	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorooctanoic acid (PFOA)	4.5		1.5	0.30	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorononanoic acid (PFNA)	0.58	X I J	1.5	0.35	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorodecanoic acid (PFDA)	0.39	J	1.5	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.43	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorobutanesulfonic acid (PFBS)	7.5	I J	1.5	0.22	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoropentanesulfonic acid (PFPeS)	0.41	J	1.5	0.16	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.5	0.19	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.14	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorooctanesulfonic acid (PFOS)	1.8		1.5	0.21	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		02/26/25 04:29	02/26/25 18:35	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.1	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.82	J	3.1	0.31	ng/L		02/26/25 04:29	02/26/25 18:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		3.1	0.69	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluorooctanesulfonamide (PFOSA)	0.82	J	1.5	0.17	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.58	X J	1.5	0.27	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.34	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	U J	7.7	1.8	ng/L		02/26/25 04:29	02/26/25 18:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	7.7	1.9	ng/L		02/26/25 04:29	02/26/25 18:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.2	0.30	ng/L		02/26/25 04:29	02/26/25 18:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		02/26/25 04:29	02/26/25 18:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		02/26/25 04:29	02/26/25 18:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		1.5	0.45	ng/L		02/26/25 04:29	02/26/25 18:35	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119248-1

Client Sample ID: Eff-G 202502

Lab Sample ID: 320-119248-2

Date Collected: 02/18/25 06:39

Matrix: Water

Date Received: 02/24/25 09:25

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.5	0.23	ng/L		02/26/25 04:29	02/26/25 18:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		02/26/25 04:29	02/26/25 18:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		02/26/25 04:29	02/26/25 18:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.7	1.3	ng/L		02/26/25 04:29	02/26/25 18:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.96	ng/L		02/26/25 04:29	02/26/25 18:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	102		5 - 130				02/26/25 04:29	02/26/25 18:35	1
13C5 PFPeA	66.0		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C5 PFHxA	115		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C4 PFHpA	90.9		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C8 PFOA	97.4		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C9 PFNA	92.2		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C6 PFDA	96.5		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C7 PFUnA	65.2		30 - 130				02/26/25 04:29	02/26/25 18:35	1
13C2 PFDoA	59.9		10 - 130				02/26/25 04:29	02/26/25 18:35	1
13C2 PFTeDA	39.5		10 - 130				02/26/25 04:29	02/26/25 18:35	1
13C3 PFBS	97.9		40 - 135				02/26/25 04:29	02/26/25 18:35	1
13C3 PFHxS	118		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C8 PFOS	95.2		40 - 130				02/26/25 04:29	02/26/25 18:35	1
13C8 FOSA	82.3		40 - 130				02/26/25 04:29	02/26/25 18:35	1
D3-NMeFOSAA	86.1		40 - 170				02/26/25 04:29	02/26/25 18:35	1
D5-NEtFOSAA	81.3		25 - 135				02/26/25 04:29	02/26/25 18:35	1
13C2 4:2 FTS	261	*5+	40 - 200				02/26/25 04:29	02/26/25 18:35	1
13C2 6:2 FTS	194		40 - 200				02/26/25 04:29	02/26/25 18:35	1
13C2 8:2 FTS	138		40 - 300				02/26/25 04:29	02/26/25 18:35	1
13C3 HFPO-DA	92.0		40 - 130				02/26/25 04:29	02/26/25 18:35	1
D7-NMeFOSE	68.9		10 - 130				02/26/25 04:29	02/26/25 18:35	1
D9-NEtFOSE	63.8		10 - 130				02/26/25 04:29	02/26/25 18:35	1
D5-NEtFOSA	74.4		10 - 130				02/26/25 04:29	02/26/25 18:35	1
D3-NMeFOSA	77.9		10 - 130				02/26/25 04:29	02/26/25 18:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	3.3		1.3	1.3	mg/L			02/24/25 16:04	1

Eurofins Sacramento

March 2025

Data Quality and Usability Review – March 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 10/23/2025

Madison Metropolitan Sewerage District (MMSD) collected influent, effluent, and biosolids samples at the Nine Springs wastewater treatment plant on March 10 and 11, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS), total oxidizable precursor (TOP) assay PFAS, and total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDGs 320-119687-1 (Revision 1, dated 4/17/25) and 320-119687-2 (Revision 2, dated 4/17/25).

Samples included in this review are listed below:

- BIO-A-23-202503
- BIO-B-202503
- INF-02-202503
- INF-08-202503
- INF-18-202503
- EB01-202503
- BIO-A-24-202503
- EFF-G-202503***
- INF-07-202503
- INF-11-202503
- INF-COMP-202503

Each sample was analyzed for one or more the following constituents.

Analyte Group	Method
PFAS (40 Analytes)* and Total Solids*, **	EPA Method 1633A
PFAS TOP Assay (40 Analytes)**	Modified EPA Method 537 and laboratory SOP using Isotope Dilution/WI Method Criteria
TSS**	Standard Method (SM) 2540D

Notes:

* The laboratory does not hold NELAP accreditation for PFAS or total solids by Method 1633A.

** The laboratory does not hold Wisconsin accreditation for the full list of PFAS analytes reported by TOP Assay, TSS, or total solids.

*** Limited sample volume was provided for sample EFF-G-202503; therefore, the laboratory conducted a total PFAS and post-top assay on this sample and canceled the pre-TOP assay analysis.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations, Document # EA-19-0001, WDNR, December 2019¹, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001

¹ The Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations were used to evaluate the TOP assay data only since the laboratory did not analyze the TOP assay samples using EPA Method 1633A.

applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose with the exception of the nondetect result for NETFOSE in sample INF-07-202503; this result was rejected (R) due to significantly low (i.e., <5%) EIS recovery. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS and TSS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the QA/QC sample summary below, with the exception of the rejected data mentioned above, have a minor impact on the data usability.

- The rejected data mentioned above and in the QA/QC sample summary below have a major impact on the data usability as these results are not usable for their intended purposes.

QA/QC Sample Summary

- The revised data packages were found to be complete as received from the laboratory with the following note. The sample collection time on the chain-of-custody (COC) for sample EFF-G-202503 and the sample collection date on the COC for sample BIO-A-24-202503 were incomplete. The collection time of 07:11 for sample EFF-G-202503 and the collection date of 3/10/25 for sample BIO-A-24-202503, as logged in by the laboratory, were confirmed using the field notes.
- The TSS and total solids analyses were performed by the Eurofins West Sacramento, California laboratory without NELAP or Wisconsin certification. TSS analyses were conducted by this laboratory in order to meet the recommended holding time and to allow sufficient time for the TSS results to be used in the consideration of the appropriate preparation procedure for method 1633A. Further, the total PFAS analysis were performed by the Eurofins West Sacramento, California laboratory without NELAP certification. However, since the laboratory was certified in Wisconsin for PFAS by method 1633A, there is no adverse impact on the data usability due to this issue. Further, select analytes in the PFAS-TOP assay were performed by the Eurofins West Sacramento, California laboratory without Wisconsin certification. However, since the laboratory was certified in Wisconsin for select PFAS-TOP assay analytes and was NELAP certified for all PFAS-TOP assay analytes, there is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - All samples in this data set, with the exception of EFF-G-202503, were not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS (total and TOP assay) and TSS. The following table summarizes the compounds detected in the method blanks, the associated samples, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Action
MB 320-842039/1-A (post-TOP assay)	PFBA	0.505 J µg/Kg	No validation actions were required on this basis since the results for PFBA were >10x the blank concentration in the post-TOP assay analyses of the associated samples.
Associated samples: BIO-B-202503, BIO-A-23-202503, BIO-A-24-202503			
MB 320-842591/1-A (post-TOP assay)	PFBA	4.48 J ng/L	The positive post-TOP assay result for PFBA in sample EFF-G-202503 was qualified as nondetect (U) at the reported concentration since the result was > the QL and <10x the blank concentration.
Associated sample: EFF-G-202503			

- One equipment blank (EB01-202503) was collected and analyzed for total PFAS. No target compounds were detected in the equipment blank.

- All samples were extracted and/or prepared and analyzed within the holding time, with the following exceptions.
 - Sample INF-08-202503 was re-extracted for select total PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The nondetect results for total NMeFOSE and total NEtFOSE in sample INF-08-202503 were qualified as estimated (UJ). No qualification was required for total NMeFOSAA or total NEtFOSAA in sample INF-08-202503 since these analytes were not detected in this sample.
 - Note that the preparation method referenced for the 1633A analysis in SDG 320-119687-1 is 1633 instead of 1633A. The associated samples were prepared in accordance with method 1633A; however, the laboratory has not updated the reference appropriately in their reporting system. No validation action was taken on this basis.
- The LCS (including low-level LCS for method 1633A PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits except as noted in the table below. Note that the laboratory's acceptance limits for TOP assay LCS/LCSDs are different than those specified in the WI Method Criteria; the laboratory's acceptance limits are listed below but the WI Method Criteria (60-135%) were also considered in the evaluation of the data.

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	RPD (%)	LCS/LCSD %R/RPD Limits	Validation Actions
LCS 320-840552/3-A/ LCSD 320-840552/4-A (total PFAS)	PFMPA	-/-	70	-/30	No validation action was required on this basis since total PFMPA was not detected in the associated samples.
Associated samples: BIO-B-202503, BIO-A-23-202503, BIO-A-24-202503					
LCS 320-842039/2-A/ LCSD 320-842039/3-A (post-TOP assay)	PFTTrDA	71/74	-	78-138/-	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
LCS 320-842039/2-A/ LCSD 320-842039/3-A (post-TOP assay) (continued)	PFHxA	271/281	-	208-257/-	Professional judgement was used and the positive results for post-TOP assay PFHxA were qualified as estimated (J) in the associated samples. See Additional note below.
	PFOSA	-/-	31	-/30	Professional judgement was used and the positive result for post-TOP assay PFOSA was qualified as estimated (J) in sample BIO-A-24-202503. See Additional note below. No validation action was required on this basis for samples BIO-B-202503 and BIO-A-23-202503 since post-TOP assay PFOSA was not detected in these samples.
Associated samples: BIO-B-202503, BIO-A-23-202503, BIO-A-24-202503					
It should be noted that the laboratory also flagged nondetect results for NFDHA in the post-TOP assay analyses of the associated samples listed above for low LCS and/or LCSD recovery and LCS/LCSD variability. However, the LCS/LCSD %Rs and RPD for NFDHA associated with the post-TOP assay of these samples were within the acceptance limits. The laboratory was not contacted about this issue.					

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	RPD (%)	LCS/LCSD %R/RPD Limits	Validation Actions
LCS 320-842591/2-A/ LCSD 320-842591/3-A (post-TOP assay)	PFTTrDA	77/77	-	85-145/-	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
	PFOSA	-/-	58	-/30	No validation action was required on this basis since the listed analytes were not detected in the post-TOP assay analysis of the associated sample.
	8:2 FTS	-/-	42	-/30	
	HFPO-DA/Gen X	127/115	-	52-112/-	
	ADONA	-/-	91	-/30	
Associated samples: EFF-G-202503					
-: Met criteria					

Additional note: The laboratory has previously stated that enhanced post-TOP assay LCS/LCSD %Rs for the perfluoroalkyl carboxylic acids [PFCAs] (i.e., PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, and PFDA) is consistent with the expected oxidation of precursor analytes. The laboratory uses elevated %R acceptance limits to account for this expected oxidation; therefore, the post-TOP assay LCS/LCSD %Rs for the PFCAs were evaluated against the laboratory's limits only and were not evaluated against the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. If post-TOP assay LCS/LCSD %Rs of the PFCA compounds exceed the elevated laboratory limits, professional judgement is used and samples are qualified as estimated without a direction of bias (J). It should also be noted that the laboratory stated in the case narrative that zero %R of precursor analytes (i.e., ADONA, 4:2 FTS, 6:2 FTS, 8:2 FTS, FOSA, NMeFOSAA, NEtFOSAA, NMeFOSA, NMeFOSE, and NEtFOSE) is also expected in the post-TOP assay due to the oxidation of these compounds during the TOP Assay procedure; %Rs less than 10% were observed for the listed precursors. No validation actions were taken on this basis. Post-TOP assay LCS/LCSD %Rs for other PFAS were evaluated against both the laboratory's limits and the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%.

- MS/MSD analyses were not performed on a sample from this data set.
- The reverse surrogate (M2-4:2 FTS) was within the laboratory's acceptance limits (0-10%) in the post-TOP assay analyses. The following table summarizes the remaining isotopically labeled surrogate %Rs that were outside of the laboratory's acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-02-202503 (total PFAS)	13C4 PFHpA	148	40-130	The positive results for total PFHpA and 6:2 FTS were qualified as estimated (J) in sample INF-02-202503.
	13C2 6:2 FTS	219	40-200	
	D3- NMeFOSAA	29.3	40-170	The nondetect result for total NMeFOSAA was qualified as estimated (UJ) in sample INF-02-202503.
	13C3 HFPO- DA	154	40-130	No validation action was required on this basis since the analytes associated with this EIS (total HFPO-DA, ADONA, 9Cl-PF3ONS, and 11Cl-PF3OUdS) were not detected in sample INF-02-202503.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-07-202503 (total PFAS)	13C8 PFOA	34.4	40-130	The positive and nondetect results for total PFOA, PFNA, PFPeS, PFHxS, PFHpS, PFOS, PFNS, PFDS, PFDoS, PFOSA, NEtFOSAA, NMeFOSE, PFDA, PFUnA, PFTrDA, PFTeDA, and NMeFOSAA were qualified as estimated (J/UJ) in sample INF-07-202503
	13C9 PFNA	27.7	40-130	
	13C3 PFHxS	26.1	40-130	
	13C8 PFOS	16.7	40-130	
	13C8 FOSA	17.9	40-130	
	D5-NEtFOSAA	207	25.135	
	D7-NMeFOSE	5.30	10-130	
	13C6 PFDA	24.8	40-130	
	13C7 PFUnA	16.5	30-130	
	13C2 PFTeDA	5.41	10-130	
	D3-NMeFOSAA	12.7	40-170	
	D9-NEtFOSE	4.03	10-130	The nondetect result for total NEtFOSE was rejected (R) in sample INF-07-202503 due to significantly low (i.e., <5%) EIS recovery.
	13C2 4:2 FTS	207	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-07-202503
INF-11-202503 (total PFAS)	D5-NEtFOSAA	19.2	25-135	The nondetect results for total NEtFOSAA, NEtFOSE, and NMeFOSAA were qualified as estimated (UJ) in sample INF-11-202503
	D9-NEtFOSE	9.76	10-130	
	D3-NMeFOSAA	23.0	40-170	
	13C2 4:2 FTS	204	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-07-202503
INF-18-202503 (total PFAS)	D5-NEtFOSAA	22.0	25-135	The positive results for total NEtFOSAA, 6:2 FTS, and NMeFOSAA were qualified as estimated (J) in sample INF-18-202503
	13C2 6:2 FTS	211	40-200	
	D3-NMeFOSAA	35.7	40-170	
	13C2 4:2 FTS	211	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-18-202503
INF-COMP-202503 (total PFAS)	D5-NEtFOSAA	21.5	25-135	The positive results for total NEtFOSAA and NMeFOSAA were qualified as estimated (J) in sample INF-COMP-202503
	D3-NMeFOSAA	37.8	40-170	
	13C3 HFPO-DA	146	40-130	No validation action was required on this basis since the analytes associated with this EIS (total HFPO-DA, ADONA, 9CI-PF3ONS, and 11CI-PF3OUdS) were not detected in sample INF-COMP-202503.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
EFF-G-202503 (total PFAS)	13C2 4:2 FTS	231	40-200	No validation action was required on this basis since the analytes associated with these EISs (total 4:2 FTS, HFPO-DA, ADONA, 9CI-PF3ONS, and 11CI-PF3OUdS) were not detected in sample EFF-G-202503.
	13C3 HFPO-DA	139	40-130	
BIO-B-202503 (total PFAS)	D5-NEtFOSAA	25.9	40-150	The positive result for total NEtFOSAA was qualified as estimated (J) in sample BIO-B-202503.
BIO-A-23-202503 (total PFAS)	13C8 FOSA	36.9	40-130	The positive results for total PFOSA and NEtFOSAA were qualified as estimated (J) in sample BIO-A-23-202503.
	D5-NEtFOSAA	28.0	40-150	
BIO-A-24-202503 (total PFAS)	13C8 FOSA	31.0	40-130	The positive results for total PFOSA, NEtFOSAA, and NMeFOSAA were qualified as estimated (J) in sample BIO-A-24-202503.
	D5-NEtFOSAA	15.1	40-150	
	D3-NMeFOSAA	28.9	40-135	
BIO-B-202503 (pre-TOP assay)	13C2 8:2 FTS	160	25-150	No validation action was required on this basis since pre-TOP assay 8:2 FTS was not detected in sample BIO-B-202503.
BIO-A-23-202503 (pre-TOP assay)	13C2 6:2 FTS	152	25-150	The positive results for pre-TOP assay 6:2 FTS and 8:2 FTS were qualified as estimated (J) in sample BIO-A-23-202503.
	13C2 8:2 FTS	164	25-150	
BIO-A-24-202503 (pre-TOP assay)	13C2 6:2 FTS	154	25-150	The positive result for pre-TOP assay 6:2 FTS was qualified as estimated (J) in sample BIO-A-24-202503.

* Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was performed on sample INF-02-202503 for TSS. The RPD was within the laboratory's acceptance limit.
- The laboratory noted the following observations in the case narrative for the PFAS and TSS analyses. No validation actions were taken on this basis.
 - Samples INF-02-202503, INF-07-202503, INF-08-202503, INF-11-202503, INF-18-202503, INF-COMP-202503, and EFF-G-202503 were light brown in color, contained floating particulates, and had a thin layer of sediment present in the bottom of the bottle prior to extraction for total PFAS. These samples were prepared using project-specified instructions. The samples were fortified with EIS and then centrifuged. The supernatant was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual solids were then extracted via solvent rinse with basic methanol. The resulting methanolic extract was added to the SPE column used for the supernatant to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.
 - Samples INF-02-202503, INF-07-202503, INF-08-202503, INF-11-202503, INF-18-202503, INF-COMP-202503, BIO-B-202503, BIO-A-23-202503, and BIO-A-24-202503 were yellow in color following the extraction for total PFAS.
 - Samples INF-02-202503, INF-07-202503, INF-08-202503, INF-11-202503, INF-18-202503, and INF-COMP-202503 were turbid, laden with sediment and very difficult to filter for the TSS analysis.

- The laboratory case narrative noted that sample INF-08-202503 was extracted at a reduced volume (i.e., subsampled for extraction using 12.5 mL versus the typical 125 mL) for select PFAS analytes due to low EIS recoveries in the original extraction. Therefore, the positive and nondetect results for all total PFAS analytes except PFBA, PFPeA, 4:2 FTS, PFMPA, PFMBA, and 3:3 FTCA in sample INF-08-202503 were qualified as estimated (J/UJ) due to subsampling; QLs were elevated accordingly.
 - Samples BIO-A-23-202503 and BIO-A-24-202503 were diluted 5-fold for select total PFAS analytes. These dilutions were due to elevated concentrations or target analytes in the undiluted analyses. The laboratory combined results from the diluted and undiluted analyses in order to report all results within calibration range and with the lowest possible QLs. All analytes reported from the 5-fold dilutions were detected above the QL.
 - The QLs for TSS in samples INF-02-202503, INF-07-202503, INF-08-202503, INF-11-202503, and INF-18-202503 were approximately 4.2x higher than the associated method blank and the QL for TSS in sample INF-COMP-202503 was approximately 3.1x higher than the associated method blank due to reduced volumes (60 or 80 mLs versus the typical 250 mL) used in the sample analysis; the case narrative noted that these samples were prepared at a reduced volume due to the nature of the sample matrix (i.e., turbid, laden with sediment, and very difficult to filter). In addition, the QL for TSS in sample EFF-G 202503 was approximately 4x lower than the associated method blank due to an increased volume (1,000 mLs versus the typical 250 mL) used in the sample analysis; the laboratory stated during previous reviews that an increased volume is used for clean samples to ensure that they meet the minimum method requirement of 2.5 mg of filtered solids. There is no adverse impact on the data usability due to these issues since TSS was detected above the QL in all samples in this data set. No validation action was required on this basis.
 - The results for the following PFAS in the samples listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - Total PFNA in sample EFF-G-202503*;
 - Total PFBS in sample BIO-A-24-202503; and
 - Total PFOS in samples INF-02-202503, INF-07-202503, INF-18-202503, INF-COMP-202503.
- * This result was also qualified as estimated (J) by the laboratory due to detection < the QL.
- The laboratory noted internal standard nonconformances in the case narrative and through the use of a “*3” qualifier associated with 13C5 PFPeA, 13C5 PFHxA, 13C8 PFOA, and D3-NMeFOSAA in the 5-fold diluted total PFAS analysis of sample BIO-A-23-202503 and 13C5 PFHxA in the 5-fold diluted total PFAS analysis sample BIO-A-24-202503. No validation action was taken on this basis since the recoveries for these EISs were within the method acceptance limits in these samples.
 - The percent moisture for sample BIO-B-202503 was high (>70% moisture). The laboratory has been contacted during previous rounds of validation review regarding this issue and stated that biosolids samples are agitated and then immediately aliquoted for extraction after agitation, indicating that a representative sample is extracted for PFAS analysis. No validation actions were taken on this basis.
 - The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narrative. No validation actions were taken on this basis since the actual CCV results were not provided for review.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-02-202503

Lab Sample ID: 320-119687-1

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.1		3.0	0.28	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.18	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorohexanoic acid (PFHxA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoroheptanoic acid (PFHpA)	0.99	J J	1.5	0.26	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorooctanoic acid (PFOA)	2.6		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorononanoic acid (PFNA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorobutanesulfonic acid (PFBS)	1.6		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorooctanesulfonic acid (PFOS)	6.9	I J	1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.40	ng/L		03/17/25 04:50	03/17/25 21:28	1
4:2 FTS	ND		3.0	0.33	ng/L		03/17/25 04:50	03/17/25 21:28	1
6:2 FTS	0.58	J J	3.0	0.31	ng/L		03/17/25 04:50	03/17/25 21:28	1
8:2 FTS	ND		3.0	0.68	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.38	J	1.5	0.33	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.5	J	7.6	1.7	ng/L		03/17/25 04:50	03/17/25 21:28	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.6	1.8	ng/L		03/17/25 04:50	03/17/25 21:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.30	ng/L		03/17/25 04:50	03/17/25 21:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.22	J	1.5	0.14	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 21:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		03/17/25 04:50	03/17/25 21:28	1
9CI-PF3ONS	ND		1.5	0.44	ng/L		03/17/25 04:50	03/17/25 21:28	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		03/17/25 04:50	03/17/25 21:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:28	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.55	ng/L		03/17/25 04:50	03/17/25 21:28	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.6	J	7.6	1.3	ng/L		03/17/25 04:50	03/17/25 21:28	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.6	0.94	ng/L		03/17/25 04:50	03/17/25 21:28	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-02-202503

Lab Sample ID: 320-119687-1

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	80.7		5 - 130	03/17/25 04:50	03/17/25 21:28	1
13C5 PFPeA	76.5		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C5 PFHxA	106		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C4 PFHpA	148	*5+	40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C8 PFOA	101		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C9 PFNA	106		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C3 PFBS	101		40 - 135	03/17/25 04:50	03/17/25 21:28	1
13C3 PFHxS	91.5		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C8 PFOS	77.7		40 - 130	03/17/25 04:50	03/17/25 21:28	1
13C8 FOSA	76.0		40 - 130	03/17/25 04:50	03/17/25 21:28	1
D5-NetFOSAA	25.7		25 - 135	03/17/25 04:50	03/17/25 21:28	1
13C2 4:2 FTS	186		40 - 200	03/17/25 04:50	03/17/25 21:28	1
13C2 6:2 FTS	219	*5+	40 - 200	03/17/25 04:50	03/17/25 21:28	1
13C2 8:2 FTS	235		40 - 300	03/17/25 04:50	03/17/25 21:28	1
13C3 HFPO-DA	154	*5+	40 - 130	03/17/25 04:50	03/17/25 21:28	1
D7-NMeFOSE	65.4		10 - 130	03/17/25 04:50	03/17/25 21:28	1
D9-NetFOSE	20.9		10 - 130	03/17/25 04:50	03/17/25 21:28	1
D5-NetFOSA	59.6		10 - 130	03/17/25 04:50	03/17/25 21:28	1
D3-NMeFOSA	78.8		10 - 130	03/17/25 04:50	03/17/25 21:28	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.5	0.44	ng/L		03/17/25 04:50	03/18/25 12:50	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.61	ng/L		03/17/25 04:50	03/18/25 12:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	UJ	1.5	0.27	ng/L		03/17/25 04:50	03/18/25 12:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C6 PFDA	102		40 - 130				03/17/25 04:50	03/18/25 12:50	1
13C7 PFUnA	63.3		30 - 130				03/17/25 04:50	03/18/25 12:50	1
13C2 PFDoA	65.2		10 - 130				03/17/25 04:50	03/18/25 12:50	1
13C2 PFTeDA	28.6		10 - 130				03/17/25 04:50	03/18/25 12:50	1
D3-NMeFOSAA	29.3	*5-	40 - 170				03/17/25 04:50	03/18/25 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	210		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	21		3.1	0.29	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.18	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorohexanoic acid (PFHxA)	8.6		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoroheptanoic acid (PFHpA)	2.1		1.5	0.27	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorooctanoic acid (PFOA)	5.1	J	1.5	0.30	ng/L		03/17/25 04:50	03/17/25 21:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND	UJ	1.5	0.35	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorobutanesulfonic acid (PFBS)	8.3		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoropentanesulfonic acid (PFPeS)	ND	UJ	1.5	0.16	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorohexanesulfonic acid (PFHxS)	3.9	J	1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	UJ	1.5	0.13	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorooctanesulfonic acid (PFOS)	4.6	I J	1.5	0.21	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorononanesulfonic acid (PFNS)	ND	UJ	1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorodecanesulfonic acid (PFDS)	ND	UJ	1.5	0.24	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND	UJ	1.5	0.41	ng/L		03/17/25 04:50	03/17/25 21:44	1
4:2 FTS	ND		3.1	0.33	ng/L		03/17/25 04:50	03/17/25 21:44	1
6:2 FTS	1.5	J	3.1	0.31	ng/L		03/17/25 04:50	03/17/25 21:44	1
8:2 FTS	ND		3.1	0.69	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluorooctanesulfonamide (PFOSA)	ND	UJ	1.5	0.17	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.78	J J	1.5	0.34	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.3	J J	7.7	1.7	ng/L		03/17/25 04:50	03/17/25 21:44	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	R	7.7	1.9	ng/L		03/17/25 04:50	03/17/25 21:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.30	ng/L		03/17/25 04:50	03/17/25 21:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	J	1.5	0.15	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 21:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		03/17/25 04:50	03/17/25 21:44	1
9Cl-PF3ONS	ND		1.5	0.44	ng/L		03/17/25 04:50	03/17/25 21:44	1
11Cl-PF3OUdS	ND		1.5	0.23	ng/L		03/17/25 04:50	03/17/25 21:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 21:44	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		03/17/25 04:50	03/17/25 21:44	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	70		7.7	1.3	ng/L		03/17/25 04:50	03/17/25 21:44	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.95	ng/L		03/17/25 04:50	03/17/25 21:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	67.3		5 - 130				03/17/25 04:50	03/17/25 21:44	1
13C5 PFPeA	76.9		40 - 130				03/17/25 04:50	03/17/25 21:44	1
13C5 PFHxA	102		40 - 130				03/17/25 04:50	03/17/25 21:44	1
13C4 PFHpA	80.0		40 - 130				03/17/25 04:50	03/17/25 21:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-07-202503

Lab Sample ID: 320-119687-2

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	34.4	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C9 PFNA	27.7	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C3 PFBS	57.4		40 - 135	03/17/25 04:50	03/17/25 21:44	1
13C3 PFHxS	26.1	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C8 PFOS	16.7	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
13C8 FOSA	17.9	*5-	40 - 130	03/17/25 04:50	03/17/25 21:44	1
D5-NEtFOSAA	13.1	*5-	25 - 135	03/17/25 04:50	03/17/25 21:44	1
13C2 4:2 FTS	207	*5+	40 - 200	03/17/25 04:50	03/17/25 21:44	1
13C2 6:2 FTS	53.9		40 - 200	03/17/25 04:50	03/17/25 21:44	1
13C2 8:2 FTS	49.9		40 - 300	03/17/25 04:50	03/17/25 21:44	1
13C3 HFPO-DA	122		40 - 130	03/17/25 04:50	03/17/25 21:44	1
D7-NMeFOSE	5.30	*5-	10 - 130	03/17/25 04:50	03/17/25 21:44	1
D9-NEtFOSE	4.03	*5-	10 - 130	03/17/25 04:50	03/17/25 21:44	1
D5-NEtFOSA	10.1		10 - 130	03/17/25 04:50	03/17/25 21:44	1
D3-NMeFOSA	10.6		10 - 130	03/17/25 04:50	03/17/25 21:44	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND	UJ	1.5	0.34	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluoroundecanoic acid (PFUnA)	ND	UJ	1.5	0.17	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluorotridecanoic acid (PFTrDA)	ND	UJ	1.5	0.44	ng/L		03/17/25 04:50	03/18/25 13:04	1
Perfluorotetradecanoic acid (PFTeDA)	ND	UJ	1.5	0.62	ng/L		03/17/25 04:50	03/18/25 13:04	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	1.1	JJ	1.5	0.27	ng/L		03/17/25 04:50	03/18/25 13:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	24.8	*5-	40 - 130	03/17/25 04:50	03/18/25 13:04	1
13C7 PFUnA	16.5	*5-	30 - 130	03/17/25 04:50	03/18/25 13:04	1
13C2 PFDoA	10.9		10 - 130	03/17/25 04:50	03/18/25 13:04	1
13C2 PFTeDA	5.41	*5-	10 - 130	03/17/25 04:50	03/18/25 13:04	1
D3-NMeFOSAA	12.7	*5-	40 - 170	03/17/25 04:50	03/18/25 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	170		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.5		3.4	0.32	ng/L		03/17/25 04:50	03/17/25 22:00	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.20	ng/L		03/17/25 04:50	03/17/25 22:00	1
4:2 FTS	ND		3.4	0.38	ng/L		03/17/25 04:50	03/17/25 22:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	J	1.7	0.16	ng/L		03/17/25 04:50	03/17/25 22:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		03/17/25 04:50	03/17/25 22:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.62	ng/L		03/17/25 04:50	03/17/25 22:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	75.5		5 - 130				03/17/25 04:50	03/17/25 22:00	1
13C5 PFPeA	66.9		40 - 130				03/17/25 04:50	03/17/25 22:00	1
13C2 4:2 FTS	60.3		40 - 200				03/17/25 04:50	03/17/25 22:00	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	7.6	J J	20	2.7	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoroheptanoic acid (PFHpA)	ND	UJ	20	3.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorooctanoic acid (PFOA)	ND		20	3.9	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorononanoic acid (PFNA)	ND		20	4.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorodecanoic acid (PFDA)	ND		20	4.4	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoroundecanoic acid (PFUnA)	ND		20	2.3	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorododecanoic acid (PFDoA)	ND		20	5.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorotridecanoic acid (PFTrDA)	ND		20	5.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorotetradecanoic acid (PFTeDA)	ND		20	8.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorobutanesulfonic acid (PFBS)	ND		20	2.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoropentanesulfonic acid (PFPeS)	ND		20	2.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		20	2.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		20	1.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorooctanesulfonic acid (PFOS)	ND		20	2.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorononanesulfonic acid (PFNS)	ND		20	3.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorodecanesulfonic acid (PFDS)	ND		20	3.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorododecanesulfonic acid (PFDoS)	ND		20	5.3	ng/L		03/20/25 13:29	03/22/25 15:00	1
6:2 FTS	ND		40	4.1	ng/L		03/20/25 13:29	03/22/25 15:00	1
8:2 FTS	ND		40	9.0	ng/L		03/20/25 13:29	03/22/25 15:00	1
Perfluorooctanesulfonamide (PFOSA)	ND		20	2.3	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		20	3.9	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		20	4.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	4.4	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		100	23	ng/L		03/20/25 13:29	03/22/25 15:00	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		100	24	ng/L		03/20/25 13:29	03/22/25 15:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		15	3.9	ng/L		03/20/25 13:29	03/22/25 15:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		20	4.0	ng/L		03/20/25 13:29	03/22/25 15:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		20	7.2	ng/L		03/20/25 13:29	03/22/25 15:00	1
9CI-PF3ONS	ND		20	5.8	ng/L		03/20/25 13:29	03/22/25 15:00	1
11CI-PF3OUdS	ND		20	3.0	ng/L		03/20/25 13:29	03/22/25 15:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-08-202503

Lab Sample ID: 320-119687-3

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND	UJ	20	2.5	ng/L		03/20/25 13:29	03/22/25 15:00	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		100	17	ng/L		03/20/25 13:29	03/22/25 15:00	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		100	12	ng/L		03/20/25 13:29	03/22/25 15:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	97.6		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C4 PFHpA	117		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C8 PFOA	103		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C9 PFNA	92.2		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C6 PFDA	105		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C7 PFUnA	95.7		30 - 130				03/20/25 13:29	03/22/25 15:00	1
13C2 PFDoA	93.2		10 - 130				03/20/25 13:29	03/22/25 15:00	1
13C2 PFTeDA	85.1		10 - 130				03/20/25 13:29	03/22/25 15:00	1
13C3 PFBS	81.3		40 - 135				03/20/25 13:29	03/22/25 15:00	1
13C3 PFHxS	88.3		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C8 PFOS	93.0		40 - 130				03/20/25 13:29	03/22/25 15:00	1
13C8 FOSA	108		40 - 130				03/20/25 13:29	03/22/25 15:00	1
D3-NMeFOSAA	87.3		40 - 170				03/20/25 13:29	03/22/25 15:00	1
D5-NEtFOSAA	69.6		25 - 135				03/20/25 13:29	03/22/25 15:00	1
13C2 6:2 FTS	102		40 - 200				03/20/25 13:29	03/22/25 15:00	1
13C2 8:2 FTS	111		40 - 300				03/20/25 13:29	03/22/25 15:00	1
13C3 HFPO-DA	101		40 - 130				03/20/25 13:29	03/22/25 15:00	1
D7-NMeFOSE	76.7		10 - 130				03/20/25 13:29	03/22/25 15:00	1
D9-NEtFOSE	59.3		10 - 130				03/20/25 13:29	03/22/25 15:00	1
D5-NEtFOSA	53.4		10 - 130				03/20/25 13:29	03/22/25 15:00	1
D3-NMeFOSA	69.6		10 - 130				03/20/25 13:29	03/22/25 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	190		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorohexanoic acid (PFHxA)	1.9		1.6	0.21	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoroheptanoic acid (PFHpA)	0.46	J	1.6	0.27	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorooctanoic acid (PFOA)	2.2		1.6	0.31	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.6	0.22	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.6	0.19	ng/L		03/17/25 04:50	03/17/25 22:17	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		03/17/25 04:50	03/17/25 22:17	1
4:2 FTS	ND		3.1	0.34	ng/L		03/17/25 04:50	03/17/25 22:17	1
6:2 FTS	ND		3.1	0.32	ng/L		03/17/25 04:50	03/17/25 22:17	1
8:2 FTS	ND		3.1	0.71	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	UJ	1.6	0.35	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.7	J	7.9	1.8	ng/L		03/17/25 04:50	03/17/25 22:17	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.9	1.9	ng/L		03/17/25 04:50	03/17/25 22:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		03/17/25 04:50	03/17/25 22:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25	J	1.6	0.15	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 22:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		03/17/25 04:50	03/17/25 22:17	1
9Cl-PF3ONS	ND		1.6	0.46	ng/L		03/17/25 04:50	03/17/25 22:17	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		03/17/25 04:50	03/17/25 22:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 22:17	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.57	ng/L		03/17/25 04:50	03/17/25 22:17	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.6	J	7.9	1.4	ng/L		03/17/25 04:50	03/17/25 22:17	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		03/17/25 04:50	03/17/25 22:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	67.2		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C5 PFHxA	93.8		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C4 PFHpA	93.1		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C8 PFOA	61.5		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C9 PFNA	56.6		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C3 PFBS	54.6		40 - 135	03/17/25 04:50	03/17/25 22:17	1
13C3 PFHxS	48.6		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C8 PFOS	42.2		40 - 130	03/17/25 04:50	03/17/25 22:17	1
13C8 FOSA	49.4		40 - 130	03/17/25 04:50	03/17/25 22:17	1
D5-NEtFOSAA	19.2	*5-	25 - 135	03/17/25 04:50	03/17/25 22:17	1
13C2 4:2 FTS	204	*5+	40 - 200	03/17/25 04:50	03/17/25 22:17	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-11-202503

Lab Sample ID: 320-119687-4

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 6:2 FTS	134		40 - 200	03/17/25 04:50	03/17/25 22:17	1
13C2 8:2 FTS	106		40 - 300	03/17/25 04:50	03/17/25 22:17	1
13C3 HFPO-DA	101		40 - 130	03/17/25 04:50	03/17/25 22:17	1
D7-NMeFOSE	18.1		10 - 130	03/17/25 04:50	03/17/25 22:17	1
D9-NEtFOSE	9.76	*5-	10 - 130	03/17/25 04:50	03/17/25 22:17	1
D5-NEtFOSA	28.3		10 - 130	03/17/25 04:50	03/17/25 22:17	1
D3-NMeFOSA	35.8		10 - 130	03/17/25 04:50	03/17/25 22:17	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.0		3.1	0.29	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		03/17/25 04:50	03/18/25 13:32	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		03/17/25 04:50	03/18/25 13:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	UJ	1.6	0.28	ng/L		03/17/25 04:50	03/18/25 13:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.4		5 - 130				03/17/25 04:50	03/18/25 13:32	1
13C6 PFDA	55.9		40 - 130				03/17/25 04:50	03/18/25 13:32	1
13C7 PFUnA	41.5		30 - 130				03/17/25 04:50	03/18/25 13:32	1
13C2 PFDoA	29.4		10 - 130				03/17/25 04:50	03/18/25 13:32	1
13C2 PFTeDA	16.5		10 - 130				03/17/25 04:50	03/18/25 13:32	1
D3-NMeFOSAA	23.0	*5-	40 - 170				03/17/25 04:50	03/18/25 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	240		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorohexanoic acid (PFHxA)	4.7		1.7	0.22	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoroheptanoic acid (PFHpA)	2.4		1.7	0.29	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorooctanoic acid (PFOA)	7.9		1.7	0.32	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorohexanesulfonic acid (PFHxS)	13		1.7	0.20	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.14	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorooctanesulfonic acid (PFOS)	11	I J	1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		03/17/25 04:50	03/17/25 22:33	1
4:2 FTS	ND		3.3	0.36	ng/L		03/17/25 04:50	03/17/25 22:33	1
6:2 FTS	2.8	J J	3.3	0.33	ng/L		03/17/25 04:50	03/17/25 22:33	1
8:2 FTS	ND		3.3	0.74	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.3	J J	1.7	0.36	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.8	J	8.3	1.9	ng/L		03/17/25 04:50	03/17/25 22:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.3	2.0	ng/L		03/17/25 04:50	03/17/25 22:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		03/17/25 04:50	03/17/25 22:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.33	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	J	1.7	0.16	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.21	ng/L		03/17/25 04:50	03/17/25 22:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.59	ng/L		03/17/25 04:50	03/17/25 22:33	1
9CI-PF3ONS	ND		1.7	0.48	ng/L		03/17/25 04:50	03/17/25 22:33	1
11CI-PF3OUdS	0.45	J	1.7	0.25	ng/L		03/17/25 04:50	03/17/25 22:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		03/17/25 04:50	03/17/25 22:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		03/17/25 04:50	03/17/25 22:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	6.3	J	8.3	1.4	ng/L		03/17/25 04:50	03/17/25 22:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.3	1.0	ng/L		03/17/25 04:50	03/17/25 22:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	66.8		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C5 PFHxA	109		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C4 PFHpA	102		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C8 PFOA	102		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C9 PFNA	91.8		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C3 PFBS	94.3		40 - 135	03/17/25 04:50	03/17/25 22:33	1
13C3 PFHxS	97.3		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C8 PFOS	79.9		40 - 130	03/17/25 04:50	03/17/25 22:33	1
13C8 FOSA	69.3		40 - 130	03/17/25 04:50	03/17/25 22:33	1
D5-NEtFOSAA	22.0	*5-	25 - 135	03/17/25 04:50	03/17/25 22:33	1
13C2 4:2 FTS	211	*5+	40 - 200	03/17/25 04:50	03/17/25 22:33	1
13C2 6:2 FTS	211	*5+	40 - 200	03/17/25 04:50	03/17/25 22:33	1
13C2 8:2 FTS	209		40 - 300	03/17/25 04:50	03/17/25 22:33	1
13C3 HFPO-DA	129		40 - 130	03/17/25 04:50	03/17/25 22:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-18-202503

Lab Sample ID: 320-119687-5

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D7-NMeFOSE	67.7		10 - 130	03/17/25 04:50	03/17/25 22:33	1
D9-NEtFOSE	18.9		10 - 130	03/17/25 04:50	03/17/25 22:33	1
D5-NEtFOSA	64.0		10 - 130	03/17/25 04:50	03/17/25 22:33	1
D3-NMeFOSA	79.0		10 - 130	03/17/25 04:50	03/17/25 22:33	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	24		3.3	0.31	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.36	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluoroundecanoic acid (PFUnA)	0.54	J	1.7	0.19	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.48	ng/L		03/17/25 04:50	03/18/25 13:46	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.67	ng/L		03/17/25 04:50	03/18/25 13:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.57	↓ J	1.7	0.29	ng/L		03/17/25 04:50	03/18/25 13:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	104		5 - 130				03/17/25 04:50	03/18/25 13:46	1
13C6 PFDA	109		40 - 130				03/17/25 04:50	03/18/25 13:46	1
13C7 PFUnA	58.3		30 - 130				03/17/25 04:50	03/18/25 13:46	1
13C2 PFDoA	50.2		10 - 130				03/17/25 04:50	03/18/25 13:46	1
13C2 PFTeDA	36.1		10 - 130				03/17/25 04:50	03/18/25 13:46	1
D3-NMeFOSAA	35.7	*5-	40 - 170				03/17/25 04:50	03/18/25 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	210		21	21	mg/L			03/17/25 13:47	1

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorohexanoic acid (PFHxA)	3.7		1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.7	0.29	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorooctanoic acid (PFOA)	4.3		1.7	0.33	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.38	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorobutanesulfonic acid (PFBS)	2.7		1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorohexanesulfonic acid (PFHxS)	5.5		1.7	0.20	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorooctanesulfonic acid (PFOS)	7.9	I J	1.7	0.23	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		03/17/25 04:50	03/17/25 22:49	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		03/17/25 04:50	03/17/25 22:49	1
4:2 FTS	ND		3.3	0.37	ng/L		03/17/25 04:50	03/17/25 22:49	1
6:2 FTS	1.3	J	3.3	0.34	ng/L		03/17/25 04:50	03/17/25 22:49	1
8:2 FTS	ND		3.3	0.75	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.72	J J	1.7	0.37	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.1	J	8.4	1.9	ng/L		03/17/25 04:50	03/17/25 22:49	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.4	2.0	ng/L		03/17/25 04:50	03/17/25 22:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		03/17/25 04:50	03/17/25 22:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.33	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25	J	1.7	0.16	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		03/17/25 04:50	03/17/25 22:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.60	ng/L		03/17/25 04:50	03/17/25 22:49	1
9Cl-PF3ONS	ND		1.7	0.48	ng/L		03/17/25 04:50	03/17/25 22:49	1
11Cl-PF3OUdS	ND		1.7	0.25	ng/L		03/17/25 04:50	03/17/25 22:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		03/17/25 04:50	03/17/25 22:49	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.60	ng/L		03/17/25 04:50	03/17/25 22:49	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	13		8.4	1.4	ng/L		03/17/25 04:50	03/17/25 22:49	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.4	1.0	ng/L		03/17/25 04:50	03/17/25 22:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	77.1		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C5 PFHxA	104		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C4 PFHpA	121		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C8 PFOA	89.7		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C9 PFNA	86.4		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C3 PFBS	81.0		40 - 135	03/17/25 04:50	03/17/25 22:49	1
13C3 PFHxS	87.3		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C8 PFOS	77.1		40 - 130	03/17/25 04:50	03/17/25 22:49	1
13C8 FOSA	73.4		40 - 130	03/17/25 04:50	03/17/25 22:49	1
D5-NEtFOSAA	21.5	*5-	25 - 135	03/17/25 04:50	03/17/25 22:49	1
13C2 4:2 FTS	173		40 - 200	03/17/25 04:50	03/17/25 22:49	1
13C2 6:2 FTS	168		40 - 200	03/17/25 04:50	03/17/25 22:49	1
13C2 8:2 FTS	182		40 - 300	03/17/25 04:50	03/17/25 22:49	1
13C3 HFPO-DA	146	*5+	40 - 130	03/17/25 04:50	03/17/25 22:49	1
D7-NMeFOSE	60.2		10 - 130	03/17/25 04:50	03/17/25 22:49	1
D9-NEtFOSE	19.2		10 - 130	03/17/25 04:50	03/17/25 22:49	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: INF-COMP-202503

Lab Sample ID: 320-119687-6

Date Collected: 03/10/25 23:59

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D5-NEtFOSA	63.8		10 - 130	03/17/25 04:50	03/17/25 22:49	1
D3-NMeFOSA	73.7		10 - 130	03/17/25 04:50	03/17/25 22:49	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.3	0.31	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.37	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.48	ng/L		03/17/25 04:50	03/18/25 14:00	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		03/17/25 04:50	03/18/25 14:00	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	0.73	J J	1.7	0.29	ng/L		03/17/25 04:50	03/18/25 14:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	103		5 - 130	03/17/25 04:50	03/18/25 14:00	1
13C6 PFDA	94.4		40 - 130	03/17/25 04:50	03/18/25 14:00	1
13C7 PFUnA	59.5		30 - 130	03/17/25 04:50	03/18/25 14:00	1
13C2 PFDoA	41.1		10 - 130	03/17/25 04:50	03/18/25 14:00	1
13C2 PFTeDA	28.6		10 - 130	03/17/25 04:50	03/18/25 14:00	1
D3-NMeFOSAA	37.8	*5-	40 - 170	03/17/25 04:50	03/18/25 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	190		16	16	mg/L			03/17/25 13:47	1

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	13		3.0	0.28	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoropentanoic acid (PFPeA)	20		1.5	0.18	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorohexanoic acid (PFHxA)	13		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.5	0.26	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorooctanoic acid (PFOA)	5.5		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorononanoic acid (PFNA)	0.63	J I J	1.5	0.34	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorobutanesulfonic acid (PFBS)	3.8		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorohexanesulfonic acid (PFHxS)	6.6		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorooctanesulfonic acid (PFOS)	2.6		1.5	0.21	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.40	ng/L		03/17/25 04:50	03/17/25 23:38	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.0	0.33	ng/L		03/17/25 04:50	03/17/25 23:38	1
6:2 FTS	0.78	J	3.0	0.31	ng/L		03/17/25 04:50	03/17/25 23:38	1
8:2 FTS	ND		3.0	0.68	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluorooctanesulfonamide (PFOSA)	0.92	J	1.5	0.17	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.6	1.7	ng/L		03/17/25 04:50	03/17/25 23:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.6	1.8	ng/L		03/17/25 04:50	03/17/25 23:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.30	ng/L		03/17/25 04:50	03/17/25 23:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.14	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		03/17/25 04:50	03/17/25 23:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		03/17/25 04:50	03/17/25 23:38	1
9CI-PF3ONS	ND		1.5	0.44	ng/L		03/17/25 04:50	03/17/25 23:38	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		03/17/25 04:50	03/17/25 23:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		03/17/25 04:50	03/17/25 23:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.55	ng/L		03/17/25 04:50	03/17/25 23:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.7	J	7.6	1.3	ng/L		03/17/25 04:50	03/17/25 23:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.6	0.94	ng/L		03/17/25 04:50	03/17/25 23:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	96.4		5 - 130	03/17/25 04:50	03/17/25 23:38	1
13C5 PFPeA	84.3		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C5 PFHxA	101		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C4 PFHpA	124		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C8 PFOA	108		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C9 PFNA	86.2		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C3 PFBS	89.4		40 - 135	03/17/25 04:50	03/17/25 23:38	1
13C3 PFHxS	80.5		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C8 PFOS	85.4		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C8 FOSA	71.4		40 - 130	03/17/25 04:50	03/17/25 23:38	1
13C2 4:2 FTS	231	*5+	40 - 200	03/17/25 04:50	03/17/25 23:38	1
13C2 6:2 FTS	115		40 - 200	03/17/25 04:50	03/17/25 23:38	1
13C2 8:2 FTS	105		40 - 300	03/17/25 04:50	03/17/25 23:38	1
13C3 HFPO-DA	139	*5+	40 - 130	03/17/25 04:50	03/17/25 23:38	1
D7-NMeFOSE	60.2		10 - 130	03/17/25 04:50	03/17/25 23:38	1
D9-NEtFOSE	51.0		10 - 130	03/17/25 04:50	03/17/25 23:38	1
D5-NEtFOSA	65.7		10 - 130	03/17/25 04:50	03/17/25 23:38	1
D3-NMeFOSA	61.6		10 - 130	03/17/25 04:50	03/17/25 23:38	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.66	J	1.5	0.34	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		03/17/25 04:50	03/18/25 14:41	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		03/17/25 04:50	03/18/25 14:41	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	0.75	J	1.5	0.27	ng/L		03/17/25 04:50	03/18/25 14:41	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	ND		1.5	0.33	ng/L		03/17/25 04:50	03/18/25 14:41	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C6 PFDA	92.0		40 - 130				03/17/25 04:50	03/18/25 14:41	1
13C7 PFUnA	107		30 - 130				03/17/25 04:50	03/18/25 14:41	1
13C2 PFDoA	98.8		10 - 130				03/17/25 04:50	03/18/25 14:41	1
13C2 PFTrDA	54.8		10 - 130				03/17/25 04:50	03/18/25 14:41	1
D3-NMeFOSAA	72.3		40 - 170				03/17/25 04:50	03/18/25 14:41	1
D5-NEtFOSAA	70.2		25 - 135				03/17/25 04:50	03/18/25 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	2.8		1.3	1.3	mg/L			03/17/25 13:47	1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.7	0.30	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoropentanoic acid (PFPeA)	ND		1.9	0.46	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.37	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.31	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorooctanoic acid (PFOA)	1.3	J	1.9	0.58	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorononanoic acid (PFNA)	0.42	J	1.9	0.27	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorodecanoic acid (PFDA)	2.2		1.9	0.22	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoroundecanoic acid (PFUnA)	0.65	J	1.9	0.26	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorododecanoic acid (PFDoA)	1.1	J	1.9	0.25	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorotridecanoic acid (PFTrDA)	0.35	J	1.9	0.27	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.9	0.54	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.23	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.9	0.37	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorohexanesulfonic acid (PFHxS)	0.72	J	1.9	0.19	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.9	0.15	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorooctanesulfonic acid (PFOS)	8.1		1.9	0.23	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1
Perfluorononanesulfonic acid (PFNS)	ND		1.9	0.21	ug/Kg	✱	03/18/25 04:19	03/19/25 22:28	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	1.0	J	1.9	0.20	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.9	0.35	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.52	J	3.7	0.50	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	J	3.7	0.41	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluorooctanesulfonamide (PFOSA)	0.91	J	1.9	0.59	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.9	0.34	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.9	0.20	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6	J	1.9	0.16	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.7	J	9.3	0.82	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.5	J	9.3	0.72	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.9	0.27	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.9	0.23	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*4	1.9	0.21	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.9	0.34	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.9	0.58	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		1.9	0.35	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.9	0.70	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.9	0.35	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	170		9.3	2.3	ug/Kg	☼	03/18/25 04:19	03/19/25 22:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	16.1		8 - 130	03/18/25 04:19	03/19/25 22:28	1
13C5 PFPeA	48.5		35 - 130	03/18/25 04:19	03/19/25 22:28	1
13C5 PFHxA	91.9		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C4 PFHpA	109		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C8 PFOA	85.8		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C9 PFNA	81.9		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C6 PFDA	98.5		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C7 PFUnA	76.9		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C2 PFDoA	82.6		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C2 PFTeDA	40.6		20 - 130	03/18/25 04:19	03/19/25 22:28	1
13C3 PFBS	78.6		40 - 135	03/18/25 04:19	03/19/25 22:28	1
13C3 PFHxS	75.0		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C8 PFOS	72.3		40 - 130	03/18/25 04:19	03/19/25 22:28	1
13C8 FOSA	47.3		40 - 130	03/18/25 04:19	03/19/25 22:28	1
D5-NEtFOSAA	25.9	*5-	40 - 150	03/18/25 04:19	03/19/25 22:28	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 6:2 FTS	156		40 - 215	03/18/25 04:19	03/19/25 22:28	1
13C2 8:2 FTS	211		40 - 275	03/18/25 04:19	03/19/25 22:28	1
13C3 HFPO-DA	112		40 - 130	03/18/25 04:19	03/19/25 22:28	1
D7-NMeFOSE	83.2		20 - 130	03/18/25 04:19	03/19/25 22:28	1
D9-NEtFOSE	30.3		15 - 130	03/18/25 04:19	03/19/25 22:28	1
D5-NEtFOSA	48.8		10 - 130	03/18/25 04:19	03/19/25 22:28	1
D3-NMeFOSA	75.9		10 - 130	03/18/25 04:19	03/19/25 22:28	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		3.7	0.61	ug/Kg	☼	03/18/25 04:19	03/20/25 09:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		1.9	0.15	ug/Kg	☼	03/18/25 04:19	03/20/25 09:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	41.2		40 - 135				03/18/25 04:19	03/20/25 09:27	1
13C2 4:2 FTS	149		40 - 165				03/18/25 04:19	03/20/25 09:27	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.7	0.70	ug/Kg	☼	03/21/25 04:32	03/23/25 22:49	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		9.4	2.0	ug/Kg	☼	03/21/25 04:32	03/23/25 22:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	89.2		35 - 130				03/21/25 04:32	03/23/25 22:49	1
13C5 PFHxA	94.4		40 - 130				03/21/25 04:32	03/23/25 22:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	95		0.10	0.10	%			03/13/25 15:02	1
Percent Solids (EPA 1633)	5.2		0.10	0.10	%			03/13/25 15:02	1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	15		0.52	0.042	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluoroheptanoic acid (PFHpA)	6.2		0.26	0.043	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorononanoic acid (PFNA)	2.5		0.26	0.038	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorodecanoic acid (PFDA)	21		0.26	0.031	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluoroundecanoic acid (PFUnA)	1.5		0.26	0.036	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorododecanoic acid (PFDoA)	5.1		0.26	0.035	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorotridecanoic acid (PFTTrDA)	0.68		0.26	0.038	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1
Perfluorotetradecanoic acid (PFTeDA)	1.4		0.26	0.076	ug/Kg	✧	03/18/25 04:19	03/19/25 22:44	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	4.6		0.26	0.033	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.26	0.052	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorohexanesulfonic acid (PFHxS)	1.4		0.26	0.026	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoroheptanesulfonic acid (PFHpS)	0.19	J	0.26	0.021	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorooctanesulfonic acid (PFOS)	17		0.26	0.033	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorononanesulfonic acid (PFNS)	ND		0.26	0.030	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorodecanesulfonic acid (PFDS)	1.7		0.26	0.027	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.26	0.048	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.3		0.52	0.070	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.5		0.52	0.057	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluorooctanesulfonamide (PFOSA)	2.5	J	0.26	0.082	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.26	0.047	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.26	0.027	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.8	J	0.26	0.022	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.9		1.3	0.11	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.6		1.3	0.10	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.26	0.038	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.26	0.033	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*4	0.26	0.029	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.26	0.047	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.26	0.081	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		0.26	0.050	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.26	0.098	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.26	0.050	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		1.3	0.32	ug/Kg	☼	03/18/25 04:19	03/19/25 22:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	64.4		8 - 130				03/18/25 04:19	03/19/25 22:44	1
13C5 PFPeA	63.5		35 - 130				03/18/25 04:19	03/19/25 22:44	1
13C5 PFHxA	76.5		40 - 130				03/18/25 04:19	03/19/25 22:44	1
13C4 PFHpA	121		40 - 130				03/18/25 04:19	03/19/25 22:44	1
13C9 PFNA	66.4		40 - 130				03/18/25 04:19	03/19/25 22:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	74.4		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C7 PFUnA	57.9		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C2 PFDoA	55.7		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C2 PFTeDA	49.8		20 - 130	03/18/25 04:19	03/19/25 22:44	1
13C3 PFBS	61.2		40 - 135	03/18/25 04:19	03/19/25 22:44	1
13C3 PFHxS	71.3		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C8 PFOS	55.8		40 - 130	03/18/25 04:19	03/19/25 22:44	1
13C8 FOSA	36.9	*5-	40 - 130	03/18/25 04:19	03/19/25 22:44	1
D5-NEtFOSAA	28.0	*5-	40 - 150	03/18/25 04:19	03/19/25 22:44	1
13C2 6:2 FTS	178		40 - 215	03/18/25 04:19	03/19/25 22:44	1
13C2 8:2 FTS	114		40 - 275	03/18/25 04:19	03/19/25 22:44	1
13C3 HFPO-DA	128		40 - 130	03/18/25 04:19	03/19/25 22:44	1
D7-NMeFOSE	52.3		20 - 130	03/18/25 04:19	03/19/25 22:44	1
D9-NEtFOSE	32.9		15 - 130	03/18/25 04:19	03/19/25 22:44	1
D5-NEtFOSA	38.2		10 - 130	03/18/25 04:19	03/19/25 22:44	1
D3-NMeFOSA	41.5		10 - 130	03/18/25 04:19	03/19/25 22:44	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	30		1.3	0.32	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5
Perfluorohexanoic acid (PFHxA)	64		1.3	0.26	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5
Perfluorooctanoic acid (PFOA)	58		1.3	0.40	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	31		1.3	0.10	ug/Kg	☼	03/18/25 04:19	03/21/25 19:02	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	98.9	*3	35 - 130	03/18/25 04:19	03/21/25 19:02	5
13C5 PFHxA	69.0	*3	40 - 130	03/18/25 04:19	03/21/25 19:02	5
13C8 PFOA	68.8	*3	40 - 130	03/18/25 04:19	03/21/25 19:02	5
D3-NMeFOSAA	67.2	*3	40 - 135	03/18/25 04:19	03/21/25 19:02	5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.52	0.085	ug/Kg	☼	03/18/25 04:19	03/20/25 09:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	132		40 - 165	03/18/25 04:19	03/20/25 09:41	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.53	0.098	ug/Kg	☼	03/21/25 04:32	03/23/25 23:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.6		1.3	0.28	ug/Kg	☼	03/21/25 04:32	03/23/25 23:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	68.8		35 - 130	03/21/25 04:32	03/23/25 23:05	1
13C5 PFHxA	73.5		40 - 130	03/21/25 04:32	03/23/25 23:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	62		0.10	0.10	%			03/13/25 15:02	1
Percent Solids (EPA 1633)	38		0.10	0.10	%			03/13/25 15:02	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		0.57	0.046	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoropentanoic acid (PFPeA)	34		0.29	0.070	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoroheptanoic acid (PFHpA)	5.1		0.29	0.047	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorooctanoic acid (PFOA)	27		0.29	0.088	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorononanoic acid (PFNA)	2.0		0.29	0.041	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorodecanoic acid (PFDA)	17		0.29	0.034	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoroundecanoic acid (PFUnA)	1.4		0.29	0.040	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorododecanoic acid (PFDoA)	4.3		0.29	0.038	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorotridecanoic acid (PFTTrDA)	0.62		0.29	0.041	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorotetradecanoic acid (PFTeDA)	1.2		0.29	0.083	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorobutanesulfonic acid (PFBS)	4.8	I J	0.29	0.036	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.29	0.057	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.29	0.029	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoroheptanesulfonic acid (PFHpS)	0.15	J	0.29	0.023	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorooctanesulfonic acid (PFOS)	15		0.29	0.036	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorononanesulfonic acid (PFNS)	ND		0.29	0.033	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.29	0.030	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.29	0.053	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.6		0.57	0.077	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.87		0.57	0.063	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluorooctanesulfonamide (PFOSA)	1.8	J	0.29	0.090	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.37		0.29	0.051	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.13	J	0.29	0.030	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10	J	0.29	0.024	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.2		1.4	0.13	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.6		1.4	0.11	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.29	0.041	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.29	0.036	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*4	0.29	0.031	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.29	0.051	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.29	0.088	ug/Kg	✱	03/18/25 04:19	03/19/25 23:01	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	ND		0.29	0.054	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.29	0.11	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.29	0.054	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	12		1.4	0.35	ug/Kg	☆	03/18/25 04:19	03/19/25 23:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	68.8		8 - 130	03/18/25 04:19	03/19/25 23:01	1
13C5 PFPeA	56.3		35 - 130	03/18/25 04:19	03/19/25 23:01	1
13C5 PFHxA	75.5		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C4 PFHpA	102		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C8 PFOA	76.9		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C9 PFNA	69.2		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C6 PFDA	72.1		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C7 PFUnA	48.0		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C2 PFDoA	51.8		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C2 PFTeDA	44.3		20 - 130	03/18/25 04:19	03/19/25 23:01	1
13C3 PFBS	54.4		40 - 135	03/18/25 04:19	03/19/25 23:01	1
13C3 PFHxS	65.2		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C8 PFOS	66.8		40 - 130	03/18/25 04:19	03/19/25 23:01	1
13C8 FOSA	31.0	*5-	40 - 130	03/18/25 04:19	03/19/25 23:01	1
D5-NetFOSAA	15.1	*5-	40 - 150	03/18/25 04:19	03/19/25 23:01	1
13C2 6:2 FTS	165		40 - 215	03/18/25 04:19	03/19/25 23:01	1
13C2 8:2 FTS	121		40 - 275	03/18/25 04:19	03/19/25 23:01	1
13C3 HFPO-DA	114		40 - 130	03/18/25 04:19	03/19/25 23:01	1
D7-NMeFOSE	51.1		20 - 130	03/18/25 04:19	03/19/25 23:01	1
D9-NetFOSE	28.3		15 - 130	03/18/25 04:19	03/19/25 23:01	1
D5-NetFOSA	34.8		10 - 130	03/18/25 04:19	03/19/25 23:01	1
D3-NMeFOSA	38.3		10 - 130	03/18/25 04:19	03/19/25 23:01	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	35		1.4	0.29	ug/Kg	☼	03/18/25 04:19	03/20/25 16:10	5
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	77.8	*3	40 - 130				03/18/25 04:19	03/20/25 16:10	5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.57	0.093	ug/Kg	☼	03/18/25 04:19	03/20/25 09:55	1
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	34	J	0.29	0.023	ug/Kg	☼	03/18/25 04:19	03/20/25 09:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	28.9	*5-	40 - 135				03/18/25 04:19	03/20/25 09:55	1
13C2 4:2 FTS	118		40 - 165				03/18/25 04:19	03/20/25 09:55	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.57	0.11	ug/Kg	☆	03/21/25 04:32	03/23/25 23:21	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.5		1.4	0.30	ug/Kg	☆	03/21/25 04:32	03/23/25 23:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	56.7		35 - 130				03/21/25 04:32	03/23/25 23:21	1
13C5 PFHxA	72.3		40 - 130				03/21/25 04:32	03/23/25 23:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	65		0.10	0.10	%			03/13/25 15:02	1
Percent Solids (EPA 1633)	35		0.10	0.10	%			03/13/25 15:02	1

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

Date Collected: 03/10/25 13:17

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.3	0.30	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.32	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.37	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.23	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.23	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		03/17/25 04:50	03/17/25 23:55	1
4:2 FTS	ND		3.3	0.36	ng/L		03/17/25 04:50	03/17/25 23:55	1
6:2 FTS	ND		3.3	0.33	ng/L		03/17/25 04:50	03/17/25 23:55	1
8:2 FTS	ND		3.3	0.73	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.2	1.9	ng/L		03/17/25 04:50	03/17/25 23:55	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		03/17/25 04:50	03/17/25 23:55	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		03/17/25 04:50	03/17/25 23:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		03/17/25 04:50	03/17/25 23:55	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

Date Collected: 03/10/25 13:17

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		03/17/25 04:50	03/17/25 23:55	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	ND		1.6	0.59	ng/L		03/17/25 04:50	03/17/25 23:55	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		03/17/25 04:50	03/17/25 23:55	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		03/17/25 04:50	03/17/25 23:55	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		03/17/25 04:50	03/17/25 23:55	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		03/17/25 04:50	03/17/25 23:55	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.2	1.4	ng/L		03/17/25 04:50	03/17/25 23:55	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		03/17/25 04:50	03/17/25 23:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	103		5 - 130				03/17/25 04:50	03/17/25 23:55	1
13C5 PFPeA	113		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C5 PFHxA	102		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C4 PFHpA	96.2		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C8 PFOA	94.2		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C9 PFNA	91.6		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C3 PFBS	93.9		40 - 135				03/17/25 04:50	03/17/25 23:55	1
13C3 PFHxS	81.6		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C8 PFOS	83.1		40 - 130				03/17/25 04:50	03/17/25 23:55	1
13C2 4:2 FTS	97.2		40 - 200				03/17/25 04:50	03/17/25 23:55	1
13C2 6:2 FTS	71.1		40 - 200				03/17/25 04:50	03/17/25 23:55	1
13C2 8:2 FTS	91.9		40 - 300				03/17/25 04:50	03/17/25 23:55	1
13C3 HFPO-DA	103		40 - 130				03/17/25 04:50	03/17/25 23:55	1
D7-NMeFOSE	66.4		10 - 130				03/17/25 04:50	03/17/25 23:55	1
D9-NEtFOSE	60.0		10 - 130				03/17/25 04:50	03/17/25 23:55	1
D5-NEtFOSA	63.9		10 - 130				03/17/25 04:50	03/17/25 23:55	1
D3-NMeFOSA	61.3		10 - 130				03/17/25 04:50	03/17/25 23:55	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.22	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		03/17/25 04:50	03/18/25 14:55	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		03/17/25 04:50	03/18/25 14:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.29	ng/L		03/17/25 04:50	03/18/25 14:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		03/17/25 04:50	03/18/25 14:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	105		40 - 130				03/17/25 04:50	03/18/25 14:55	1
13C6 PFDA	106		40 - 130				03/17/25 04:50	03/18/25 14:55	1
13C7 PFUnA	127		30 - 130				03/17/25 04:50	03/18/25 14:55	1
13C2 PFDoA	122		10 - 130				03/17/25 04:50	03/18/25 14:55	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-1

Client Sample ID: EB01-202503

Lab Sample ID: 320-119687-11

Date Collected: 03/10/25 13:17

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	109		10 - 130	03/17/25 04:50	03/18/25 14:55	1
13C8 FOSA	84.6		40 - 130	03/17/25 04:50	03/18/25 14:55	1
D3-NMeFOSAA	68.5		40 - 170	03/17/25 04:50	03/18/25 14:55	1
D5-NEtFOSAA	71.5		25 - 135	03/17/25 04:50	03/18/25 14:55	1

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23	B U	23 43	23 3.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoropentanoic acid (PFPeA)	12		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorohexanoic acid (PFHxA)	18		5.0	1.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorooctanoic acid (PFOA)	8.4		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorotridecanoic acid (PFTTrDA)	ND	*	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorobutanesulfonic acid (PFBS)	3.4	J	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorohexanesulfonic acid (PFHxS)	5.9		5.0	1.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorooctanesulfonic acid (PFOS)	2.8	J	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluorooctanesulfonamide (PFOSA)	ND	*4	5.0	2.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
4:2 FTS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
6:2 FTS	ND		13	3.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
8:2 FTS	ND	*4	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		03/27/25 03:41	03/29/25 00:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	*+	10	2.5	ng/L		03/27/25 03:41	03/29/25 00:18	1
9Cl-PF3ONS	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
11Cl-PF3OUdS	ND		5.0	1.7	ng/L		03/27/25 03:41	03/29/25 00:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	*4	5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: EFF-G-202503

Lab Sample ID: 320-119687-7

Date Collected: 03/11/25 07:11

Matrix: Water

Date Received: 03/12/25 09:30

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	ND		5.0	1.6	ng/L		03/27/25 03:41	03/29/25 00:18	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		03/27/25 03:41	03/29/25 00:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	84		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFBA	96		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C5 PFPeA	90		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFHxA	88		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFHpA	97		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFOA	99		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C5 PFNA	97		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFDA	93		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFUnA	86		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFDoA	85		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 PFTeDA	70		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C3 PFBS	79		25 - 150				03/27/25 03:41	03/29/25 00:18	1
18O2 PFHxS	81		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C4 PFOS	77		25 - 150				03/27/25 03:41	03/29/25 00:18	1
D3-NMeFOSAA	83		25 - 150				03/27/25 03:41	03/29/25 00:18	1
d5-NEtFOSAA	81		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 4:2 FTS	0		0 - 10				03/27/25 03:41	03/29/25 00:18	1
13C2 6:2 FTS	107		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C2 8:2 FTS	110		25 - 150				03/27/25 03:41	03/29/25 00:18	1
d-N-MeFOSA-M	60		25 - 150				03/27/25 03:41	03/29/25 00:18	1
d-N-EtFOSA-M	53		25 - 150				03/27/25 03:41	03/29/25 00:18	1
D7-NMeFOSE	71		25 - 150				03/27/25 03:41	03/29/25 00:18	1
D9-NEtFOSE	62		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C3 HFPO-DA	79		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C-6:2 FTCA	85		25 - 150				03/27/25 03:41	03/29/25 00:18	1
13C-8:2 FTCA	79		25 - 150				03/27/25 03:41	03/29/25 00:18	1

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		19	4.3	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoropentanoic acid (PFPeA)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorohexanoic acid (PFHxA)	3.7	J	19	2.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoroheptanoic acid (PFHpA)	ND		19	3.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorooctanoic acid (PFOA)	ND		19	5.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorononanoic acid (PFNA)	ND		19	2.1	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorodecanoic acid (PFDA)	ND		19	4.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoroundecanoic acid (PFUnA)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorododecanoic acid (PFDoA)	ND		19	2.8	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	ND		19	2.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		19	3.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		19	3.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		19	3.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		19	2.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		19	4.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorooctanesulfonic acid (PFOS)	9.0	J	19	4.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorononanesulfonic acid (PFNS)	ND		19	2.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		19	4.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND		19	4.4	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		19	3.1	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		19	4.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		19	4.4	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11	J	19	2.2	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.0	J	19	4.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		19	4.4	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		19	2.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
4:2 FTS	ND		19	4.8	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
6:2 FTS	ND		19	2.5	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
8:2 FTS	ND		19	3.3	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
9CI-PF3ONS	ND		19	3.3	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
11CI-PF3OUdS	ND		19	2.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		19	3.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.3	J	19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		19	3.0	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		19	2.2	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		19	4.2	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		19	3.7	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	93		19	3.6	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		19	3.9	ug/Kg	✱	03/25/25 05:08	03/28/25 17:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	90		25 - 150				03/25/25 05:08	03/28/25 17:31	1
13C5 PFPeA	88		25 - 150				03/25/25 05:08	03/28/25 17:31	1
13C2 PFHxA	95		25 - 150				03/25/25 05:08	03/28/25 17:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	96		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C4 PFOA	98		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C5 PFNA	96		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFDA	96		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFUnA	89		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFDoA	83		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 PFTeDA	43		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C3 PFBS	79		25 - 150	03/25/25 05:08	03/28/25 17:31	1
18O2 PFHxS	81		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C4 PFOS	80		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C8 FOSA	78		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 4:2 FTS	122		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 6:2 FTS	141		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C2 8:2 FTS	160	*5+	25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C3 HFPO-DA	76		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D3-NMeFOSAA	87		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D5-NEtFOSAA	88		25 - 150	03/25/25 05:08	03/28/25 17:31	1
d-N-MeFOSA-M	52		25 - 150	03/25/25 05:08	03/28/25 17:31	1
d-N-EtFOSA-M	55		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D7-NMeFOSE	58		25 - 150	03/25/25 05:08	03/28/25 17:31	1
D9-NEtFOSE	72		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C-6:2 FTCA	78		25 - 150	03/25/25 05:08	03/28/25 17:31	1
13C-8:2 FTCA	80		25 - 150	03/25/25 05:08	03/28/25 17:31	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	140	B	18	4.2	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoropentanoic acid (PFPeA)	90		18	3.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorohexanoic acid (PFHxA)	43	*+ J	18	2.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoroheptanoic acid (PFHpA)	29		18	3.5	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorooctanoic acid (PFOA)	37		18	4.9	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorononanoic acid (PFNA)	16	J	18	2.0	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorodecanoic acid (PFDA)	8.8	J	18	4.4	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoroundecanoic acid (PFUnA)	5.9	J	18	3.9	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorododecanoic acid (PFDoA)	4.3	J	18	2.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorotridecanoic acid (PFTTrDA)	ND	*	18	1.9	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.4	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorobutanesulfonic acid (PFBS)	ND		18	3.5	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.4	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.7	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.5	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorooctanesulfonic acid (PFOS)	6.6	J	18	4.0	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.7	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.8	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		18	4.3	ug/Kg	✱	03/25/25 05:12	03/28/25 19:37	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (PFOSA)	ND	*4	18	3.0	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.1	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.4	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
4:2 FTS	ND		18	4.7	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
6:2 FTS	ND		18	2.5	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
8:2 FTS	ND		18	3.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.3	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.5	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.3	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.6	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
9Cl-PF3ONS	ND		18	3.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
11Cl-PF3OUdS	ND		18	2.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.6	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		18	3.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		18	2.9	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		18	2.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.2	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	* *4	18	3.7	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		18	3.5	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.8	ug/Kg	☼	03/25/25 05:12	03/28/25 19:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	63		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFBA	82		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C5 PFPeA	76		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFHxA	73		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFHpA	92		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFOA	87		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C5 PFNA	81		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFDA	78		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFUnA	68		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFDoA	67		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 PFTeDA	54		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C3 PFBS	70		25 - 150	03/25/25 05:12	03/28/25 19:37	1
18O2 PFHxS	71		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C4 PFOS	65		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D3-NMeFOSAA	63		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D5-NEtFOSAA	63		25 - 150	03/25/25 05:12	03/28/25 19:37	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-B-202503

Lab Sample ID: 320-119687-8

Date Collected: 03/10/25 13:28

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 5.2

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/28/25 19:37	1
13C2 6:2 FTS	95		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C2 8:2 FTS	96		25 - 150	03/25/25 05:12	03/28/25 19:37	1
d-N-MeFOSA-M	28		25 - 150	03/25/25 05:12	03/28/25 19:37	1
d-N-EtFOSA-M	25		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D7-NMeFOSE	55		25 - 150	03/25/25 05:12	03/28/25 19:37	1
D9-NEtFOSE	49		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C3 HFPO-DA	70		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C-6:2 FTCA	74		25 - 150	03/25/25 05:12	03/28/25 19:37	1
13C-8:2 FTCA	67		25 - 150	03/25/25 05:12	03/28/25 19:37	1

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.6		2.6	0.61	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoropentanoic acid (PFPeA)	14		2.6	0.54	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorohexanoic acid (PFHxA)	45		2.6	0.41	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoroheptanoic acid (PFHpA)	4.0		2.6	0.50	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorooctanoic acid (PFOA)	38		2.6	0.70	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorononanoic acid (PFNA)	1.9 J		2.6	0.29	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorodecanoic acid (PFDA)	15		2.6	0.63	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoroundecanoic acid (PFUnA)	1.1 J		2.6	0.55	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorododecanoic acid (PFDoA)	2.8		2.6	0.40	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.6	0.28	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorotetradecanoic acid (PFTeDA)	0.79 J		2.6	0.49	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorobutanesulfonic acid (PFBS)	3.3		2.6	0.50	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.6	0.49	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.6	0.65	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorooctanesulfonic acid (PFOS)	11		2.6	0.57	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorononanesulfonic acid (PFNS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorodecanesulfonic acid (PFDS)	0.99 J		2.6	0.69	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.62	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
Perfluorooctanesulfonamide (PFOSA)	1.3 J		2.6	0.44	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.6	0.65	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.6	0.62	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20		2.6	0.30	ug/Kg	☆	03/25/25 05:08	03/28/25 17:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.2		2.6	0.63	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.2		2.6	0.62	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.7		2.6	0.37	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
4:2 FTS	ND		2.6	0.68	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
6:2 FTS	3.4	J	2.6	0.36	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
8:2 FTS	1.1	J J	2.6	0.46	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.6	0.54	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
9CI-PF3ONS	ND		2.6	0.46	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
11CI-PF3OUdS	ND		2.6	0.41	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.6	0.51	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	5.1		2.6	0.54	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.6	0.42	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.6	0.32	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.6	0.60	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.6	0.53	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	6.6		2.6	0.50	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.6	0.54	ug/Kg	☼	03/25/25 05:08	03/28/25 17:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C5 PFPeA	92		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFHxA	91		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C4 PFHpA	97		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C4 PFOA	99		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C5 PFNA	95		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFDA	88		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFUnA	89		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFDoA	81		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 PFTeDA	53		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C3 PFBS	78		25 - 150	03/25/25 05:08	03/28/25 17:45	1
18O2 PFHxS	79		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C4 PFOS	78		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C8 FOSA	80		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 4:2 FTS	145		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 6:2 FTS	152	*5+	25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C2 8:2 FTS	164	*5+	25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C3 HFPO-DA	74		25 - 150	03/25/25 05:08	03/28/25 17:45	1
D3-NMeFOSAA	82		25 - 150	03/25/25 05:08	03/28/25 17:45	1
D5-NEtFOSAA	81		25 - 150	03/25/25 05:08	03/28/25 17:45	1
d-N-MeFOSA-M	73		25 - 150	03/25/25 05:08	03/28/25 17:45	1
d-N-EtFOSA-M	67		25 - 150	03/25/25 05:08	03/28/25 17:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D7-NMeFOSE	73		25 - 150	03/25/25 05:08	03/28/25 17:45	1
D9-NEtFOSE	75		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C-6:2 FTCA	77		25 - 150	03/25/25 05:08	03/28/25 17:45	1
13C-8:2 FTCA	68		25 - 150	03/25/25 05:08	03/28/25 17:45	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	190	B	2.6	0.60	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoropentanoic acid (PFPeA)	82		2.6	0.53	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorohexanoic acid (PFHxA)	89	*+ J	2.6	0.40	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoroheptanoic acid (PFHpA)	34		2.6	0.49	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorooctanoic acid (PFOA)	77		2.6	0.69	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorononanoic acid (PFNA)	14		2.6	0.28	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorodecanoic acid (PFDA)	21		2.6	0.62	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoroundecanoic acid (PFUnA)	4.7		2.6	0.54	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorododecanoic acid (PFDoA)	5.3		2.6	0.39	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorotridecanoic acid (PFTTrDA)	1.3	J *	2.6	0.27	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorotetradecanoic acid (PFTeDA)	1.6	J	2.6	0.48	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorobutanesulfonic acid (PFBS)	12		2.6	0.49	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.6	0.48	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.6	0.64	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorooctanesulfonic acid (PFOS)	11		2.6	0.56	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorononanesulfonic acid (PFNS)	ND		2.6	0.38	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorodecanesulfonic acid (PFDS)	0.79	J	2.6	0.67	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.61	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Perfluorooctanesulfonamide (PFOSA)	ND	*4	2.6	0.43	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.6	0.30	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.6	0.62	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
4:2 FTS	ND		2.6	0.66	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
6:2 FTS	ND		2.6	0.35	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
8:2 FTS	ND		2.6	0.45	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.6	0.61	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.6	0.64	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.6	0.61	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.6	0.36	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.6	0.53	ug/Kg	☆	03/25/25 05:12	03/28/25 19:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-23-202503

Lab Sample ID: 320-119687-9

Date Collected: 03/10/25 14:04

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 37.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		2.6	0.45	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
11CI-PF3OUdS	ND		2.6	0.40	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.6	0.50	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		2.6	0.53	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.6	0.41	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.6	0.31	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.6	0.58	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	* *1	2.6	0.52	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		2.6	0.49	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.6	0.53	ug/Kg	☼	03/25/25 05:12	03/28/25 19:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	55		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFBA	88		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C5 PFPeA	86		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFHxA	87		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFHpA	94		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFOA	93		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C5 PFNA	87		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFDA	79		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFUnA	71		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFDoA	66		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 PFTeDA	65		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C3 PFBS	75		25 - 150	03/25/25 05:12	03/28/25 19:51	1
18O2 PFHxS	79		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C4 PFOS	62		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D3-NMeFOSAA	61		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D5-NEtFOSAA	56		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/28/25 19:51	1
13C2 6:2 FTS	105		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C2 8:2 FTS	95		25 - 150	03/25/25 05:12	03/28/25 19:51	1
d-N-MeFOSA-M	44		25 - 150	03/25/25 05:12	03/28/25 19:51	1
d-N-EtFOSA-M	41		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D7-NMeFOSE	55		25 - 150	03/25/25 05:12	03/28/25 19:51	1
D9-NEtFOSE	50		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C3 HFPO-DA	80		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C-6:2 FTCA	84		25 - 150	03/25/25 05:12	03/28/25 19:51	1
13C-8:2 FTCA	73		25 - 150	03/25/25 05:12	03/28/25 19:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.5		2.9	0.66	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoropentanoic acid (PFPeA)	17		2.9	0.59	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorohexanoic acid (PFHxA)	28		2.9	0.45	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoroheptanoic acid (PFHpA)	2.8	J	2.9	0.55	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorooctanoic acid (PFOA)	22		2.9	0.76	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorononanoic acid (PFNA)	1.5	J	2.9	0.32	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorodecanoic acid (PFDA)	8.8		2.9	0.69	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoroundecanoic acid (PFUnA)	0.85	J	2.9	0.60	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorododecanoic acid (PFDoA)	2.0	J	2.9	0.43	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.9	0.30	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		2.9	0.53	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorobutanesulfonic acid (PFBS)	3.6		2.9	0.55	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.9	0.53	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	2.9	0.42	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.9	0.71	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorooctanesulfonic acid (PFOS)	8.6		2.9	0.62	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorononanesulfonic acid (PFNS)	ND		2.9	0.42	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.9	0.75	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.9	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluorooctanesulfonamide (PFOSA)	0.82	J	2.9	0.47	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.9	0.71	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.9	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	13		2.9	0.33	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.6		2.9	0.69	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.8	J	2.9	0.68	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.5	J	2.9	0.40	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
4:2 FTS	ND		2.9	0.74	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
6:2 FTS	1.4	J J	2.9	0.39	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
8:2 FTS	ND		2.9	0.50	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.9	0.59	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
9CI-PF3ONS	ND		2.9	0.50	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
11CI-PF3OUdS	ND		2.9	0.45	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.9	0.56	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.5		2.9	0.59	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.9	0.46	ug/Kg	✱	03/25/25 05:08	03/28/25 17:59	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.9	0.34	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.9	0.65	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.9	0.57	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	5.9		2.9	0.55	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.9	0.59	ug/Kg	☼	03/25/25 05:08	03/28/25 17:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	84		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C5 PFPeA	84		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 PFHxA	84		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C4 PFHpA	90		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C4 PFOA	97		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C5 PFNA	89		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 PFDA	91		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 PFUnA	78		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 PFDoA	80		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 PFTeDA	45		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C3 PFBS	72		25 - 150	03/25/25 05:08	03/28/25 17:59	1
18O2 PFHxS	75		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C4 PFOS	74		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C8 FOSA	75		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 4:2 FTS	137		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 6:2 FTS	154	*5+	25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C2 8:2 FTS	149		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C3 HFPO-DA	68		25 - 150	03/25/25 05:08	03/28/25 17:59	1
D3-NMeFOSAA	83		25 - 150	03/25/25 05:08	03/28/25 17:59	1
D5-NEtFOSAA	73		25 - 150	03/25/25 05:08	03/28/25 17:59	1
d-N-MeFOSA-M	68		25 - 150	03/25/25 05:08	03/28/25 17:59	1
d-N-EtFOSA-M	65		25 - 150	03/25/25 05:08	03/28/25 17:59	1
D7-NMeFOSE	65		25 - 150	03/25/25 05:08	03/28/25 17:59	1
D9-NEtFOSE	69		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C-6:2 FTCA	72		25 - 150	03/25/25 05:08	03/28/25 17:59	1
13C-8:2 FTCA	70		25 - 150	03/25/25 05:08	03/28/25 17:59	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	120	B	2.8	0.65	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluoropentanoic acid (PFPeA)	83		2.8	0.58	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorohexanoic acid (PFHxA)	76	*+ J	2.8	0.44	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluoroheptanoic acid (PFHpA)	31		2.8	0.53	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorooctanoic acid (PFOA)	60		2.8	0.75	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorononanoic acid (PFNA)	13		2.8	0.31	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorodecanoic acid (PFDA)	15		2.8	0.68	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluoroundecanoic acid (PFUnA)	4.5		2.8	0.59	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1
Perfluorododecanoic acid (PFDoA)	4.3		2.8	0.42	ug/Kg	☼	03/25/25 05:12	03/28/25 20:05	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	0.90	J *	2.8	0.30	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorotetradecanoic acid (PFTeDA)	1.5	J	2.8	0.52	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorobutanesulfonic acid (PFBS)	17		2.8	0.53	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.8	0.52	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	2.8	0.41	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.8	0.69	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorooctanesulfonic acid (PFOS)	8.7		2.8	0.61	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorononanesulfonic acid (PFNS)	ND		2.8	0.41	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.8	0.73	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.8	0.66	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluorooctanesulfonamide (PFOSA)	0.95	J *1 J	2.8	0.46	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.8	0.32	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.8	0.68	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
4:2 FTS	ND		2.8	0.72	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
6:2 FTS	ND		2.8	0.38	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
8:2 FTS	ND		2.8	0.49	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.8	0.66	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.8	0.69	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.8	0.66	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.8	0.39	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.8	0.58	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
9Cl-PF3ONS	ND		2.8	0.49	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
11Cl-PF3OUdS	ND		2.8	0.44	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.8	0.55	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		2.8	0.58	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.8	0.45	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.8	0.34	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.8	0.64	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	* *1	2.8	0.56	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		2.8	0.53	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.8	0.58	ug/Kg	✱	03/25/25 05:12	03/28/25 20:05	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-119687-2

Client Sample ID: BIO-A-24-202503

Lab Sample ID: 320-119687-10

Date Collected: 03/10/25 14:38

Matrix: Solid

Date Received: 03/12/25 09:30

Percent Solids: 34.8

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 FOSA	73		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFBA	82		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C5 PFPeA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFHxA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFHpA	84		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFOA	84		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C5 PFNA	86		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFDA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFUnA	61		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFDoA	59		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 PFTeDA	56		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C3 PFBS	72		25 - 150	03/25/25 05:12	03/28/25 20:05	1
18O2 PFHxS	72		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C4 PFOS	61		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D3-NMeFOSAA	59		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D5-NEtFOSAA	59		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 4:2 FTS	0		0 - 10	03/25/25 05:12	03/28/25 20:05	1
13C2 6:2 FTS	97		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C2 8:2 FTS	100		25 - 150	03/25/25 05:12	03/28/25 20:05	1
d-N-MeFOSA-M	64		25 - 150	03/25/25 05:12	03/28/25 20:05	1
d-N-EtFOSA-M	53		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D7-NMeFOSE	55		25 - 150	03/25/25 05:12	03/28/25 20:05	1
D9-NEtFOSE	47		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C3 HFPO-DA	68		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C-6:2 FTCA	78		25 - 150	03/25/25 05:12	03/28/25 20:05	1
13C-8:2 FTCA	71		25 - 150	03/25/25 05:12	03/28/25 20:05	1

April 2025

Data Quality and Usability Review – April 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 5/9/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on April 14 and 15, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDG 320-120622-1.

Samples included in this review are listed below:

- INF COMP-202504
- EFF-G-202504

Each sample was analyzed for the following constituents.

Analyte Group	Method
PFAS (40 Analytes)*	EPA Method 1633A
TSS**	Standard Method (SM) 2540D

Notes:

* The laboratory does not hold NELAP accreditation for PFAS by Method 1633A.

** The laboratory does not hold Wisconsin accreditation for TSS.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;

- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS and TSS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the QA/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The data package was found to be complete as received from the laboratory.
- The TSS analyses were performed by the Eurofins West Sacramento, California laboratory without Wisconsin certification. TSS analyses were conducted by this laboratory in order to meet the recommended holding time and to allow sufficient time for the TSS results to be used in the consideration of the appropriate preparation procedure for method 1633A. Further, the PFAS analysis were performed by the Eurofins West Sacramento, California laboratory without NELAP certification. However, since the laboratory was certified in Wisconsin for PFAS by method 1633A, there is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample INF COMP-202504 was not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in

coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.

- A method blank was analyzed with each analytical batch for PFAS and TSS. Target analytes were not detected in the method blanks.
- All samples were extracted and/or prepared and analyzed within the holding time, with the following exception.
 - Samples INF COMP-202504 and EFF-G-202504 were extracted for PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive result for NMeFOSE in sample INF COMP-202504 was qualified as estimated (J); no direction of bias was applied since this result was also qualified as estimated (J) due to a low EIS %R discussed later in this report. The nondetect results for NMeFOSE in sample EFF-G-202504, and NEtFOSE in samples INF COMP-202504 and EFF-G-202504 were qualified as estimated (UJ).
 - The positive results for NMeFOSAA in samples INF COMP-202504 and EFF-G-202504 were qualified as estimated (J); no direction of bias was applied since these results were detected < the QL. No qualification was required for NEtFOSAA in samples INF COMP-202504 and EFF-G-202504 since this analyte was not detected in these samples.

Note that the preparation method referenced for the 1633A analysis is 1633 instead of 1633A. The associated samples were prepared in accordance with method 1633A; however, the laboratory has not updated the reference appropriately in their reporting system. No validation action was taken on this basis.

- The LCS (including low-level LCS for PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The following table summarizes the EIS %Rs that were outside of the method acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF COMP-202504	D5-NEtFOSA	6.62	10-130	The positive and nondetect results for NEtFOSA, PFPeA, PFOSA, NMeFOSA, NMeFOSAA, NEtFOSAA, NMeFOSE, NEtFOSE, HFPO-DA, ADONA, PFMPA, PFMBAA, 9CI-PF3ONS, 11CI-PF3OUdS, and 3:3 FTCA were qualified as estimated (J/UJ) in sample INF COMP-202504.
	13C5 PFPeA	24.8	40-130	
	13C8 FOSA	23.6	40-130	
	D3-NMeFOSAA	39.7	40-170	
	D5-NEtFOSAA	23.5	25-135	
	13C3 HFPO-DA	35.1	40-130	
	D7-NMeFOSE	6.82	10-130	
	D9-NEtFOSE	5.32	10-130	
	D3-NMeFOSA	7.86	10-130	

* Note that based on professional judgement, a "significantly low" limit of 5% was used for rejection criteria.

* Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analyses were not performed on a sample in this data set.
- The laboratory noted the following observations in the case narrative for the PFAS and TSS analyses. No validation actions were taken on this basis.
 - Samples INF COMP-202504 and EFF-G-202504 were discolored prior to and following extraction for PFAS.

- Sample INF COMP-202504 had an excess amount of sediment and particulates prior to extraction for PFAS. This sample was prepared using project-specified instructions. The sample was fortified with EIS and then centrifuged. The supernatant was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual solids were then extracted via solvent rinse with basic methanol. The resulting methanolic extract was added to the SPE column used for the supernatant to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.
- Sample INF COMP-202504 was turbid and had heavy non-homogenous sediment for the TSS analysis.
- Sample INF COMP-202504 was diluted 10-fold for NEtFOSA. This dilution was due to matrix interference in the undiluted analysis. The laboratory combined results from the diluted and undiluted analyses in order to report all results with the lowest possible QLs. NEtFOSA was not detected in the 10-fold dilution of sample INF COMP-202504. The QL was elevated accordingly.
- The QL for TSS in sample INF COMP-202504 was approximately 3.125x higher than the associated method blank due to a reduced volume (80 mLs versus the typical 250 mL) used in the sample analysis; the case narrative noted that this sample was prepared at a reduced volume due to the nature of the sample matrix. In addition, the QL for TSS in sample EFF-G-202504 was approximately 4x lower than the associated method blank due to an increased volume (1,000 mLs versus the typical 250 mL) used in the sample analysis; the laboratory stated during previous reviews that an increased volume is used for clean samples to ensure that they meet the minimum method requirement of 2.5 mg of filtered solids. There is no adverse impact on the data usability due to these issues since TSS was detected above the QL in both samples in this data set. No validation action was required on this basis.
- The result for PFOS in sample INF COMP-202504 was flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive result for PFOS in sample INF COMP-202504 was qualified as estimated (J).
- The laboratory noted in the case narrative and through the use of a “CI” qualifier that sample INF COMP-202504 had chromatographic interferences that could adversely impact the identification and quantitation of PFBA; the laboratory noted that the interference could cause a false positive result. Therefore, the positive result for PFBA in sample INF COMP-202504 was qualified as estimated (J+) with a potential high bias.
- The laboratory noted in the case narrative and through the use of a “G” qualifier that sample INF COMP-202504 had matrix interferences that required elevation of the QL for PFPeA in this sample. The QL and method detection limit (MDL) were raised by the laboratory to be equal to the matrix interference. No validation action was taken on this basis.
- The laboratory noted internal standard nonconformances through the use of a “*3” qualifier associated with D5-NEtFOSA in sample INF COMP-202504. Validation action was taken based on the low EIS recovery for D5-NEtFOSA in this sample as discussed previously in this report. No additional validation action was taken on this basis.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: INF COMP-202504

Lab Sample ID: 320-120622-1

Date Collected: 04/14/25 23:59

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.3	0.36	ng/L		04/23/25 04:32	04/25/25 07:04	1
6:2 FTS	1.2	J	3.3	0.33	ng/L		04/23/25 04:32	04/25/25 07:04	1
8:2 FTS	ND		3.3	0.73	ng/L		04/23/25 04:32	04/25/25 07:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	50.8		40 - 200				04/23/25 04:32	04/25/25 07:04	1
13C2 6:2 FTS	108		40 - 200				04/23/25 04:32	04/25/25 07:04	1
13C2 8:2 FTS	73.9		40 - 300				04/23/25 04:32	04/25/25 07:04	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND	UJ	16	3.6	ng/L		04/23/25 04:32	04/26/25 03:10	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSA	6.62	*5- *3	10 - 130				04/23/25 04:32	04/26/25 03:10	10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12	CI J+	3.3	0.30	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoropentanoic acid (PFPeA)	ND	G UJ	6.7	6.7	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorohexanoic acid (PFHxA)	4.6		1.6	0.22	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoroheptanoic acid (PFHpA)	1.7		1.6	0.28	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorooctanoic acid (PFOA)	5.3		1.6	0.32	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorononanoic acid (PFNA)	0.56	J	1.6	0.37	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorobutanesulfonic acid (PFBS)	3.0		1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorooctanesulfonic acid (PFOS)	7.9	I J	1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluorooctanesulfonamide (PFOSA)	ND	UJ	1.6	0.18	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND	UJ	1.6	0.31	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47	J J	1.6	0.28	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	UJ	1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:04	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2	J	8.1	1.9	ng/L		04/23/25 04:32	04/26/25 02:04	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: INF COMP-202504

Lab Sample ID: 320-120622-1

Date Collected: 04/14/25 23:59

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.1	2.0	ng/L		04/23/25 04:32	04/26/25 02:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	UJ	1.2	0.32	ng/L		04/23/25 04:32	04/26/25 02:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	UJ	1.6	0.33	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.6	0.15	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.6	0.21	ng/L		04/23/25 04:32	04/26/25 02:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.58	ng/L		04/23/25 04:32	04/26/25 02:04	1
9Cl-PF3ONS	ND	UJ	1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:04	1
11Cl-PF3OUdS	ND	UJ	1.6	0.24	ng/L		04/23/25 04:32	04/26/25 02:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:04	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.3	0.58	ng/L		04/23/25 04:32	04/26/25 02:04	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.0	J	8.1	1.4	ng/L		04/23/25 04:32	04/26/25 02:04	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	1.0	ng/L		04/23/25 04:32	04/26/25 02:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	16.2		5 - 130	04/23/25 04:32	04/26/25 02:04	1
13C5 PFPeA	24.8	*5-	40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C5 PFHxA	43.0		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C4 PFHpA	47.7		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C8 PFOA	64.7		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C9 PFNA	58.1		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C6 PFDA	67.0		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C7 PFUnA	51.7		30 - 130	04/23/25 04:32	04/26/25 02:04	1
13C2 PFDoA	34.5		10 - 130	04/23/25 04:32	04/26/25 02:04	1
13C2 PFTeDA	31.3		10 - 130	04/23/25 04:32	04/26/25 02:04	1
13C3 PFBS	76.6		40 - 135	04/23/25 04:32	04/26/25 02:04	1
13C3 PFHxS	79.4		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C8 PFOS	73.8		40 - 130	04/23/25 04:32	04/26/25 02:04	1
13C8 FOSA	23.6	*5-	40 - 130	04/23/25 04:32	04/26/25 02:04	1
D3-NMeFOSAA	39.7	*5-	40 - 170	04/23/25 04:32	04/26/25 02:04	1
D5-NEtFOSAA	23.5	*5-	25 - 135	04/23/25 04:32	04/26/25 02:04	1
13C3 HFPO-DA	35.1	*5-	40 - 130	04/23/25 04:32	04/26/25 02:04	1
D7-NMeFOSE	6.82	*5-	10 - 130	04/23/25 04:32	04/26/25 02:04	1
D9-NEtFOSE	5.32	*5-	10 - 130	04/23/25 04:32	04/26/25 02:04	1
D3-NMeFOSA	7.86	*5-	10 - 130	04/23/25 04:32	04/26/25 02:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	230		16	16	mg/L			04/18/25 15:27	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: EFF-G-202504

Lab Sample ID: 320-120622-2

Date Collected: 04/15/25 06:45

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.3	0.36	ng/L		04/23/25 04:32	04/25/25 07:21	1
6:2 FTS	0.90	J	3.3	0.33	ng/L		04/23/25 04:32	04/25/25 07:21	1
8:2 FTS	ND		3.3	0.73	ng/L		04/23/25 04:32	04/25/25 07:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	192		40 - 200				04/23/25 04:32	04/25/25 07:21	1
13C2 6:2 FTS	174		40 - 200				04/23/25 04:32	04/25/25 07:21	1
13C2 8:2 FTS	132		40 - 300				04/23/25 04:32	04/25/25 07:21	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.7		3.3	0.31	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoropentanoic acid (PFPeA)	10		1.6	0.19	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorohexanoic acid (PFHxA)	12		1.6	0.22	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.28	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorooctanoic acid (PFOA)	7.0		1.6	0.32	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorononanoic acid (PFNA)	0.55	J	1.6	0.37	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorodecanoic acid (PFDA)	0.65	J	1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.19	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorobutanesulfonic acid (PFBS)	3.3		1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoropentanesulfonic acid (PFPeS)	0.67	J	1.6	0.17	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorohexanesulfonic acid (PFHxS)	7.8		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorooctanesulfonic acid (PFOS)	3.6		1.6	0.23	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluorooctanesulfonamide (PFOSA)	0.84	J	1.6	0.18	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.32	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.85	J J	1.6	0.29	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	8.2	1.9	ng/L		04/23/25 04:32	04/26/25 02:20	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.2	2.0	ng/L		04/23/25 04:32	04/26/25 02:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		04/23/25 04:32	04/26/25 02:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		04/23/25 04:32	04/26/25 02:20	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-120622-1

Client Sample ID: EFF-G-202504

Lab Sample ID: 320-120622-2

Date Collected: 04/15/25 06:45

Matrix: Water

Date Received: 04/16/25 09:30

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		04/23/25 04:32	04/26/25 02:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		04/23/25 04:32	04/26/25 02:20	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		04/23/25 04:32	04/26/25 02:20	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		04/23/25 04:32	04/26/25 02:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		04/23/25 04:32	04/26/25 02:20	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		04/23/25 04:32	04/26/25 02:20	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.2	1.4	ng/L		04/23/25 04:32	04/26/25 02:20	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		04/23/25 04:32	04/26/25 02:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	98.4		5 - 130	04/23/25 04:32	04/26/25 02:20	1
13C5 PFPeA	92.6		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C5 PFHxA	105		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C4 PFHpA	110		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C8 PFOA	107		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C9 PFNA	95.2		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C6 PFDA	104		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C7 PFUnA	91.2		30 - 130	04/23/25 04:32	04/26/25 02:20	1
13C2 PFDoA	70.3		10 - 130	04/23/25 04:32	04/26/25 02:20	1
13C2 PFTeDA	47.4		10 - 130	04/23/25 04:32	04/26/25 02:20	1
13C3 PFBS	112		40 - 135	04/23/25 04:32	04/26/25 02:20	1
13C3 PFHxS	96.9		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C8 PFOS	88.1		40 - 130	04/23/25 04:32	04/26/25 02:20	1
13C8 FOSA	95.7		40 - 130	04/23/25 04:32	04/26/25 02:20	1
D3-NMeFOSAA	80.3		40 - 170	04/23/25 04:32	04/26/25 02:20	1
D5-NEtFOSAA	71.7		25 - 135	04/23/25 04:32	04/26/25 02:20	1
13C3 HFPO-DA	98.6		40 - 130	04/23/25 04:32	04/26/25 02:20	1
D7-NMeFOSE	77.9		10 - 130	04/23/25 04:32	04/26/25 02:20	1
D9-NEtFOSE	67.7		10 - 130	04/23/25 04:32	04/26/25 02:20	1
D5-NEtFOSA	76.0		10 - 130	04/23/25 04:32	04/26/25 02:20	1
D3-NMeFOSA	66.7		10 - 130	04/23/25 04:32	04/26/25 02:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	2.3		1.3	1.3	mg/L			04/18/25 15:27	1

Eurofins Sacramento

May 2025

Data Quality and Usability Review – May 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 6/3/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on May 12 and 13, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDG 320-121571-1.

Samples included in this review are listed below:

- Influent Comp-202505
- Eff-G-202505

Each sample was analyzed for the following constituents.

Analyte Group	Method
PFAS (40 Analytes)*	EPA Method 1633A
TSS**	Standard Method (SM) 2540D

Notes:

* The laboratory does not hold NELAP accreditation for PFAS by Method 1633A.

** The laboratory does not hold Wisconsin accreditation for TSS.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs

are used to assess the accuracy and precision of the analytical method using a clean matrix;

- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS and TSS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the QA/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The data package was found to be complete as received from the laboratory with the following note. The sample collection time for sample Influent Comp-202505 and the sample collection date for sample Eff-G-202505 were illegible on the Chain-of-Custody (COC). The collection time of 23:59 for sample Influent Comp-202505 and the collection date of 5/13/25 for sample Eff-G-202505 were confirmed using the field notes.
- The TSS analyses were performed by the Eurofins West Sacramento, California laboratory without Wisconsin certification. TSS analyses were conducted by this laboratory in order to meet the recommended holding time and to allow sufficient time for the TSS results to be used in the consideration of the appropriate preparation procedure for method 1633A. Further, the PFAS analyses were performed by the same laboratory without NELAP certification. However, since the laboratory was certified in Wisconsin for PFAS by method 1633A, there is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.

- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample Influent Comp-202505 was not shipped to the laboratory until one day after collection. The sample was stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS and TSS. Target analytes were not detected in the method blanks.
- All samples were extracted and/or prepared and analyzed within the holding time.

Note that the preparation method referenced for the 1633A analysis is 1633 instead of 1633A. The associated samples were prepared in accordance with method 1633A; however, the laboratory has not updated the reference appropriately in their reporting system. No validation action was taken on this basis.

- The LCS (including low-level LCS for PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The following table summarizes the EIS %R that was outside of the method acceptance limits, the associated sample, and the validation action.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action
Influent Comp-202505	13C2 6:2 FTS	202	40-200	The positive result for 6:2 FTS was qualified as estimated (J) in sample Influent Comp-202505. This result was also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was performed on sample Influent Comp-202505 for TSS. The RPD was within the laboratory's acceptance limit.
- The laboratory noted the following observations in the case narrative for the PFAS and TSS analyses. No validation actions were taken on this basis.
 - Samples Influent Comp-202505 and Eff-G-202505 were discolored following extraction for PFAS.
 - Sample Influent Comp-202505 had a thin layer of sediment present in the bottom of the bottle prior to extraction and an excess amount of sediment and particulates prior to extraction for PFAS. This sample was prepared using project-specified instructions. The sample was fortified with EIS and then centrifuged. The supernatant was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual solids were then extracted via solvent rinse with basic methanol. The resulting methanolic extract was added to the SPE column used for the supernatant to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.
 - Sample Influent Comp-202505 was very difficult to filter, was turbid, and had observable sediment for the TSS analysis.

- No dilutions were performed on the samples in this data set for PFAS.
- The QL for TSS in sample Influent Comp-202505 was approximately 4.2x higher than the associated method blank due to a reduced volume (60 mLs versus the typical 250 mL) used in the sample analysis; the case narrative noted that this sample was prepared at a reduced volume due to the nature of the sample matrix as previously stated above. In addition, the QL for TSS in sample Eff-G-202505 was approximately 4x lower than the associated method blank due to an increased volume (1,000 mLs versus the typical 250 mL) used in the sample analysis; the laboratory stated during previous reviews that an increased volume is used for clean samples to ensure that they meet the minimum method requirement of 2.5 mg of filtered solids. There is no adverse impact on the data usability due to these issues since TSS was detected above the QL in both samples in this data set. No validation action was required on this basis.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Influent Comp-202505

Lab Sample ID: 320-121571-1

Date Collected: 05/12/25 23:59

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	13		3.1	0.29	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorohexanoic acid (PFHxA)	7.5		1.6	0.21	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoroheptanoic acid (PFHpA)	1.6		1.6	0.27	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorooctanoic acid (PFOA)	6.2		1.6	0.31	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorononanoic acid (PFNA)	0.54	J	1.6	0.36	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorobutanesulfonic acid (PFBS)	4.7		1.6	0.22	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorohexanesulfonic acid (PFHxS)	7.8		1.6	0.19	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorooctanesulfonic acid (PFOS)	8.0		1.6	0.22	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		05/19/25 06:57	05/19/25 17:33	1
4:2 FTS	ND		3.1	0.34	ng/L		05/19/25 06:57	05/19/25 17:33	1
6:2 FTS	1.2	J J	3.1	0.32	ng/L		05/19/25 06:57	05/19/25 17:33	1
8:2 FTS	ND		3.1	0.70	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J	1.6	0.27	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.8	J	7.9	1.8	ng/L		05/19/25 06:57	05/19/25 17:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		05/19/25 06:57	05/19/25 17:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		05/19/25 06:57	05/19/25 17:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		05/19/25 06:57	05/19/25 17:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		05/19/25 06:57	05/19/25 17:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		05/19/25 06:57	05/19/25 17:33	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		05/19/25 06:57	05/19/25 17:33	1
11CI-PF3OUs	ND		1.6	0.23	ng/L		05/19/25 06:57	05/19/25 17:33	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Influent Comp-202505

Lab Sample ID: 320-121571-1

Date Collected: 05/12/25 23:59

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	ND		1.6	0.20	ng/L		05/19/25 06:57	05/19/25 17:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	11		3.1	0.56	ng/L		05/19/25 06:57	05/19/25 17:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20		7.9	1.4	ng/L		05/19/25 06:57	05/19/25 17:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.7	J	7.9	0.97	ng/L		05/19/25 06:57	05/19/25 17:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	91.9		5 - 130				05/19/25 06:57	05/19/25 17:33	1
13C5 PFPeA	69.5		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C5 PFHxA	79.3		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C4 PFHpA	98.1		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C8 PFOA	106		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C9 PFNA	102		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C6 PFDA	96.3		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C7 PFUnA	71.6		30 - 130				05/19/25 06:57	05/19/25 17:33	1
13C2 PFDoA	52.3		10 - 130				05/19/25 06:57	05/19/25 17:33	1
13C2 PFTeDA	58.0		10 - 130				05/19/25 06:57	05/19/25 17:33	1
13C3 PFBS	90.3		40 - 135				05/19/25 06:57	05/19/25 17:33	1
13C3 PFHxS	98.1		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C8 PFOS	76.6		40 - 130				05/19/25 06:57	05/19/25 17:33	1
13C8 FOSA	85.2		40 - 130				05/19/25 06:57	05/19/25 17:33	1
D3-NMeFOSAA	45.3		40 - 170				05/19/25 06:57	05/19/25 17:33	1
D5-NEtFOSAA	31.4		25 - 135				05/19/25 06:57	05/19/25 17:33	1
13C2 4:2 FTS	165		40 - 200				05/19/25 06:57	05/19/25 17:33	1
13C2 6:2 FTS	202	*5+	40 - 200				05/19/25 06:57	05/19/25 17:33	1
13C2 8:2 FTS	153		40 - 300				05/19/25 06:57	05/19/25 17:33	1
13C3 HFPO-DA	81.8		40 - 130				05/19/25 06:57	05/19/25 17:33	1
D7-NMeFOSE	39.2		10 - 130				05/19/25 06:57	05/19/25 17:33	1
D9-NEtFOSE	26.9		10 - 130				05/19/25 06:57	05/19/25 17:33	1
D5-NEtFOSA	28.2		10 - 130				05/19/25 06:57	05/19/25 17:33	1
D3-NMeFOSA	46.6		10 - 130				05/19/25 06:57	05/19/25 17:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	230		21	21	mg/L			05/19/25 14:38	1

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	11		3.0	0.28	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.17	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorohexanoic acid (PFHxA)	9.6		1.5	0.20	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoroheptanoic acid (PFHpA)	1.5		1.5	0.26	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorooctanoic acid (PFOA)	6.8		1.5	0.29	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorononanoic acid (PFNA)	0.52	J	1.5	0.34	ng/L		05/19/25 06:57	05/19/25 17:50	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.58	J	1.5	0.33	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.41	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.43	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.60	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorobutanesulfonic acid (PFBS)	4.2		1.5	0.21	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoropentanesulfonic acid (PFPeS)	0.53	J	1.5	0.16	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.5	0.18	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorooctanesulfonic acid (PFOS)	3.1		1.5	0.21	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.23	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.23	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.39	ng/L		05/19/25 06:57	05/19/25 17:50	1
4:2 FTS	ND		3.0	0.32	ng/L		05/19/25 06:57	05/19/25 17:50	1
6:2 FTS	0.89	J	3.0	0.30	ng/L		05/19/25 06:57	05/19/25 17:50	1
8:2 FTS	ND		3.0	0.67	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluorooctanesulfonamide (PFOSA)	0.34	J	1.5	0.17	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.33	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.59	J	1.5	0.26	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.35	J	1.5	0.33	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.4	1.7	ng/L		05/19/25 06:57	05/19/25 17:50	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.4	1.8	ng/L		05/19/25 06:57	05/19/25 17:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.1	0.29	ng/L		05/19/25 06:57	05/19/25 17:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.14	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.19	ng/L		05/19/25 06:57	05/19/25 17:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.53	ng/L		05/19/25 06:57	05/19/25 17:50	1
9CI-PF3ONS	ND		1.5	0.43	ng/L		05/19/25 06:57	05/19/25 17:50	1
11CI-PF3OUdS	ND		1.5	0.22	ng/L		05/19/25 06:57	05/19/25 17:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.18	ng/L		05/19/25 06:57	05/19/25 17:50	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.53	ng/L		05/19/25 06:57	05/19/25 17:50	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.3	J	7.4	1.3	ng/L		05/19/25 06:57	05/19/25 17:50	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-121571-1

Client Sample ID: Eff-G-202505

Lab Sample ID: 320-121571-2

Date Collected: 05/13/25 08:36

Matrix: Water

Date Received: 05/14/25 09:40

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.4	0.92	ng/L		05/19/25 06:57	05/19/25 17:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130				05/19/25 06:57	05/19/25 17:50	1
13C5 PFPeA	85.8		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C5 PFHxA	88.9		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C4 PFHpA	93.2		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C8 PFOA	106		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C9 PFNA	99.9		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C6 PFDA	109		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C7 PFUnA	102		30 - 130				05/19/25 06:57	05/19/25 17:50	1
13C2 PFDoA	83.8		10 - 130				05/19/25 06:57	05/19/25 17:50	1
13C2 PFTeDA	55.4		10 - 130				05/19/25 06:57	05/19/25 17:50	1
13C3 PFBS	101		40 - 135				05/19/25 06:57	05/19/25 17:50	1
13C3 PFHxS	99.0		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C8 PFOS	85.9		40 - 130				05/19/25 06:57	05/19/25 17:50	1
13C8 FOSA	89.7		40 - 130				05/19/25 06:57	05/19/25 17:50	1
D3-NMeFOSAA	79.9		40 - 170				05/19/25 06:57	05/19/25 17:50	1
D5-NEtFOSAA	73.4		25 - 135				05/19/25 06:57	05/19/25 17:50	1
13C2 4:2 FTS	161		40 - 200				05/19/25 06:57	05/19/25 17:50	1
13C2 6:2 FTS	135		40 - 200				05/19/25 06:57	05/19/25 17:50	1
13C2 8:2 FTS	120		40 - 300				05/19/25 06:57	05/19/25 17:50	1
13C3 HFPO-DA	93.0		40 - 130				05/19/25 06:57	05/19/25 17:50	1
D7-NMeFOSE	68.9		10 - 130				05/19/25 06:57	05/19/25 17:50	1
D9-NEtFOSE	62.4		10 - 130				05/19/25 06:57	05/19/25 17:50	1
D5-NEtFOSA	71.6		10 - 130				05/19/25 06:57	05/19/25 17:50	1
D3-NMeFOSA	67.6		10 - 130				05/19/25 06:57	05/19/25 17:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	3.7		1.3	1.3	mg/L			05/19/25 14:38	1

June 2025

Data Quality and Usability Review – June 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Elizabeth Denly

Date: 9/22/2025

Madison Metropolitan Sewerage District (MMSD) collected influent, effluent, and biosolids samples at the Nine Springs wastewater treatment plant on June 16 and 17, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS), total oxidizable precursor (TOP) assay PFAS, and total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDGs 320-122544-1 and 320-122544-2.

Samples included in this review are listed below:

- BIO-A-23-202506
- BIO-B-202506
- INF-02-202506
- INF-08-202506
- INF-18-202506
- EB-01-202506
- BIO-A-24-202506
- EFF G-202506
- INF-07-202506
- INF-11-202506
- INF-COMP-202506
- EB-02-202506

Each sample was analyzed for one or more the following constituents.

Analyte Group	Method
PFAS (40 Analytes)* and Total Solids*,**	EPA Method 1633A
PFAS TOP Assay (40 Analytes)**	Modified EPA Method 537 and laboratory SOP using Isotope Dilution/WI Method Criteria
TSS**	Standard Method (SM) 2540D

Notes:

* The laboratory does not hold NELAP accreditation for PFAS or total solids by Method 1633A.

** The laboratory does not hold Wisconsin accreditation for the full list of PFAS analytes reported by TOP Assay, TSS, or total solids.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations, Document # EA-19-0001, WDNR, December 2019¹, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part

¹ The Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations were used to evaluate the TOP assay data only since the laboratory did not analyze the TOP assay samples using EPA Method 1633A.

or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS and TSS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The data packages were found to be complete as received from the laboratory with the following note. The sample identification on the chain-of-custody (COC) for sample BIO-A-24-202506 was listed as BIO-A-2024-06 on the container label. The laboratory logged in this sample according to the sample ID on the COC which is correct. No validation actions were taken on this basis.
- The TSS and total solids analyses were performed by the Eurofins West Sacramento, California laboratory without NELAP or Wisconsin certification. TSS analyses were conducted by this laboratory in order to meet the recommended holding time and to allow sufficient time for the TSS results to be used in the consideration of the appropriate preparation procedure for method 1633A. Further, the total PFAS analyses were performed by the Eurofins West Sacramento, California laboratory without NELAP certification. However, since the laboratory was certified in Wisconsin for PFAS by method 1633A, there is no adverse impact on the data usability due to this issue. Further, select analytes in the PFAS-TOP assay were performed by the Eurofins West Sacramento, California laboratory without Wisconsin certification. However, since the laboratory was certified in Wisconsin for select PFAS-TOP assay analytes and was NELAP certified for all PFAS-TOP assay analytes, there is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - All samples in this data set, with the exception of sample EFF G-202506, were not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS (total and TOP assay) and TSS. The following table summarizes the compounds detected in the method blanks, the associated samples, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Action
MB 320-859937/1-A (post-TOP assay)	PFBA	4.88 J ng/L	The positive post-TOP assay result for PFBA in sample EFF G-202506 was qualified as nondetect (U) at the reported concentration since the result was > the QL and <10x the blank concentration.
Associated sample: EFF G-202506			
MB 320-863235/1-A (post-TOP assay)	PFBA	0.531 J ug/kg	No validation actions were required on this basis since the results for PFBA were >10x the blank concentration in the post-TOP assay analyses of the associated samples.
Associated samples: BIO-A-23-202506, BIO-A-24-202506, BIO-B-202506			

- Two equipment blanks (EB-01-202506 and EB-02-202506) were collected and analyzed for total PFAS. No target compounds were detected in EB-02-202506. The following table summarizes the compounds detected in the other equipment blank (EB-01-202506), the associated sample, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Actions
EB-01 202506 (total PFAS)	PFBA	1.1 J ng/L	No validation actions were required on this basis for the associated sample since the listed compounds were > the QL and > 10x the blank concentration in the associated sample (when adjusted for sample-specific preparation factors).
	PFHpA	0.28 J ng/L	
	PFOA	0.90 J ng/L	
	PFBS	1.0 J ng/L	
	PFOS	0.36 J ng/L	
	PFHxA	3.4 ng/L	
Associated sample: BIO-A-23-202506			

* Note that the case narrative stated that sample EB-01-202506 was re-extracted with concurring results; therefore, the original data were reported by the laboratory.

- All samples were extracted and/or prepared and analyzed within the holding time, with the following exceptions.
 - Samples INF-02-202506, INF-08-202506, INF-11-202506, INF-18-202506, and INF-COMP-202506 were extracted for total PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive results for NMeFOSE in samples INF-11-202506 and INF-COMP-202506 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to a result <QL. The nondetect results for NMeFOSE in samples INF-02-202506, INF-08-202506, and INF-18-202506, and the nondetect results for NEtFOSE in samples INF-02-202506, INF-08-202506, INF-11-202506, INF-18-202506, and INF-COMP-202506 were qualified as estimated (UJ).
 - The positive results for NMeFOSAA in samples INF-08-202506 and INF-COMP-202506 and the positive result for NEtFOSAA in sample INF-18-202506 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to a result <QL. No qualification was required for NMeFOSAA in samples INF-02-202506, INF-11-202506, and INF-18-202506 and total NEtFOSAA in samples INF-02-202506, INF-08-202506, INF-11-202506, and INF-COMP-202506 since these analytes were not detected in these samples.
 - Note that the preparation method referenced for the 1633A analysis in SDG 320-119687-1 is 1633 instead of 1633A. The associated samples were prepared in accordance with method 1633A; however, the laboratory has not updated the reference appropriately in their reporting system. No validation action was taken on this basis.
- The LCS (including low-level LCS for method 1633A PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits except as noted in the table below. Note that the laboratory's acceptance limits for TOP assay LCS/LCSDs are different than those specified in the WI Method Criteria; the laboratory's acceptance limits are listed below but the WI Method Criteria (60-135%) were also considered in the evaluation of the data.

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	RPD (%)	LCS/LCSD %R/RPD Limits	Validation Actions
LCS 320-859517/3-A/ LCSD 320-859517/4-A (total PFAS)	PFDS	-/-	37	-/30	No validation action was required on this basis since total PFDS and total 11Cl-PF3OUdS were not detected in the associated samples.
	11Cl-PF3OUdS	-/-	48	-/30	
Associated samples: BIO-A-23-202506. BIO-A-24-202506. BIO-B-202506					

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	RPD (%)	LCS/LCSD %R/RPD Limits	Validation Actions
LCS 320-859928/2-A/ LCSD 320-859928/3-A (pre-TOP assay)	NMeFOSA	67/69	-	72-132/-	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
LCS 320-859937/2-A/ LCSD 320-859937/3-A (post-TOP assay)	PFPeA	249/234	-	151-208/-	Professional judgement was used and the positive results for post-TOP assay PFPeA, PFHxA, and 6:2 FTS were qualified as estimated (J) in the associated sample. See Additional note below.
	PFHxA	-/295	-	194-269/-	
	6:2 FTS	-/-	200	-/30	
	11Cl-PF3OUdS	39/41		45-105/-	Professional judgement was used and the nondetect result for post-TOP assay 11Cl-PF3OUdS was qualified as estimated (UJ) in the associated sample. See Additional note below.
	PFOSA	-/-	47	-/30	No validation action was required on this basis since post-TOP assay PFOSA, HFPO-DA/Gen X, and ADONA were not detected in the associated sample.
	HFPO-DA/Gen X	115/116	-	52-112/-	
	ADONA	-/-	42	-/30	
Associated sample: EFF G-202506					
LCS 320-863235/2-A/ LCSD 320-863235/3-A (post-TOP assay)	PFTTrDA	70/71	-	78-138/-	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
Associated samples: BIO-A-23-202506, BIO-A-24-202506, BIO-B-202506					
-: Met criteria					

Additional Note:

The laboratory has previously stated that enhanced post-TOP assay LCS/LCSD %Rs for the perfluoroalkyl carboxylic acids [PFCA]s (i.e., PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, and PFDA) is consistent with the expected oxidation of precursor analytes. The laboratory uses elevated %R acceptance limits to account for this expected oxidation; therefore, the post-TOP assay LCS/LCSD %Rs for the PFCAs were evaluated against the laboratory's limits only and were not evaluated against the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. If post-TOP assay LCS/LCSD %Rs of the PFCA compounds exceed the elevated laboratory limits, professional judgement is used and samples are qualified as estimated without a direction of bias (J). It should also be noted that the laboratory stated in the case narrative that zero %R of precursor analytes (i.e., 3:3 FTCA, 5:3 FTCA, 7:3 FTCA, ADONA, 4:2 FTS, 6:2 FTS, 8:2 FTS, PFOSA, NMeFOSAA, NEtFOSAA, NEtFOSA, NMeFOSA, NMeFOSE, and NEtFOSE) is also expected in the post-TOP assay due to the oxidation of these compounds during the TOP Assay procedure; %Rs ≤ 10% were observed for the listed precursors. No validation actions were taken on this basis. Post-TOP assay LCS/LCSD %Rs for other PFAS were evaluated against both the laboratory's limits and the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%.

- MS/MSD analyses were not performed on a sample from this data set.
- The reverse surrogate (M2-4:2 FTS) was within the laboratory's acceptance limits (0-10%) in the post-TOP assay analyses. The following table summarizes the remaining EIS %Rs that were outside of the laboratory's acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-02-202506 (total PFAS)	D3-NMeFOSAA	33.9	40-170	The nondetect results for total NMeFOSAA and NEtFOSE were qualified as estimated (UJ) in sample INF-02-202506.
	D9-NEtFOSE	7.89	10-130	
	13C2 6:2 FTS	214	40-200	No validation action was required on this basis since total 6:2 FTS was not detected in sample INF-02-202506
INF-07-202506 (total PFAS)	13C2 6:2 FTS	219	40-200	The positive result for total 6:2 FTS was qualified as estimated (J) in sample INF-07-202506
INF-08-202506 (total PFAS)	D3-NMeFOSAA	31.4	40-170	The positive and nondetect results for total NMeFOSAA, NEtFOSAA, 6:2 FTS, and NEtFOSE were qualified as estimated (J/UJ) in sample INF-08-202506.
	D5-NEtFOSAA	23.0	25-135	
	13C2 6:2 FTS	234	40-200	
	D9-NEtFOSE	9.25	10-130	
INF-11-202506 (total PFAS)	D3-NMeFOSAA	30.5	40-170	The nondetect results for total NMeFOSAA and NEtFOSAA were qualified as estimated (UJ) in sample INF-11-202506.
	D5-NEtFOSAA	21.1	25-135	
	13C2 6:2 FTS	228	40-200	No validation action was required on this basis since total 6:2 FTS was not detected in sample INF-11-202506
INF-18-202506 (total PFAS)	D3-NMeFOSAA	31.5	40-170	The positive and nondetect results for total NMeFOSAA, NEtFOSAA, and 6:2 FTS were qualified as estimated (J/UJ) in sample INF-18-202506.
	D5-NEtFOSAA	23.1	25-135	
	13C2 6:2 FTS	239	40-200	
INF-COMP-202506 (total PFAS)	D3-NMeFOSAA	32.8	40-170	The positive and nondetect results for total NMeFOSAA and NEtFOSAA were qualified as estimated (J/UJ) in sample INF-COMP-202506.
	D5-NEtFOSAA	24.5	25-135	
	13C2 6:2 FTS	239	40-200	No validation action was required on this basis since total 6:2 FTS was not detected in sample INF-COMP-202506
BIO-A-23-202506 (total PFAS)	D5-NEtFOSAA	29.0	40-150	The positive result for total NEtFOSAA was qualified as estimated (J) in sample BIO-A-23-202506.
BIO-A-24-202506 (total PFAS)	D5-NEtFOSAA	24.9	40-150	The positive result for total NEtFOSAA was qualified as estimated (J) in sample BIO-A-24-202506.
BIO-B-202506 (total PFAS)	D5-NEtFOSAA	35.4	40-150	The positive result for total NEtFOSAA was qualified as estimated (J) in sample BIO-B-202506.
BIO-A-23-202506 (pre-TOP assay)	13C2 6:2 FTS	159	25-150	The positive result for pre-TOP assay 6:2 FTS was qualified as estimated (J) in sample BIO-A-23-202506.
BIO-B-202506 (pre-TOP assay)	13C2 6:2 FTS	166	25-150	No validation action was required on this basis since pre-TOP assay 6:2 FTS was not detected in sample BIO-B-202506.

Notes:

* Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

* Note that based on professional judgement, a "significantly low" limit of 5% was used for rejection criteria.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was performed on sample INF-02-202506 for TSS. The RPD was within the laboratory's acceptance limit.
- The laboratory noted the following observations in the case narrative for the PFAS and TSS analyses. No validation actions were taken on the basis of these observations.
 - Samples INF-02-202506, INF-07-202506, INF-08-202506, INF-11-202506, INF-18-202506, and INF-COMP-202506 contained floating particulates and were discolored prior to and following extraction for total PFAS. These samples, with the exception of INF-07-202506, were prepared using project-specified instructions. The samples were fortified with EIS and then centrifuged. The aqueous phase was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual particulates were then rinsed with solvent (basic methanol) and the resulting methanolic extract was added to the aqueous phase prior to extraction to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.
 - Sample EFF G-202506 was discolored following extraction for total PFAS and the pre-TOP assay PFAS.
 - Samples BIO-A-23-202506, BIO-A-24-202506, and BIO-B-202506 were discolored prior to and following the extraction for total PFAS.
 - Samples INF-02-202506, INF-07-202506, INF-08-202506, INF-11-202506, INF-18-202506, and INF-COMP-202506 were laden with sediment and would not filter using the nominal volume for the TSS analysis.
- No dilutions were performed on the samples in this data set for PFAS.
- The QL for TSS in sample INF-02-202506 was approximately 5x higher than the associated method blank, the QL for TSS in sample INF-11-202506 was approximately 3.6x higher than the associated method blank, and the QLs for TSS in samples INF-07-202506, INF-08-202506, INF-18-202506, and INF-COMP-202506 were approximately 4.2x higher than the associated method blank due to reduced volumes (50, 60, or 70 mL versus the typical 250 mL) used in the sample analysis; the case narrative noted that these samples were prepared at a reduced volume due to the nature of the sample matrix (i.e., laden with sediment, and would not filter using the nominal volume). In addition, the QL for TSS in sample EFF-G 202506 was approximately 4x lower than the associated method blank due to an increased volume (1,000 mLs versus the typical 250 mL) used in the sample analysis; the laboratory stated during previous reviews that an increased volume is used for clean samples to ensure that they meet the minimum method requirement of 2.5 mg of filtered solids. There is no adverse impact on the data usability due to these issues since TSS was detected above the QL in all samples in this data set. No validation action was required on this basis.
- The results for the following PFAS in the samples listed below were flagged with an "I" by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - Total PFHxA in sample INF-COMP-202506;
 - Total PFHpA in samples INF-02-202506 and INF-11-202506;
 - Total PFNA in samples INF-07-202506*, INF-08-202506*, and INF-18-202506*;
 - Total PFBS in samples INF-08-202506, INF-11-202506, and INF-18-202506;

- Pre-TOP assay PFHxS in samples BIO-A-23-202506*, BIO-A-24-202506*, and BIO-B-202506*;
- Total PFOS in sample INF-07-202506;
- Pre-TOP assay PFOS in sample BIO-B-202506;
- Total 6:2 FTS in samples INF-07-202506*, INF-08-202506*, and BIO-A-24-202506*;
- Total PFOSA in sample EFF G-202506*;
- Total NMeFOSA in samples BIO-A-23-202506 and BIO-A-24-202506;
- Total NMeFOSAA in sample INF-08-202506*.

* This result was also qualified as estimated (J) by the laboratory due to detection < the QL.

- The laboratory noted internal standard nonconformances in the case narrative and through the use of a “*3” qualifier associated with the EIS 13C4 PFBA in the undiluted total PFAS analysis of sample INF-18-202506 and the total PFAS analysis of sample BIO-B-202506. No validation action was taken on this basis since the recoveries for the affected EIS were within the method acceptance limits in these samples.
- The percent moisture for samples BIO-A-23-202506, BIO-A-24-202506, and BIO-B-202506 were high (>70% moisture). The laboratory has been contacted during previous rounds of validation review regarding this issue and stated that biosolids samples are agitated and then immediately aliquoted for extraction after agitation, indicating that a representative sample is extracted for PFAS analysis. No validation actions were taken on this basis.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narrative. No validation actions were taken on this basis since the actual CCV results were not provided for review.
- The laboratory noted in the case narrative and through the use of a “G” qualifier that sample INF 07-202506 had matrix interferences that required elevation of the QL for PFPeA in this sample. The QL and method detection limit (MDL) were raised by the laboratory to be equal to the matrix interference. No validation action was taken on this basis.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-02-202506

Lab Sample ID: 320-122544-1

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.8		3.2	0.30	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorohexanoic acid (PFHxA)	3.6		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoroheptanoic acid (PFHpA)	1.7	I J	1.6	0.28	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorooctanoic acid (PFOA)	4.1		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorononanoic acid (PFNA)	0.52	J	1.6	0.37	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorodecanoic acid (PFDA)	0.56	J	1.6	0.36	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.65	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorobutanesulfonic acid (PFBS)	2.0		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorooctanesulfonic acid (PFOS)	3.9		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		06/28/25 05:31	07/01/25 02:38	1
4:2 FTS	ND		3.2	0.35	ng/L		06/28/25 05:31	07/01/25 02:38	1
6:2 FTS	ND		3.2	0.33	ng/L		06/28/25 05:31	07/01/25 02:38	1
8:2 FTS	ND		3.2	0.73	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	UJ	1.6	0.28	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	8.1	1.8	ng/L		06/28/25 05:31	07/01/25 02:38	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.1	2.0	ng/L		06/28/25 05:31	07/01/25 02:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		06/28/25 05:31	07/01/25 02:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.48	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 02:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 02:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.58	ng/L		06/28/25 05:31	07/01/25 02:38	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		06/28/25 05:31	07/01/25 02:38	1
11CI-PF3OUs	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 02:38	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-02-202506

Lab Sample ID: 320-122544-1

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 02:38	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.58	ng/L		06/28/25 05:31	07/01/25 02:38	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	8.1	1.4	ng/L		06/28/25 05:31	07/01/25 02:38	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	1.0	ng/L		06/28/25 05:31	07/01/25 02:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	61.8		5 - 130				06/28/25 05:31	07/01/25 02:38	1
13C5 PFPeA	48.1		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C5 PFHxA	58.9		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C4 PFHpA	65.4		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C8 PFOA	94.8		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C9 PFNA	75.8		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C6 PFDA	78.7		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C7 PFUnA	44.0		30 - 130				06/28/25 05:31	07/01/25 02:38	1
13C2 PFDoA	27.7		10 - 130				06/28/25 05:31	07/01/25 02:38	1
13C2 PFTeDA	24.4		10 - 130				06/28/25 05:31	07/01/25 02:38	1
13C3 PFBS	96.7		40 - 135				06/28/25 05:31	07/01/25 02:38	1
13C3 PFHxS	103		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C8 PFOS	70.9		40 - 130				06/28/25 05:31	07/01/25 02:38	1
13C8 FOSA	64.5		40 - 130				06/28/25 05:31	07/01/25 02:38	1
D3-NMeFOSAA	33.9	*5-	40 - 170				06/28/25 05:31	07/01/25 02:38	1
D5-NEtFOSAA	26.9		25 - 135				06/28/25 05:31	07/01/25 02:38	1
13C2 4:2 FTS	166		40 - 200				06/28/25 05:31	07/01/25 02:38	1
13C2 6:2 FTS	214	*5+	40 - 200				06/28/25 05:31	07/01/25 02:38	1
13C2 8:2 FTS	149		40 - 300				06/28/25 05:31	07/01/25 02:38	1
13C3 HFPO-DA	56.6		40 - 130				06/28/25 05:31	07/01/25 02:38	1
D7-NMeFOSE	26.4		10 - 130				06/28/25 05:31	07/01/25 02:38	1
D9-NEtFOSE	7.89	*5-	10 - 130				06/28/25 05:31	07/01/25 02:38	1
D5-NEtFOSA	16.4		10 - 130				06/28/25 05:31	07/01/25 02:38	1
D3-NMeFOSA	27.0		10 - 130				06/28/25 05:31	07/01/25 02:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	320		25	25	mg/L			06/23/25 11:45	1

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	27		3.0	0.28	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoropentanoic acid (PFPeA)	ND	G	250	250	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorohexanoic acid (PFHxA)	11		1.5	0.21	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoroheptanoic acid (PFHpA)	2.5		1.5	0.26	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorooctanoic acid (PFOA)	7.2		1.5	0.30	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorononanoic acid (PFNA)	0.84	J I J	1.5	0.35	ng/L		06/23/25 20:11	06/24/25 09:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.58	J	1.5	0.34	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorobutanesulfonic acid (PFBS)	25		1.5	0.21	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorohexanesulfonic acid (PFHxS)	5.0		1.5	0.19	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorooctanesulfonic acid (PFOS)	6.7	I J	1.5	0.21	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.40	ng/L		06/23/25 20:11	06/24/25 09:45	1
4:2 FTS	ND		3.0	0.33	ng/L		06/23/25 20:11	06/24/25 09:45	1
6:2 FTS	1.4	J I J	3.0	0.31	ng/L		06/23/25 20:11	06/24/25 09:45	1
8:2 FTS	ND		3.0	0.68	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.29	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.61	J	1.5	0.34	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	J	1.5	0.27	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.2	J	1.5	0.34	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.2	J	7.6	1.7	ng/L		06/23/25 20:11	06/24/25 09:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.6	1.9	ng/L		06/23/25 20:11	06/24/25 09:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	△	1.1	0.30	ng/L		06/23/25 20:11	06/24/25 09:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.30	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.14	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		06/23/25 20:11	06/24/25 09:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		06/23/25 20:11	06/24/25 09:45	1
9Cl-PF3ONS	ND		1.5	0.44	ng/L		06/23/25 20:11	06/24/25 09:45	1
11Cl-PF3OUdS	ND		1.5	0.23	ng/L		06/23/25 20:11	06/24/25 09:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		06/23/25 20:11	06/24/25 09:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.55	ng/L		06/23/25 20:11	06/24/25 09:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		7.6	1.3	ng/L		06/23/25 20:11	06/24/25 09:45	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.6	J	7.6	0.95	ng/L		06/23/25 20:11	06/24/25 09:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-07-202506

Lab Sample ID: 320-122544-2

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	85.1		5 - 130	06/23/25 20:11	06/24/25 09:45	1
13C5 PFPeA	58.8		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C5 PFHxA	81.5		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C4 PFHpA	89.7		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C8 PFOA	86.5		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C9 PFNA	83.7		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C6 PFDA	94.2		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C7 PFUnA	76.8		30 - 130	06/23/25 20:11	06/24/25 09:45	1
13C2 PFDoA	51.6		10 - 130	06/23/25 20:11	06/24/25 09:45	1
13C2 PFTeDA	25.7		10 - 130	06/23/25 20:11	06/24/25 09:45	1
13C3 PFBS	82.3		40 - 135	06/23/25 20:11	06/24/25 09:45	1
13C3 PFHxS	95.4		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C8 PFOS	76.9		40 - 130	06/23/25 20:11	06/24/25 09:45	1
13C8 FOSA	86.6		40 - 130	06/23/25 20:11	06/24/25 09:45	1
D3-NMeFOSAA	65.7		40 - 170	06/23/25 20:11	06/24/25 09:45	1
D5-NEtFOSAA	46.7		25 - 135	06/23/25 20:11	06/24/25 09:45	1
13C2 4:2 FTS	161		40 - 200	06/23/25 20:11	06/24/25 09:45	1
13C2 6:2 FTS	219	*5+	40 - 200	06/23/25 20:11	06/24/25 09:45	1
13C2 8:2 FTS	182		40 - 300	06/23/25 20:11	06/24/25 09:45	1
13C3 HFPO-DA	72.0		40 - 130	06/23/25 20:11	06/24/25 09:45	1
D7-NMeFOSE	39.3		10 - 130	06/23/25 20:11	06/24/25 09:45	1
D9-NEtFOSE	22.2		10 - 130	06/23/25 20:11	06/24/25 09:45	1
D5-NEtFOSA	57.0		10 - 130	06/23/25 20:11	06/24/25 09:45	1
D3-NMeFOSA	55.2		10 - 130	06/23/25 20:11	06/24/25 09:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	200		21	21	mg/L			06/23/25 11:45	1

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.1		3.1	0.29	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorohexanoic acid (PFHxA)	4.2		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.27	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorooctanoic acid (PFOA)	2.8		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorononanoic acid (PFNA)	0.60	J I J	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.34	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorobutanesulfonic acid (PFBS)	2.3	I J	1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 02:54	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		06/28/25 05:31	07/01/25 02:54	1
4:2 FTS	ND		3.1	0.34	ng/L		06/28/25 05:31	07/01/25 02:54	1
6:2 FTS	0.58	J I J	3.1	0.32	ng/L		06/28/25 05:31	07/01/25 02:54	1
8:2 FTS	ND		3.1	0.70	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.45	J I J	1.6	0.27	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	UJ	1.6	0.34	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	7.8	1.8	ng/L		06/28/25 05:31	07/01/25 02:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.8	1.9	ng/L		06/28/25 05:31	07/01/25 02:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		06/28/25 05:31	07/01/25 02:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.50	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 02:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/28/25 05:31	07/01/25 02:54	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 02:54	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 02:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 02:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/28/25 05:31	07/01/25 02:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.4	J	7.8	1.3	ng/L		06/28/25 05:31	07/01/25 02:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		06/28/25 05:31	07/01/25 02:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79.2		5 - 130	06/28/25 05:31	07/01/25 02:54	1
13C5 PFPeA	49.2		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C5 PFHxA	60.7		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C4 PFHpA	71.1		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C8 PFOA	102		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C9 PFNA	79.4		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C6 PFDA	76.6		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C7 PFUnA	47.2		30 - 130	06/28/25 05:31	07/01/25 02:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-08-202506

Lab Sample ID: 320-122544-3

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	27.7		10 - 130	06/28/25 05:31	07/01/25 02:54	1
13C2 PFTeDA	22.2		10 - 130	06/28/25 05:31	07/01/25 02:54	1
13C3 PFBS	101		40 - 135	06/28/25 05:31	07/01/25 02:54	1
13C3 PFHxS	93.2		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C8 PFOS	68.9		40 - 130	06/28/25 05:31	07/01/25 02:54	1
13C8 FOSA	67.6		40 - 130	06/28/25 05:31	07/01/25 02:54	1
D3-NMeFOSAA	31.4	*5-	40 - 170	06/28/25 05:31	07/01/25 02:54	1
D5-NEtFOSAA	23.0	*5-	25 - 135	06/28/25 05:31	07/01/25 02:54	1
13C2 4:2 FTS	134		40 - 200	06/28/25 05:31	07/01/25 02:54	1
13C2 6:2 FTS	234	*5+	40 - 200	06/28/25 05:31	07/01/25 02:54	1
13C2 8:2 FTS	136		40 - 300	06/28/25 05:31	07/01/25 02:54	1
13C3 HFPO-DA	60.5		40 - 130	06/28/25 05:31	07/01/25 02:54	1
D7-NMeFOSE	30.0		10 - 130	06/28/25 05:31	07/01/25 02:54	1
D9-NEtFOSE	9.25	*5-	10 - 130	06/28/25 05:31	07/01/25 02:54	1
D5-NEtFOSA	20.1		10 - 130	06/28/25 05:31	07/01/25 02:54	1
D3-NMeFOSA	28.7		10 - 130	06/28/25 05:31	07/01/25 02:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	240		21	21	mg/L	-		06/23/25 11:45	1

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.1		3.2	0.30	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.21	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluoroheptanoic acid (PFHpA)	1.8	I J	1.6	0.28	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorooctanoic acid (PFOA)	2.4		1.6	0.31	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorononanoic acid (PFNA)	0.41	J	1.6	0.36	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.46	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorobutanesulfonic acid (PFBS)	2.2	I J	1.6	0.22	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.19	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L	-	06/28/25 05:31	07/01/25 20:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L	-	06/28/25 05:31	07/01/25 20:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		3.2	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
6:2 FTS	ND		3.2	0.32	ng/L		06/28/25 05:31	07/01/25 20:14	1
8:2 FTS	ND		3.2	0.71	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	UJ	1.6	0.28	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	UJ	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.8	J J	8.0	1.8	ng/L		06/28/25 05:31	07/01/25 20:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.0	1.9	ng/L		06/28/25 05:31	07/01/25 20:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		06/28/25 05:31	07/01/25 20:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 20:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		06/28/25 05:31	07/01/25 20:14	1
9Cl-PF3ONS	ND		1.6	0.46	ng/L		06/28/25 05:31	07/01/25 20:14	1
11Cl-PF3OUdS	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 20:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 20:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		06/28/25 05:31	07/01/25 20:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.3	J	8.0	1.4	ng/L		06/28/25 05:31	07/01/25 20:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.0	0.99	ng/L		06/28/25 05:31	07/01/25 20:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	80.3		5 - 130	06/28/25 05:31	07/01/25 20:14	1
13C5 PFPeA	51.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C5 PFHxA	61.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C4 PFHpA	71.0		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C8 PFOA	98.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C9 PFNA	86.8		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C6 PFDA	79.7		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C7 PFUnA	48.1		30 - 130	06/28/25 05:31	07/01/25 20:14	1
13C2 PFDoA	33.4		10 - 130	06/28/25 05:31	07/01/25 20:14	1
13C2 PFTeDA	33.0		10 - 130	06/28/25 05:31	07/01/25 20:14	1
13C3 PFBS	92.5		40 - 135	06/28/25 05:31	07/01/25 20:14	1
13C3 PFHxS	90.7		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C8 PFOS	71.0		40 - 130	06/28/25 05:31	07/01/25 20:14	1
13C8 FOSA	64.8		40 - 130	06/28/25 05:31	07/01/25 20:14	1
D3-NMeFOSAA	30.5	*5-	40 - 170	06/28/25 05:31	07/01/25 20:14	1
D5-NEtFOSAA	21.1	*5-	25 - 135	06/28/25 05:31	07/01/25 20:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-11-202506

Lab Sample ID: 320-122544-4

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	144		40 - 200	06/28/25 05:31	07/01/25 20:14	1
13C2 6:2 FTS	228	*5+	40 - 200	06/28/25 05:31	07/01/25 20:14	1
13C2 8:2 FTS	127		40 - 300	06/28/25 05:31	07/01/25 20:14	1
13C3 HFPO-DA	64.3		40 - 130	06/28/25 05:31	07/01/25 20:14	1
D7-NMeFOSE	31.7		10 - 130	06/28/25 05:31	07/01/25 20:14	1
D9-NEtFOSE	12.6		10 - 130	06/28/25 05:31	07/01/25 20:14	1
D5-NEtFOSA	20.8		10 - 130	06/28/25 05:31	07/01/25 20:14	1
D3-NMeFOSA	33.6		10 - 130	06/28/25 05:31	07/01/25 20:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	200		18	18	mg/L			06/23/25 11:45	1

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	15		3.2	0.29	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorohexanoic acid (PFHxA)	6.0		1.6	0.21	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoroheptanoic acid (PFHpA)	2.6		1.6	0.27	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorooctanoic acid (PFOA)	8.0		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorononanoic acid (PFNA)	0.60	J I J	1.6	0.36	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorobutanesulfonic acid (PFBS)	3.6	I J	1.6	0.22	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoropentanesulfonic acid (PFPeS)	1.1	J	1.6	0.17	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorohexanesulfonic acid (PFHxS)	14		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorooctanesulfonic acid (PFOS)	11		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/28/25 05:31	07/01/25 20:31	1
4:2 FTS	ND		3.2	0.34	ng/L		06/28/25 05:31	07/01/25 20:31	1
6:2 FTS	2.4	J J	3.2	0.32	ng/L		06/28/25 05:31	07/01/25 20:31	1
8:2 FTS	ND		3.2	0.71	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 20:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	UJ	1.6	0.28	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.76	J J	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	7.9	1.8	ng/L		06/28/25 05:31	07/01/25 20:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.9	1.9	ng/L		06/28/25 05:31	07/01/25 20:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		06/28/25 05:31	07/01/25 20:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.31	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 20:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		06/28/25 05:31	07/01/25 20:31	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		06/28/25 05:31	07/01/25 20:31	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 20:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 20:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		06/28/25 05:31	07/01/25 20:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.2	J	7.9	1.4	ng/L		06/28/25 05:31	07/01/25 20:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		06/28/25 05:31	07/01/25 20:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	83.3	*3	5 - 130	06/28/25 05:31	07/01/25 20:31	1
13C5 PFPeA	46.7		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C5 PFHxA	64.4		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C4 PFHpA	64.6		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C8 PFOA	106		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C9 PFNA	84.3		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C6 PFDA	83.8		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C7 PFUnA	53.9		30 - 130	06/28/25 05:31	07/01/25 20:31	1
13C2 PFDoA	35.5		10 - 130	06/28/25 05:31	07/01/25 20:31	1
13C2 PFTeDA	36.3		10 - 130	06/28/25 05:31	07/01/25 20:31	1
13C3 PFBS	101		40 - 135	06/28/25 05:31	07/01/25 20:31	1
13C3 PFHxS	95.3		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C8 PFOS	69.7		40 - 130	06/28/25 05:31	07/01/25 20:31	1
13C8 FOSA	61.6		40 - 130	06/28/25 05:31	07/01/25 20:31	1
D3-NMeFOSAA	31.5	*5-	40 - 170	06/28/25 05:31	07/01/25 20:31	1
D5-NEtFOSAA	23.1	*5-	25 - 135	06/28/25 05:31	07/01/25 20:31	1
13C2 4:2 FTS	175		40 - 200	06/28/25 05:31	07/01/25 20:31	1
13C2 6:2 FTS	239	*5+	40 - 200	06/28/25 05:31	07/01/25 20:31	1
13C2 8:2 FTS	148		40 - 300	06/28/25 05:31	07/01/25 20:31	1
13C3 HFPO-DA	64.5		40 - 130	06/28/25 05:31	07/01/25 20:31	1
D7-NMeFOSE	29.1		10 - 130	06/28/25 05:31	07/01/25 20:31	1
D9-NEtFOSE	11.8		10 - 130	06/28/25 05:31	07/01/25 20:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-18-202506

Lab Sample ID: 320-122544-5

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D5-NEtFOSA	19.9		10 - 130	06/28/25 05:31	07/01/25 20:31	1
D3-NMeFOSA	32.8		10 - 130	06/28/25 05:31	07/01/25 20:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	230		21	21	mg/L			06/23/25 11:45	1

Client Sample ID: INF-COMP-202506

Lab Sample ID: 320-122544-6

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		3.1	0.29	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorohexanoic acid (PFHxA)	5.1	I J	1.6	0.21	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.27	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorooctanoic acid (PFOA)	5.2		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorononanoic acid (PFNA)	0.53	J	1.6	0.35	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.34	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorobutanesulfonic acid (PFBS)	4.9		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorohexanesulfonic acid (PFHxS)	6.2		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		06/28/25 05:31	07/01/25 03:44	1
4:2 FTS	ND		3.1	0.34	ng/L		06/28/25 05:31	07/01/25 03:44	1
6:2 FTS	ND		3.1	0.31	ng/L		06/28/25 05:31	07/01/25 03:44	1
8:2 FTS	ND		3.1	0.70	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.17	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.49	J J	1.6	0.27	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	UJ	1.6	0.34	ng/L		06/28/25 05:31	07/01/25 03:44	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.9	J J	7.8	1.8	ng/L		06/28/25 05:31	07/01/25 03:44	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: INF-COMP-202506

Lab Sample ID: 320-122544-6

Date Collected: 06/16/25 23:59

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.8	1.9	ng/L		06/28/25 05:31	07/01/25 03:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		06/28/25 05:31	07/01/25 03:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.16	J	1.6	0.15	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/28/25 05:31	07/01/25 03:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/28/25 05:31	07/01/25 03:44	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		06/28/25 05:31	07/01/25 03:44	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		06/28/25 05:31	07/01/25 03:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.19	ng/L		06/28/25 05:31	07/01/25 03:44	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/28/25 05:31	07/01/25 03:44	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	19		7.8	1.3	ng/L		06/28/25 05:31	07/01/25 03:44	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.96	ng/L		06/28/25 05:31	07/01/25 03:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	78.1		5 - 130	06/28/25 05:31	07/01/25 03:44	1
13C5 PFPeA	45.8		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C5 PFHxA	58.8		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C4 PFHpA	67.1		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C8 PFOA	103		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C9 PFNA	77.0		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C6 PFDA	80.3		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C7 PFUnA	42.4		30 - 130	06/28/25 05:31	07/01/25 03:44	1
13C2 PFDoA	32.8		10 - 130	06/28/25 05:31	07/01/25 03:44	1
13C2 PFTeDA	33.1		10 - 130	06/28/25 05:31	07/01/25 03:44	1
13C3 PFBS	99.6		40 - 135	06/28/25 05:31	07/01/25 03:44	1
13C3 PFHxS	100		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C8 PFOS	72.4		40 - 130	06/28/25 05:31	07/01/25 03:44	1
13C8 FOSA	66.8		40 - 130	06/28/25 05:31	07/01/25 03:44	1
D3-NMeFOSAA	32.8	*5-	40 - 170	06/28/25 05:31	07/01/25 03:44	1
D5-NEtFOSAA	24.5	*5-	25 - 135	06/28/25 05:31	07/01/25 03:44	1
13C2 4:2 FTS	176		40 - 200	06/28/25 05:31	07/01/25 03:44	1
13C2 6:2 FTS	239	*5+	40 - 200	06/28/25 05:31	07/01/25 03:44	1
13C2 8:2 FTS	146		40 - 300	06/28/25 05:31	07/01/25 03:44	1
13C3 HFPO-DA	61.3		40 - 130	06/28/25 05:31	07/01/25 03:44	1
D7-NMeFOSE	34.0		10 - 130	06/28/25 05:31	07/01/25 03:44	1
D9-NEtFOSE	10.4		10 - 130	06/28/25 05:31	07/01/25 03:44	1
D5-NEtFOSA	20.2		10 - 130	06/28/25 05:31	07/01/25 03:44	1
D3-NMeFOSA	32.8		10 - 130	06/28/25 05:31	07/01/25 03:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	250		21	21	mg/L			06/23/25 11:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.3		3.2	0.30	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorohexanoic acid (PFHxA)	9.9		1.6	0.21	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorooctanoic acid (PFOA)	6.6		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorononanoic acid (PFNA)	0.43	J	1.6	0.36	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorodecanoic acid (PFDA)	0.71	J	1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.46	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorobutanesulfonic acid (PFBS)	4.4		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoropentanesulfonic acid (PFPeS)	0.32	J	1.6	0.17	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorohexanesulfonic acid (PFHxS)	5.4		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorooctanesulfonic acid (PFOS)	3.5		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/23/25 20:11	06/24/25 11:40	1
4:2 FTS	ND		3.2	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
6:2 FTS	ND		3.2	0.32	ng/L		06/23/25 20:11	06/24/25 11:40	1
8:2 FTS	ND		3.2	0.71	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluorooctanesulfonamide (PFOSA)	0.38	J I J	1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.72	J	1.6	0.28	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.49	J	1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.9	1.8	ng/L		06/23/25 20:11	06/24/25 11:40	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		06/23/25 20:11	06/24/25 11:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	△+	1.2	0.31	ng/L		06/23/25 20:11	06/24/25 11:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		06/23/25 20:11	06/24/25 11:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:40	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		06/23/25 20:11	06/24/25 11:40	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		06/23/25 20:11	06/24/25 11:40	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 11:40	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:40	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		06/23/25 20:11	06/24/25 11:40	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.8	J	7.9	1.4	ng/L		06/23/25 20:11	06/24/25 11:40	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		06/23/25 20:11	06/24/25 11:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.8		5 - 130				06/23/25 20:11	06/24/25 11:40	1
13C5 PFPeA	69.6		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C5 PFHxA	93.2		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C4 PFHpA	87.8		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C8 PFOA	86.1		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C9 PFNA	84.3		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C6 PFDA	98.9		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C7 PFUnA	91.3		30 - 130				06/23/25 20:11	06/24/25 11:40	1
13C2 PFDoA	74.6		10 - 130				06/23/25 20:11	06/24/25 11:40	1
13C2 PFTeDA	57.2		10 - 130				06/23/25 20:11	06/24/25 11:40	1
13C3 PFBS	94.9		40 - 135				06/23/25 20:11	06/24/25 11:40	1
13C3 PFHxS	103		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C8 PFOS	86.0		40 - 130				06/23/25 20:11	06/24/25 11:40	1
13C8 FOSA	77.2		40 - 130				06/23/25 20:11	06/24/25 11:40	1
D3-NMeFOSAA	83.1		40 - 170				06/23/25 20:11	06/24/25 11:40	1
D5-NEtFOSAA	79.0		25 - 135				06/23/25 20:11	06/24/25 11:40	1
13C2 4:2 FTS	169		40 - 200				06/23/25 20:11	06/24/25 11:40	1
13C2 6:2 FTS	126		40 - 200				06/23/25 20:11	06/24/25 11:40	1
13C2 8:2 FTS	120		40 - 300				06/23/25 20:11	06/24/25 11:40	1
13C3 HFPO-DA	83.1		40 - 130				06/23/25 20:11	06/24/25 11:40	1
D7-NMeFOSE	73.9		10 - 130				06/23/25 20:11	06/24/25 11:40	1
D9-NEtFOSE	64.5		10 - 130				06/23/25 20:11	06/24/25 11:40	1
D5-NEtFOSA	75.1		10 - 130				06/23/25 20:11	06/24/25 11:40	1
D3-NMeFOSA	68.8		10 - 130				06/23/25 20:11	06/24/25 11:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	5.7		1.3	1.3	mg/L			06/23/25 11:45	1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	9.2		0.51	0.12	ug/Kg	⚠	06/24/25 12:11	06/25/25 13:00	1
Perfluorohexanoic acid (PFHxA)	29		0.51	0.10	ug/Kg	⚠	06/24/25 12:11	06/25/25 13:00	1
Perfluoroheptanoic acid (PFHpA)	1.8		0.51	0.083	ug/Kg	⚠	06/24/25 12:11	06/25/25 13:00	1
Perfluorooctanoic acid (PFOA)	25		0.51	0.16	ug/Kg	⚠	06/24/25 12:11	06/25/25 13:00	1
Perfluorononanoic acid (PFNA)	1.3		0.51	0.073	ug/Kg	⚠	06/24/25 12:11	06/25/25 13:00	1
Perfluorodecanoic acid (PFDA)	12		0.51	0.061	ug/Kg	⚠	06/24/25 12:11	06/25/25 13:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	1.0		0.51	0.071	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorododecanoic acid (PFDoA)	3.2		0.51	0.068	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorotridecanoic acid (PFTTrDA)	0.64		0.51	0.073	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorotetradecanoic acid (PFTeDA)	0.92		0.51	0.15	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.51	0.10	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.51	0.051	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.51	0.040	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorooctanesulfonic acid (PFOS)	8.9		0.51	0.063	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorononanesulfonic acid (PFNS)	ND		0.51	0.058	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorodecanesulfonic acid (PFDS)	ND	*4	0.51	0.053	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.51	0.093	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
4:2 FTS	ND		1.0	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
6:2 FTS	1.6		1.0	0.14	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
8:2 FTS	1.3		1.0	0.11	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluorooctanesulfonamide (PFOSA)	1.2		0.51	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.64	I J	0.51	0.091	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.22	J	0.51	0.053	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	21		0.51	0.040	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.6	J	0.51	0.043	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12		2.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.0		2.5	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.51	0.073	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.51	0.063	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.51	0.056	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.51	0.091	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.51	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
9CI-PF3ONS	ND		0.51	0.096	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
11CI-PF3OUdS	ND	*4	0.51	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.51	0.096	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.0	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		2.5	0.62	ug/Kg	✱	06/24/25 12:11	06/25/25 13:00	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	19		2.5	0.54	ug/Kg	☆	06/24/25 12:11	06/25/25 13:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	56.8		35 - 130				06/24/25 12:11	06/25/25 13:00	1
13C5 PFHxA	82.6		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C4 PFHpA	90.6		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C8 PFOA	90.4		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C9 PFNA	81.0		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C6 PFDA	89.5		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C7 PFUnA	72.5		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C2 PFDoA	77.9		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C2 PFTeDA	42.0		20 - 130				06/24/25 12:11	06/25/25 13:00	1
13C3 PFHxS	99.9		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C8 PFOS	85.4		40 - 130				06/24/25 12:11	06/25/25 13:00	1
13C8 FOSA	89.5		40 - 130				06/24/25 12:11	06/25/25 13:00	1
D3-NMeFOSAA	53.1		40 - 135				06/24/25 12:11	06/25/25 13:00	1
D5-NEtFOSAA	29.0	*5-	40 - 150				06/24/25 12:11	06/25/25 13:00	1
13C2 4:2 FTS	150		40 - 165				06/24/25 12:11	06/25/25 13:00	1
13C2 6:2 FTS	180		40 - 215				06/24/25 12:11	06/25/25 13:00	1
13C2 8:2 FTS	161		40 - 275				06/24/25 12:11	06/25/25 13:00	1
13C3 HFPO-DA	74.3		40 - 130				06/24/25 12:11	06/25/25 13:00	1
D7-NMeFOSE	79.6		20 - 130				06/24/25 12:11	06/25/25 13:00	1
D9-NEtFOSE	60.1		15 - 130				06/24/25 12:11	06/25/25 13:00	1
D5-NEtFOSA	59.6		10 - 130				06/24/25 12:11	06/25/25 13:00	1
D3-NMeFOSA	64.5		10 - 130				06/24/25 12:11	06/25/25 13:00	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.3		1.0	0.081	ug/Kg	☆	06/24/25 12:11	06/26/25 10:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	81.1		8 - 130				06/24/25 12:11	06/26/25 10:02	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		0.50	0.062	ug/Kg	☆	06/27/25 13:32	07/01/25 06:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	96.9		40 - 135				06/27/25 13:32	07/01/25 06:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	80		0.10	0.10	%			06/20/25 12:46	1
Percent Solids (EPA 1633)	20		0.10	0.10	%			06/20/25 12:46	1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	6.4		0.41	0.10	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	12		0.41	0.083	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoroheptanoic acid (PFHpA)	1.0		0.41	0.068	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorooctanoic acid (PFOA)	9.6		0.41	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorononanoic acid (PFNA)	1.0		0.41	0.060	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorodecanoic acid (PFDA)	7.1		0.41	0.050	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoroundecanoic acid (PFUnA)	1.0		0.41	0.058	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorododecanoic acid (PFDoA)	2.9		0.41	0.056	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorotridecanoic acid (PFTTrDA)	0.67		0.41	0.060	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorotetradecanoic acid (PFTeDA)	0.74		0.41	0.12	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.41	0.083	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.41	0.041	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.41	0.033	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorooctanesulfonic acid (PFOS)	8.5		0.41	0.052	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorononanesulfonic acid (PFNS)	ND		0.41	0.047	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorodecanesulfonic acid (PFDS)	ND	*4	0.41	0.043	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.41	0.076	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
4:2 FTS	ND		0.83	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
6:2 FTS	0.58	J I J	0.83	0.11	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
8:2 FTS	0.71	J	0.83	0.091	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluorooctanesulfonamide (PFOSA)	0.90		0.41	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.62	I J	0.41	0.074	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.21	J	0.41	0.043	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	18		0.41	0.033	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.8	J	0.41	0.035	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	10		2.1	0.18	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.4		2.1	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.41	0.060	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.41	0.052	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.41	0.045	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.41	0.074	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.41	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
9CI-PF3ONS	ND		0.41	0.078	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
11CI-PF3OUdS	ND	*4	0.41	0.15	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.41	0.078	ug/Kg	✱	06/24/25 12:11	06/25/25 13:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.83	0.15	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	53		2.1	0.51	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	22		2.1	0.44	ug/Kg	☆	06/24/25 12:11	06/25/25 13:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	55.7		35 - 130				06/24/25 12:11	06/25/25 13:16	1
13C5 PFHxA	80.7		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C4 PFHpA	82.0		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C8 PFOA	84.7		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C9 PFNA	79.5		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C6 PFDA	90.0		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C7 PFUnA	59.3		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C2 PFDoA	60.5		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C2 PFTeDA	61.9		20 - 130				06/24/25 12:11	06/25/25 13:16	1
13C3 PFHxS	93.4		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C8 PFOS	77.8		40 - 130				06/24/25 12:11	06/25/25 13:16	1
13C8 FOSA	84.6		40 - 130				06/24/25 12:11	06/25/25 13:16	1
D3-NMeFOSAA	45.7		40 - 135				06/24/25 12:11	06/25/25 13:16	1
D5-NEtFOSAA	24.9	*5-	40 - 150				06/24/25 12:11	06/25/25 13:16	1
13C2 4:2 FTS	143		40 - 165				06/24/25 12:11	06/25/25 13:16	1
13C2 6:2 FTS	180		40 - 215				06/24/25 12:11	06/25/25 13:16	1
13C2 8:2 FTS	143		40 - 275				06/24/25 12:11	06/25/25 13:16	1
13C3 HFPO-DA	68.0		40 - 130				06/24/25 12:11	06/25/25 13:16	1
D7-NMeFOSE	70.6		20 - 130				06/24/25 12:11	06/25/25 13:16	1
D9-NEtFOSE	58.5		15 - 130				06/24/25 12:11	06/25/25 13:16	1
D5-NEtFOSA	57.0		10 - 130				06/24/25 12:11	06/25/25 13:16	1
D3-NMeFOSA	57.9		10 - 130				06/24/25 12:11	06/25/25 13:16	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0		0.83	0.066	ug/Kg	☆	06/24/25 12:11	06/26/25 10:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	71.0		8 - 130				06/24/25 12:11	06/26/25 10:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		0.41	0.051	ug/Kg	☆	06/27/25 13:32	07/01/25 07:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	79.8		40 - 135				06/27/25 13:32	07/01/25 07:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	76		0.10	0.10	%			06/20/25 12:46	1
Percent Solids (EPA 1633)	24		0.10	0.10	%			06/20/25 12:46	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.37	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorohexanoic acid (PFHxA)	ND		1.5	0.30	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoroheptanoic acid (PFHpA)	ND		1.5	0.25	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorooctanoic acid (PFOA)	1.1	J	1.5	0.47	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorononanoic acid (PFNA)	0.54	J	1.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorodecanoic acid (PFDA)	2.4		1.5	0.18	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoroundecanoic acid (PFUnA)	0.59	J	1.5	0.21	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorododecanoic acid (PFDoA)	1.6		1.5	0.21	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorotridecanoic acid (PFTTrDA)	0.38	J	1.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorotetradecanoic acid (PFTeDA)	0.48	J	1.5	0.44	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.30	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.5	0.15	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.12	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorooctanesulfonic acid (PFOS)	7.7		1.5	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.18	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorodecanesulfonic acid (PFDS)	ND	*4	1.5	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.28	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
4:2 FTS	ND		3.0	0.49	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
6:2 FTS	ND		3.0	0.41	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
8:2 FTS	0.59	J	3.0	0.33	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluorooctanesulfonamide (PFOSA)	0.96	J	1.5	0.48	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.43	J	1.5	0.27	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.16	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		1.5	0.12	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.7	J	1.5	0.13	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		7.6	0.67	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.1	J	7.6	0.59	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.22	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.19	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.17	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.27	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.47	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
9CI-PF3ONS	ND		1.5	0.29	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1
11CI-PF3OUdS	ND	*4	1.5	0.57	ug/Kg	✱	06/24/25 12:11	06/25/25 13:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.29	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.57	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	120		7.6	1.9	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	16		7.6	1.6	ug/Kg	☆	06/24/25 12:11	06/25/25 13:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	47.1		35 - 130				06/24/25 12:11	06/25/25 13:33	1
13C5 PFHxA	78.6		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C4 PFHpA	86.1		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C8 PFOA	85.0		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C9 PFNA	81.4		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C6 PFDA	94.8		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C7 PFUnA	89.2		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C2 PFDoA	80.9		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C2 PFTeDA	69.0		20 - 130				06/24/25 12:11	06/25/25 13:33	1
13C3 PFHxS	93.5		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C8 PFOS	81.7		40 - 130				06/24/25 12:11	06/25/25 13:33	1
13C8 FOSA	89.9		40 - 130				06/24/25 12:11	06/25/25 13:33	1
D3-NMeFOSAA	66.6		40 - 135				06/24/25 12:11	06/25/25 13:33	1
D5-NEtFOSAA	35.4	*5-	40 - 150				06/24/25 12:11	06/25/25 13:33	1
13C2 4:2 FTS	138		40 - 165				06/24/25 12:11	06/25/25 13:33	1
13C2 6:2 FTS	178		40 - 215				06/24/25 12:11	06/25/25 13:33	1
13C2 8:2 FTS	182		40 - 275				06/24/25 12:11	06/25/25 13:33	1
13C3 HFPO-DA	69.2		40 - 130				06/24/25 12:11	06/25/25 13:33	1
D7-NMeFOSE	84.7		20 - 130				06/24/25 12:11	06/25/25 13:33	1
D9-NEtFOSE	101		15 - 130				06/24/25 12:11	06/25/25 13:33	1
D5-NEtFOSA	65.7		10 - 130				06/24/25 12:11	06/25/25 13:33	1
D3-NMeFOSA	73.7		10 - 130				06/24/25 12:11	06/25/25 13:33	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.1	J	3.0	0.24	ug/Kg	☆	06/27/25 13:32	07/01/25 07:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.5	0.19	ug/Kg	☆	06/27/25 13:32	07/01/25 07:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	91.0	*3	8 - 130				06/27/25 13:32	07/01/25 07:18	1
13C3 PFBS	100		40 - 135				06/27/25 13:32	07/01/25 07:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	93		0.10	0.10	%			06/20/25 12:46	1
Percent Solids (EPA 1633)	6.6		0.10	0.10	%			06/20/25 12:46	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-01-202506

Lab Sample ID: 320-122544-11

Date Collected: 06/16/25 13:35

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.1	J	3.1	0.29	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoroheptanoic acid (PFHpA)	0.28	J	1.6	0.27	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorooctanoic acid (PFOA)	0.90	J	1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorooctanesulfonic acid (PFOS)	0.36	J	1.6	0.22	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		06/23/25 20:11	06/24/25 11:57	1
4:2 FTS	ND		3.1	0.34	ng/L		06/23/25 20:11	06/24/25 11:57	1
6:2 FTS	ND		3.1	0.32	ng/L		06/23/25 20:11	06/24/25 11:57	1
8:2 FTS	ND		3.1	0.70	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.9	1.8	ng/L		06/23/25 20:11	06/24/25 11:57	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.9	1.9	ng/L		06/23/25 20:11	06/24/25 11:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	Δ+	1.2	0.31	ng/L		06/23/25 20:11	06/24/25 11:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/23/25 20:11	06/24/25 11:57	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 11:57	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		06/23/25 20:11	06/24/25 11:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 11:57	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-01-202506

Lab Sample ID: 320-122544-11

Date Collected: 06/16/25 13:35

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/23/25 20:11	06/24/25 11:57	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.9	1.4	ng/L		06/23/25 20:11	06/24/25 11:57	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.97	ng/L		06/23/25 20:11	06/24/25 11:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	95.2		5 - 130				06/23/25 20:11	06/24/25 11:57	1
13C5 PFPeA	95.8		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C5 PFHxA	107		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C4 PFHpA	98.5		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C8 PFOA	89.0		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C9 PFNA	83.9		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C6 PFDA	98.5		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C7 PFUnA	96.6		30 - 130				06/23/25 20:11	06/24/25 11:57	1
13C2 PFDoA	75.8		10 - 130				06/23/25 20:11	06/24/25 11:57	1
13C2 PFTeDA	68.5		10 - 130				06/23/25 20:11	06/24/25 11:57	1
13C3 PFBS	95.4		40 - 135				06/23/25 20:11	06/24/25 11:57	1
13C3 PFHxS	101		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C8 PFOS	87.9		40 - 130				06/23/25 20:11	06/24/25 11:57	1
13C8 FOSA	79.0		40 - 130				06/23/25 20:11	06/24/25 11:57	1
D3-NMeFOSAA	85.7		40 - 170				06/23/25 20:11	06/24/25 11:57	1
D5-NEtFOSAA	84.5		25 - 135				06/23/25 20:11	06/24/25 11:57	1
13C2 4:2 FTS	108		40 - 200				06/23/25 20:11	06/24/25 11:57	1
13C2 6:2 FTS	101		40 - 200				06/23/25 20:11	06/24/25 11:57	1
13C2 8:2 FTS	109		40 - 300				06/23/25 20:11	06/24/25 11:57	1
13C3 HFPO-DA	93.6		40 - 130				06/23/25 20:11	06/24/25 11:57	1
D7-NMeFOSE	76.9		10 - 130				06/23/25 20:11	06/24/25 11:57	1
D9-NEtFOSE	66.0		10 - 130				06/23/25 20:11	06/24/25 11:57	1
D5-NEtFOSA	70.4		10 - 130				06/23/25 20:11	06/24/25 11:57	1
D3-NMeFOSA	67.0		10 - 130				06/23/25 20:11	06/24/25 11:57	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	3.4		1.5	0.21	ng/L		06/28/25 05:31	07/01/25 04:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	95.4		40 - 130				06/28/25 05:31	07/01/25 04:00	1

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.21	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 12:13	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.6	0.34	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		06/23/25 20:11	06/24/25 12:13	1
4:2 FTS	ND		3.1	0.34	ng/L		06/23/25 20:11	06/24/25 12:13	1
6:2 FTS	ND		3.1	0.32	ng/L		06/23/25 20:11	06/24/25 12:13	1
8:2 FTS	ND		3.1	0.70	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.27	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.34	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.8	ng/L		06/23/25 20:11	06/24/25 12:13	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		06/23/25 20:11	06/24/25 12:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	+	1.2	0.30	ng/L		06/23/25 20:11	06/24/25 12:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		06/23/25 20:11	06/24/25 12:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		06/23/25 20:11	06/24/25 12:13	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		06/23/25 20:11	06/24/25 12:13	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		06/23/25 20:11	06/24/25 12:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		06/23/25 20:11	06/24/25 12:13	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		06/23/25 20:11	06/24/25 12:13	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.8	1.3	ng/L		06/23/25 20:11	06/24/25 12:13	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		06/23/25 20:11	06/24/25 12:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	100		5 - 130				06/23/25 20:11	06/24/25 12:13	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-1

Client Sample ID: EB-02-202506

Lab Sample ID: 320-122544-12

Date Collected: 06/16/25 14:25

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	108		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C5 PFHxA	111		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C4 PFHpA	102		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C8 PFOA	92.0		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C9 PFNA	90.8		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C6 PFDA	105		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C7 PFUnA	102		30 - 130	06/23/25 20:11	06/24/25 12:13	1
13C2 PFDoA	88.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
13C2 PFTeDA	77.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
13C3 PFBS	94.5		40 - 135	06/23/25 20:11	06/24/25 12:13	1
13C3 PFHxS	102		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C8 PFOS	88.1		40 - 130	06/23/25 20:11	06/24/25 12:13	1
13C8 FOSA	77.4		40 - 130	06/23/25 20:11	06/24/25 12:13	1
D3-NMeFOSAA	88.2		40 - 170	06/23/25 20:11	06/24/25 12:13	1
D5-NEtFOSAA	83.2		25 - 135	06/23/25 20:11	06/24/25 12:13	1
13C2 4:2 FTS	119		40 - 200	06/23/25 20:11	06/24/25 12:13	1
13C2 6:2 FTS	110		40 - 200	06/23/25 20:11	06/24/25 12:13	1
13C2 8:2 FTS	116		40 - 300	06/23/25 20:11	06/24/25 12:13	1
13C3 HFPO-DA	103		40 - 130	06/23/25 20:11	06/24/25 12:13	1
D7-NMeFOSE	81.6		10 - 130	06/23/25 20:11	06/24/25 12:13	1
D9-NEtFOSE	75.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
D5-NEtFOSA	76.9		10 - 130	06/23/25 20:11	06/24/25 12:13	1
D3-NMeFOSA	70.5		10 - 130	06/23/25 20:11	06/24/25 12:13	1

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.6	J	13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoropentanoic acid (PFPeA)	7.6		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorohexanoic acid (PFHxA)	14		5.0	1.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorooctanoic acid (PFOA)	7.2		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorohexanesulfonic acid (PFHxS)	7.2		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorooctanesulfonic acid (PFOS)	4.0	J	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
4:2 FTS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
6:2 FTS	ND		13	3.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
8:2 FTS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND	*	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		06/25/25 19:45	07/01/25 05:35	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		06/25/25 19:45	07/01/25 05:35	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		06/25/25 19:45	07/01/25 05:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.2	J	5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		06/25/25 19:45	07/01/25 05:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		06/25/25 19:45	07/01/25 05:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		06/25/25 19:45	07/01/25 05:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	69		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFBA	93		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C5 PFPeA	96		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFHxA	110		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFHpA	94		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFOA	94		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C5 PFNA	91		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFDA	69		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFUnA	52		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFDoA	42		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 PFTeDA	40		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C3 PFBS	99		25 - 150				06/25/25 19:45	07/01/25 05:35	1
18O2 PFHxS	90		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C4 PFOS	71		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D3-NMeFOSAA	63		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D5-NEtFOSAA	65		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 4:2 FTS	111		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 6:2 FTS	98		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C2 8:2 FTS	70		25 - 150				06/25/25 19:45	07/01/25 05:35	1
d-N-MeFOSA-M	48		25 - 150				06/25/25 19:45	07/01/25 05:35	1
d-N-EtFOSA-M	41		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D7-NMeFOSE	39		25 - 150				06/25/25 19:45	07/01/25 05:35	1
D9-NEtFOSE	34		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C3 HFPO-DA	87		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C-6:2 FTCA	81		25 - 150				06/25/25 19:45	07/01/25 05:35	1
13C-8:2 FTCA	86		25 - 150				06/25/25 19:45	07/01/25 05:35	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	6.0		5.0	1.3	ng/L		07/13/25 20:15	07/15/25 14:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	91		25 - 150				07/13/25 20:15	07/15/25 14:19	1
13C2 4:2 FTS	115		25 - 150				07/13/25 20:15	07/15/25 14:19	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	26	B U	26 43	26	3.4 ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoropentanoic acid (PFPeA)	17	* J	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorohexanoic acid (PFHxA)	17	* J	5.0	1.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoroheptanoic acid (PFHpA)	2.9	J	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorooctanoic acid (PFOA)	8.9		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorohexanesulfonic acid (PFHxS)	7.3		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorooctanesulfonic acid (PFOS)	4.0	J	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluorooctanesulfonamide (PFOSA)	ND	*4	5.0	2.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
4:2 FTS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
6:2 FTS	3.2	J*4 J	13	3.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
8:2 FTS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		06/25/25 20:19	07/01/25 07:14	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	*+	10	2.5	ng/L		06/25/25 20:19	07/01/25 07:14	1
11CI-PF3OUdS	ND	* UJ	5.0	1.7	ng/L		06/25/25 20:19	07/01/25 07:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	*4	5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		06/25/25 20:19	07/01/25 07:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		06/25/25 20:19	07/01/25 07:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: EFF G-202506

Lab Sample ID: 320-122544-7

Date Collected: 06/17/25 07:37

Matrix: Water

Date Received: 06/18/25 09:45

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	60		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFBA	107		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C5 PFPeA	100		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFHxA	104		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFHpA	98		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFOA	99		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C5 PFNA	93		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFDA	73		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFUnA	66		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFDoA	66		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 PFTeDA	66		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C3 PFBS	97		25 - 150	06/25/25 20:19	07/01/25 07:14	1
18O2 PFHxS	96		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C4 PFOS	72		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D3-NMeFOSAA	67		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D5-NEtFOSAA	79		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 4:2 FTS	0		0 - 10	06/25/25 20:19	07/01/25 07:14	1
13C2 6:2 FTS	93		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C2 8:2 FTS	62		25 - 150	06/25/25 20:19	07/01/25 07:14	1
d-N-MeFOSA-M	53		25 - 150	06/25/25 20:19	07/01/25 07:14	1
d-N-EtFOSA-M	46		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D7-NMeFOSE	55		25 - 150	06/25/25 20:19	07/01/25 07:14	1
D9-NEtFOSE	50		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C3 HFPO-DA	96		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C-6:2 FTCA	85		25 - 150	06/25/25 20:19	07/01/25 07:14	1
13C-8:2 FTCA	83		25 - 150	06/25/25 20:19	07/01/25 07:14	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	5.6		5.0	1.3	ng/L		07/13/25 20:31	07/15/25 18:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 PFBS	86		25 - 150				07/13/25 20:31	07/15/25 18:17	1
13C2 4:2 FTS	0		0 - 10				07/13/25 20:31	07/15/25 18:17	1

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.8		5.0	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoropentanoic acid (PFPeA)	16		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorohexanoic acid (PFHxA)	31		5.0	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoroheptanoic acid (PFHpA)	2.3 J		5.0	0.95	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorooctanoic acid (PFOA)	23		5.0	1.3	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorononanoic acid (PFNA)	1.6 J		5.0	0.55	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorodecanoic acid (PFDA)	9.1		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorododecanoic acid (PFDoA)	2.3 J		5.0	0.75	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	ND		5.0	0.52	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	0.92	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorobutanesulfonic acid (PFBS)	16		5.0	0.95	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	0.92	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorohexanesulfonic acid (PFHxS)	2.4	J I J	5.0	0.72	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorooctanesulfonic acid (PFOS)	12		5.0	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	0.72	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluorooctanesulfonamide (PFOSA)	1.3	J	5.0	0.82	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.7		5.0	0.57	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.7	J	5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
4:2 FTS	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
6:2 FTS	1.3	J J	5.0	0.67	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
8:2 FTS	0.93	J	5.0	0.87	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.0		5.0	1.2	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.4	J	5.0	0.70	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
9CI-PF3ONS	ND		5.0	0.87	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
11CI-PF3OUdS	ND		5.0	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	0.97	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	36		5.0	0.95	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	0.60	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	0.80	ug/Kg	✱	07/15/25 20:33	07/22/25 08:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	66		25 - 150				07/15/25 20:33	07/22/25 08:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C5 PFPeA	91		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFHxA	108		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C4 PFHpA	93		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C4 PFOA	94		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C5 PFNA	97		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFDA	90		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFUnA	84		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFDoA	73		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 PFTeDA	53		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C3 PFBS	89		25 - 150	07/15/25 20:33	07/22/25 08:47	1
18O2 PFHxS	88		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C4 PFOS	82		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D3-NMeFOSAA	71		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D5-NEtFOSAA	83		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 4:2 FTS	138		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 6:2 FTS	159	*5+	25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C2 8:2 FTS	125		25 - 150	07/15/25 20:33	07/22/25 08:47	1
d-N-MeFOSA-M	41		25 - 150	07/15/25 20:33	07/22/25 08:47	1
d-N-EtFOSA-M	49		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D7-NMeFOSE	44		25 - 150	07/15/25 20:33	07/22/25 08:47	1
D9-NEtFOSE	56		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C3 HFPO-DA	76		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C-6:2 FTCA	70		25 - 150	07/15/25 20:33	07/22/25 08:47	1
13C-8:2 FTCA	61		25 - 150	07/15/25 20:33	07/22/25 08:47	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	120	B	5.0	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoropentanoic acid (PFPeA)	70		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorohexanoic acid (PFHxA)	60		5.0	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoroheptanoic acid (PFHpA)	25		5.0	0.95	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorooctanoic acid (PFOA)	52		5.0	1.3	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorononanoic acid (PFNA)	13		5.0	0.55	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorodecanoic acid (PFDA)	15		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoroundecanoic acid (PFUnA)	5.2		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorododecanoic acid (PFDoA)	5.0		5.0	0.75	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorotridecanoic acid (PFTTrDA)	1.6	J *	5.0	0.52	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorotetradecanoic acid (PFTeDA)	1.7	J	5.0	0.92	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorobutanesulfonic acid (PFBS)	12		5.0	0.95	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	0.92	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorohexanesulfonic acid (PFHxS)	1.5	J	5.0	0.72	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	11		5.0	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	0.72	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	0.82	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0	0.57	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
4:2 FTS	ND		5.0	1.3	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
6:2 FTS	ND		5.0	0.67	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
8:2 FTS	ND		5.0	0.87	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		5.0	1.2	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	0.70	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
9CI-PF3ONS	ND		5.0	0.87	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
11CI-PF3OUdS	ND		5.0	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	0.97	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	0.95	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	0.60	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	0.80	ug/Kg	✱	07/15/25 20:40	07/22/25 04:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	63		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFBA	109		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C5 PFPeA	107		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFHxA	109		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFHpA	103		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFOA	97		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C5 PFNA	97		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFDA	82		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFUnA	76		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 PFDoA	67		25 - 150	07/15/25 20:40	07/22/25 04:48	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-23-202506

Lab Sample ID: 320-122544-8

Date Collected: 06/16/25 14:15

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 19.7

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	68		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C3 PFBS	104		25 - 150	07/15/25 20:40	07/22/25 04:48	1
18O2 PFHxS	102		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C4 PFOS	82		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D3-NMeFOSAA	64		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D5-NEtFOSAA	69		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 4:2 FTS	0		0 - 10	07/15/25 20:40	07/22/25 04:48	1
13C2 6:2 FTS	94		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C2 8:2 FTS	74		25 - 150	07/15/25 20:40	07/22/25 04:48	1
d-N-MeFOSA-M	51		25 - 150	07/15/25 20:40	07/22/25 04:48	1
d-N-EtFOSA-M	41		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D7-NMeFOSE	59		25 - 150	07/15/25 20:40	07/22/25 04:48	1
D9-NEtFOSE	53		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C3 HFPO-DA	90		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C-6:2 FTCA	86		25 - 150	07/15/25 20:40	07/22/25 04:48	1
13C-8:2 FTCA	68		25 - 150	07/15/25 20:40	07/22/25 04:48	1

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.6		4.1	0.94	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoropentanoic acid (PFPeA)	11		4.1	0.84	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorohexanoic acid (PFHxA)	37		4.1	0.63	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoroheptanoic acid (PFHpA)	2.2 J		4.1	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorooctanoic acid (PFOA)	23		4.1	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorononanoic acid (PFNA)	1.7 J		4.1	0.45	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorodecanoic acid (PFDA)	8.6		4.1	0.98	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoroundecanoic acid (PFUnA)	1.1 J		4.1	0.85	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorododecanoic acid (PFDoA)	2.6 J		4.1	0.61	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorotridecanoic acid (PFTrDA)	ND		4.1	0.43	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorotetradecanoic acid (PFTeDA)	ND		4.1	0.75	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorobutanesulfonic acid (PFBS)	11		4.1	0.77	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.1	0.75	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorohexanesulfonic acid (PFHxS)	2.5 J I J		4.1	0.59	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.1	1.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorooctanesulfonic acid (PFOS)	15		4.1	0.88	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorononanesulfonic acid (PFNS)	ND		4.1	0.59	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorodecanesulfonic acid (PFDS)	1.1 J		4.1	1.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.1	0.96	ug/Kg	✱	07/15/25 20:33	07/22/25 09:01	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (PFOSA)	1.2	J	4.1	0.67	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.0		4.1	0.47	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	4.1	0.98	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
4:2 FTS	ND		4.1	1.0	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
6:2 FTS	0.72	J	4.1	0.55	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
8:2 FTS	ND		4.1	0.71	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.1	0.96	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.1	1.0	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8		4.1	0.96	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.8		4.1	0.57	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
9CI-PF3ONS	ND		4.1	0.71	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
11CI-PF3OUdS	ND		4.1	0.63	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.1	0.79	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	28		4.1	0.77	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.7		4.1	0.84	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.1	0.81	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.1	0.92	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.1	0.49	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		4.1	0.65	ug/Kg	☼	07/15/25 20:33	07/22/25 09:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	62		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFBA	94		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C5 PFPeA	94		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFHxA	106		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFHpA	97		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFOA	95		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C5 PFNA	98		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFDA	89		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFUnA	89		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFDoA	77		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 PFTeDA	61		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C3 PFBS	92		25 - 150	07/15/25 20:33	07/22/25 09:01	1
18O2 PFHxS	92		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C4 PFOS	76		25 - 150	07/15/25 20:33	07/22/25 09:01	1
D3-NMeFOSAA	85		25 - 150	07/15/25 20:33	07/22/25 09:01	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	84		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 4:2 FTS	135		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 6:2 FTS	135		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C2 8:2 FTS	105		25 - 150	07/15/25 20:33	07/22/25 09:01	1
d-N-MeFOSA-M	52		25 - 150	07/15/25 20:33	07/22/25 09:01	1
d-N-EtFOSA-M	55		25 - 150	07/15/25 20:33	07/22/25 09:01	1
D7-NMeFOSE	60		25 - 150	07/15/25 20:33	07/22/25 09:01	1
D9-NEtFOSE	67		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C3 HFPO-DA	75		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C-6:2 FTCA	70		25 - 150	07/15/25 20:33	07/22/25 09:01	1
13C-8:2 FTCA	57		25 - 150	07/15/25 20:33	07/22/25 09:01	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	110	B	4.1	0.94	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoropentanoic acid (PFPeA)	63		4.1	0.84	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorohexanoic acid (PFHxA)	64		4.1	0.63	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoroheptanoic acid (PFHpA)	26		4.1	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorooctanoic acid (PFOA)	48		4.1	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorononanoic acid (PFNA)	12		4.1	0.45	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorodecanoic acid (PFDA)	12		4.1	0.98	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoroundecanoic acid (PFUnA)	4.1		4.1	0.85	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorododecanoic acid (PFDoA)	3.6	J	4.1	0.61	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorotridecanoic acid (PFTTrDA)	1.1	J *	4.1	0.43	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorotetradecanoic acid (PFTTeDA)	1.1	J	4.1	0.75	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorobutanesulfonic acid (PFBS)	9.5		4.1	0.77	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.1	0.75	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	4.1	0.59	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.1	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorooctanesulfonic acid (PFOS)	9.0		4.1	0.88	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorononanesulfonic acid (PFNS)	ND		4.1	0.59	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.1	1.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.1	0.96	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
Perfluorooctanesulfonamide (PFOSA)	ND		4.1	0.67	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.1	0.47	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.1	0.98	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
4:2 FTS	ND		4.1	1.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
6:2 FTS	ND		4.1	0.55	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
8:2 FTS	ND		4.1	0.71	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.1	0.96	ug/Kg	✱	07/15/25 20:40	07/22/25 05:02	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.1	1.0	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.1	0.96	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.1	0.57	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
9CI-PF3ONS	ND		4.1	0.71	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
11CI-PF3OUdS	ND		4.1	0.63	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.1	0.79	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.1	0.77	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.1	0.84	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.1	0.81	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.1	0.92	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.1	0.49	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		4.1	0.65	ug/Kg	☼	07/15/25 20:40	07/22/25 05:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	55		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFBA	101		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C5 PFPeA	102		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFHxA	103		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFHpA	96		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFOA	92		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C5 PFNA	89		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFDA	71		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFUnA	64		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFDoA	60		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 PFTeDA	63		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C3 PFBS	98		25 - 150	07/15/25 20:40	07/22/25 05:02	1
18O2 PFHxS	97		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C4 PFOS	74		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D3-NMeFOSAA	55		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D5-NEtFOSAA	53		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 4:2 FTS	0		0 - 10	07/15/25 20:40	07/22/25 05:02	1
13C2 6:2 FTS	86		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C2 8:2 FTS	64		25 - 150	07/15/25 20:40	07/22/25 05:02	1
d-N-MeFOSA-M	41		25 - 150	07/15/25 20:40	07/22/25 05:02	1
d-N-EtFOSA-M	35		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D7-NMeFOSE	54		25 - 150	07/15/25 20:40	07/22/25 05:02	1
D9-NEtFOSE	48		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C3 HFPO-DA	86		25 - 150	07/15/25 20:40	07/22/25 05:02	1
13C-6:2 FTCA	77		25 - 150	07/15/25 20:40	07/22/25 05:02	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-A-24-202506

Lab Sample ID: 320-122544-9

Date Collected: 06/16/25 14:40

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 24.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-8:2 FTCA	58		25 - 150	07/15/25 20:40	07/22/25 05:02	1

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		15	3.4	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoropentanoic acid (PFPeA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorohexanoic acid (PFHxA)	3.0	J	15	2.3	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoroheptanoic acid (PFHpA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorooctanoic acid (PFOA)	ND		15	4.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorononanoic acid (PFNA)	ND		15	1.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorodecanoic acid (PFDA)	ND		15	3.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoroundecanoic acid (PFUnA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorododecanoic acid (PFDoA)	ND		15	2.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		15	1.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorotetradecanoic acid (PFTeDA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoropentanesulfonic acid (PFPeS)	ND		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorohexanesulfonic acid (PFHxS)	8.1	J I J	15	2.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		15	3.7	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorooctanesulfonic acid (PFOS)	16	I J	15	3.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorononanesulfonic acid (PFNS)	ND		15	2.2	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		15	3.9	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorododecanesulfonic acid (PFDoS)	ND		15	3.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		15	2.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11	J	15	1.7	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.2	J	15	3.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
4:2 FTS	ND		15	3.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
6:2 FTS	ND		15	2.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
8:2 FTS	ND		15	2.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		15	3.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		15	3.7	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.1	J	15	3.5	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.9	J	15	2.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
9CI-PF3ONS	ND		15	2.6	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
11CI-PF3OUdS	ND		15	2.3	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		15	2.9	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		15	2.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.6 J		15	3.1	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		15	3.0	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		15	3.4	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		15	1.8	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		15	2.4	ug/Kg	✱	07/15/25 20:33	07/22/25 09:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	79		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFBA	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C5 PFPeA	89		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFHxA	111		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFHpA	94		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFOA	98		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C5 PFNA	103		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFDA	98		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFUnA	90		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFDoA	87		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 PFTeDA	41		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C3 PFBS	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
18O2 PFHxS	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C4 PFOS	85		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D3-NMeFOSAA	92		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D5-NEtFOSAA	88		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 4:2 FTS	144		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 6:2 FTS	166	*5+	25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C2 8:2 FTS	136		25 - 150	07/15/25 20:33	07/22/25 09:15	1
d-N-MeFOSA-M	43		25 - 150	07/15/25 20:33	07/22/25 09:15	1
d-N-EtFOSA-M	53		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D7-NMeFOSE	46		25 - 150	07/15/25 20:33	07/22/25 09:15	1
D9-NEtFOSE	67		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C3 HFPO-DA	79		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C-6:2 FTCA	72		25 - 150	07/15/25 20:33	07/22/25 09:15	1
13C-8:2 FTCA	76		25 - 150	07/15/25 20:33	07/22/25 09:15	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	100	B	15	3.4	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoropentanoic acid (PFPeA)	68		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorohexanoic acid (PFHxA)	28		15	2.3	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoroheptanoic acid (PFHpA)	19		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorooctanoic acid (PFOA)	24		15	4.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	11	J	15	1.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorodecanoic acid (PFDA)	6.6	J	15	3.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoroundecanoic acid (PFUnA)	4.4	J	15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorododecanoic acid (PFDoA)	2.9	J	15	2.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorotridecanoic acid (PFTrDA)	ND	*	15	1.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorotetradecanoic acid (PFTeDA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorobutanesulfonic acid (PFBS)	3.5	J	15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoropentanesulfonic acid (PFPeS)	ND		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorohexanesulfonic acid (PFHxS)	ND		15	2.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		15	3.7	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorooctanesulfonic acid (PFOS)	9.2	J	15	3.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorononanesulfonic acid (PFNS)	ND		15	2.2	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		15	3.9	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		15	3.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluorooctanesulfonamide (PFOSA)	ND		15	2.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		15	1.7	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		15	3.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
4:2 FTS	ND		15	3.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
6:2 FTS	ND		15	2.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
8:2 FTS	ND		15	2.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		15	3.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		15	3.7	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		15	3.5	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		15	2.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
9CI-PF3ONS	ND		15	2.6	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
11CI-PF3OUdS	ND		15	2.3	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		15	2.9	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		15	2.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		15	3.1	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		15	3.0	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		15	3.4	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		15	1.8	ug/Kg	✱	07/15/25 20:40	07/22/25 05:16	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-122544-2

Client Sample ID: BIO-B-202506

Lab Sample ID: 320-122544-10

Date Collected: 06/16/25 15:00

Matrix: Solid

Date Received: 06/18/25 09:45

Percent Solids: 6.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		15	2.4	ug/Kg	☆	07/15/25 20:40	07/22/25 05:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	54		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFBA	104		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C5 PFPeA	101		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFHxA	101		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFHpA	97		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFOA	97		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C5 PFNA	89		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFDA	72		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFUnA	66		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFDaA	58		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 PFTeDA	61		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C3 PFBS	97		25 - 150				07/15/25 20:40	07/22/25 05:16	1
18O2 PFHxS	99		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C4 PFOS	73		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D3-NMeFOSAA	59		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D5-NEtFOSAA	55		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 4:2 FTS	0		0 - 10				07/15/25 20:40	07/22/25 05:16	1
13C2 6:2 FTS	85		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C2 8:2 FTS	68		25 - 150				07/15/25 20:40	07/22/25 05:16	1
d-N-MeFOSA-M	48		25 - 150				07/15/25 20:40	07/22/25 05:16	1
d-N-EtFOSA-M	40		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D7-NMeFOSE	51		25 - 150				07/15/25 20:40	07/22/25 05:16	1
D9-NEtFOSE	44		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C3 HFPO-DA	86		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C-6:2 FTCA	76		25 - 150				07/15/25 20:40	07/22/25 05:16	1
13C-8:2 FTCA	68		25 - 150				07/15/25 20:40	07/22/25 05:16	1

July 2025

Data Quality and Usability Review – July 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 9/23/2025

Madison Metropolitan Sewerage District (MMSD) collected influent, effluent, and biosolids samples at the Nine Springs wastewater treatment plant on July 14 and 15, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and/or total oxidizable precursor (TOP) assay PFAS by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDGs 320-123508-1 and 320-123508-2 (Revision 1 dated 9/4/2025).

Samples included in this review are listed below:

- BIO-A-25-202507
- INF-COMP-202507
- EFF-G-202507
- EB-01-202507

Each sample was analyzed for one or more the following constituents.

Analyte Group	Method
PFAS (40 Analytes)* and Total Solids* ^{**}	EPA Method 1633A
PFAS TOP Assay (40 Analytes) ^{**}	Modified EPA Method 537 and laboratory SOP using Isotope Dilution/WI Method Criteria

Notes:

* The laboratory does not hold NELAP accreditation for PFAS or total solids by Method 1633A.

^{**} The laboratory does not hold Wisconsin accreditation for the full list of PFAS analytes reported by TOP Assay or total solids.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations, Document # EA-19-0001, WDNR, December 2019¹, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;

¹ The Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations were used to evaluate the TOP assay data only since the laboratory did not analyze the TOP assay samples using EPA Method 1633A.

- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The revised data packages were found to be complete as received from the laboratory.
- The total solids analysis was performed by the laboratory without NELAP or Wisconsin certification, the total PFAS analyses were performed by the laboratory without NELAP certification, and select analytes in the PFAS TOP assay were performed by the laboratory without Wisconsin certification. However, since the laboratory was certified in Wisconsin for all PFAS by method 1633A and select PFAS TOP assay analytes, and was NELAP certified for all PFAS TOP assay analytes, there is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.

- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample INF-COMP-202507 was not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was extracted and analyzed with each batch for PFAS (total and TOP assay). The following table summarizes the compounds detected in the method blanks, the associated samples, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Action
MB 320-864414/1-A (post-TOP assay)	PFBA	0.623 J ug/kg	No validation action was required on this basis since the result for PFBA was >10x the blank concentration in the post-TOP assay analysis of the associated sample.
Associated sample: BIO-A-25-202507			

- One equipment blank (EB-01-202507) was collected and analyzed for total PFAS. The following table summarizes the compounds detected in EB-01-202507, the associated sample, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Actions
EB-01-202507 (total PFAS)	PFBA	0.49 J ng/L	The positive pre-TOP assay result for PFBA in sample BIO-A-25-202507 was qualified as an estimated nondetect (UJ) at the reported concentration since the result was ≤ the QL. No validation actions were required on this basis for the post-TOP PFBA and total PFBA analyses since the results were > the QL and > 10x the blank concentration in the associated sample (when adjusted for sample-specific preparation factors).
	PFHxA	0.80 J ng/L	No validation actions were required on this basis since the pre-TOP, post-TOP, and total PFHxA results were > the QL and > 10x the blank concentration in the associated sample (when adjusted for sample-specific preparation factors).
Associated sample: BIO-A-25-202507			

- All samples were extracted and analyzed within the holding time, with the following exceptions.
 - Sample INF-COMP-202507 was extracted for total PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The nondetect results for total NMeFOSE and total NEtFOSE in sample INF-COMP-202507 were qualified as estimated (UJ).
 - The positive result for total NMeFOSAA in sample INF-COMP-202507 was qualified as estimated (J); no direction of bias was applied since this result was also qualified as estimated (J) by the laboratory due to detection <QL. No qualification was required for total NEtFOSAA in sample INF-COMP-202507 since this analyte was not detected in the sample.
 - Note that the preparation method referenced for the total PFAS and total solids analyses is 1633 instead of 1633A. The associated samples were prepared in accordance with method 1633A; however, the laboratory has not updated the

reference appropriately in their reporting system. No validation action was taken on this basis.

- The LCS (including low-level LCS for method 1633A PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs) for all analytes were within the method acceptance limits except as noted in the table below. Note that the laboratory's acceptance limits for TOP assay LCS/LCSDs are different than those specified in the WI Method Criteria; the laboratory's acceptance limits are listed below but the WI Method Criteria (60-135%) were also considered in the evaluation of the data.

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	RPD (%)	LCS/LCSD %R/RPD Limits	Validation Actions
LCS 320- 864414/2-A/ LCSD 320- 864414/3-A (post-TOP assay)	PFPeA	-/234	-	159-221/-	Professional judgement was used and the positive results for post-TOP assay PFPeA and PFHxA were qualified as estimated (J) in the associated sample. These results were also qualified as estimated (J) by the laboratory due to detections < the QL. See Additional note below.
	PFHxA	295/270	-	208-257/-	
	PFTTrDA	65/63	-	78-138/-	Professional judgement was used and no validation actions were taken on this basis since these compounds recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
	PFTeDA	63/58	-	72-132/-	
	PFHpS	-/141	-	68-128/-	No validation action was required on this basis since post-TOP assay PFHpS was not detected in the associated sample.
	PFDoS	-/44	-	47-107/-	Professional judgement was used and the nondetect results for post-TOP assay PFDoS and 11Cl-PF3OUdS were qualified as estimated (UJ) in the associated sample. See Additional note below.
	11Cl-PF3OUdS	42/38	-	46-106/-	
LCS 320- 868862/3-A/ LCSD 320- 868862/4-A (total PFAS)	11Cl-PF3OUdS	-/-	34	-/30	No validation action was required on this basis since total 11Cl-PF3OUdS was not detected in the associated sample.
Associated sample: BIO-A-25-202507					
-: Met criteria					

Additional Note:

The laboratory has previously stated that enhanced post-TOP assay LCS/LCSD %Rs for the perfluoroalkyl carboxylic acids (PFCAs) (i.e., PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, and PFDA) is consistent with the expected oxidation of precursor analytes. The laboratory uses elevated %R acceptance limits to account for this expected oxidation; therefore, the post-TOP assay LCS/LCSD %Rs for the PFCAs were evaluated against the laboratory's limits only and were not evaluated against the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. If post-TOP assay LCS/LCSD %Rs of the PFCA compounds exceed the elevated laboratory limits, professional judgement is used and samples are qualified as estimated without a direction of bias (J). It should also be noted that the laboratory stated in the case narrative that zero %R of precursor analytes (i.e., 3:3 FTCA, 5:3 FTCA, 7:3 FTCA, ADONA, 4:2 FTS, 6:2 FTS, 8:2 FTS, PFOSA, NMeFOSAA, NEtFOSAA, NEtFOSA, NMeFOSA, NMeFOSE, and NEtFOSE) is also expected in the post-TOP assay due to the oxidation of these compounds during the TOP Assay procedure; %Rs ≤ 10% were observed for the listed precursors. No validation actions were taken on this basis. Post-TOP assay LCS/LCSD %Rs for other PFAS were evaluated against both the laboratory's limits and the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%.

- MS/MSD analyses were not performed on a sample from this data set.
- The reverse surrogate (M2-4:2 FTS) was within the laboratory's acceptance limits (0-10%) in the post-TOP assay analyses. The following table summarizes the remaining EIS %Rs that were outside of the laboratory's acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-COMP-202507 (total PFAS)	13C2 6:2 FTS	230	40-200	The positive result for total 6:2 FTS was qualified as estimated (J) in sample INF-COMP-202507.
	13C2 4:2 FTS	231		No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-COMP-202507.
EFF-G-202507 (total PFAS)	13C2 4:2 FTS	207	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample EFF-G-202507.
BIO-A-25-202507 (pre-TOP assay)	13C2 6:2 FTS	160	25-150	No validation action was required on this basis since pre-TOP assay 6:2 FTS was not detected in sample BIO-A-25-202507.
BIO-A-25-202507 (total PFAS)	13C8 FOSA	39.0	40-130	The positive result for total PFOSA was qualified as estimated (J) in sample BIO-A-25-202507.
	13C2 4:2 FTS	256	40-165	No validation action was required on this basis since total 4:2 FTS was not detected in sample BIO-A-25-202507.
	13C2 6:2 FTS	267	40-215	The positive result for total 6:2 FTS was qualified as estimated (J) in sample BIO-A-25-202507.

Notes:

* Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was not performed on a sample from this sample set.
- The laboratory noted the following observations in the case narrative for the PFAS analyses. No validation actions were taken on the basis of these observations.
 - Samples INF-COMP-202507 and EFF-G-202507 were discolored following extraction for total PFAS.
 - Sample BIO-A-25-202507 was discolored prior to and following extraction for total PFAS.
 - Sample INF-COMP-202507 had elevated total suspended solids (TSS) in the sample container and was therefore prepared using project-specified instructions. The sample was fortified with EIS, equilibrated, and centrifuged. The aqueous phase was separated into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual solids were then rinsed with solvent (basic methanol) and the resulting methanolic extract was added to the aqueous phase prior to extraction to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.
- No dilutions were performed on the samples in this data set.

- The results for the following PFAS in the samples listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - Pre-TOP assay PFHxS in sample BIO-A-25-202507*;
 - Post-TOP assay PFHxS in sample BIO-A-25-202507*.

* This result was also qualified as estimated (J) by the laboratory due to detection < the QL.
- The percent moisture for sample BIO-A-25-202507 was high (>70% moisture). The laboratory has been contacted during previous rounds of validation review regarding this issue and stated that biosolids samples are agitated and then immediately aliquoted for extraction after agitation, indicating that a representative sample is extracted for PFAS analysis. No validation actions were taken on this basis.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narratives. No validation actions were taken on this basis since the actual CCV results were not provided for review.
- The laboratory noted in the case narrative and through the use of a “CI” qualifier that sample EFF-G-202507 had chromatographic interferences that could adversely impact the identification and quantitation of total PFPeA; the laboratory noted that the interference could cause false positive results. Therefore, the positive result for total PFPeA in sample EFF-G-202507 was qualified as estimated (J+) with a potential high bias.

QUALIFIED FORM 1s

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: INF-COMP-202507

Lab Sample ID: 320-123508-1

Date Collected: 07/14/25 23:59

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.20	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorohexanoic acid (PFHxA)	7.9		1.7	0.23	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.7	0.30	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorooctanoic acid (PFOA)	5.2		1.7	0.33	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorononanoic acid (PFNA)	0.51	J	1.7	0.39	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorodecanoic acid (PFDA)	0.43	J	1.7	0.38	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.49	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.69	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorobutanesulfonic acid (PFBS)	5.9		1.7	0.24	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorohexanesulfonic acid (PFHxS)	7.6		1.7	0.21	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorooctanesulfonic acid (PFOS)	8.8		1.7	0.24	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.27	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.45	ng/L		07/22/25 04:17	07/23/25 23:42	1
6:2 FTS	2.6	J J	3.4	0.35	ng/L		07/22/25 04:17	07/23/25 23:42	1
8:2 FTS	0.88	J	3.4	0.77	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.33	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.38	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.61	J J	1.7	0.30	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.38	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	8.6	2.0	ng/L		07/22/25 04:17	07/23/25 23:42	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.6	2.1	ng/L		07/22/25 04:17	07/23/25 23:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		07/22/25 04:17	07/23/25 23:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	J	1.7	0.16	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		07/22/25 04:17	07/23/25 23:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.62	ng/L		07/22/25 04:17	07/23/25 23:42	1
9CI-PF3ONS	ND		1.7	0.50	ng/L		07/22/25 04:17	07/23/25 23:42	1
11CI-PF3OUdS	ND		1.7	0.25	ng/L		07/22/25 04:17	07/23/25 23:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		07/22/25 04:17	07/23/25 23:42	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: INF-COMP-202507

Lab Sample ID: 320-123508-1

Date Collected: 07/14/25 23:59

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.62	ng/L		07/22/25 04:17	07/23/25 23:42	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	21		8.6	1.5	ng/L		07/22/25 04:17	07/23/25 23:42	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.4	J	8.6	1.1	ng/L		07/22/25 04:17	07/23/25 23:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFPeA	47.1		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C5 PFHxA	60.8		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C4 PFHpA	64.6		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C8 PFOA	106		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C9 PFNA	102		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C6 PFDA	84.0		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C7 PFUnA	52.9		30 - 130				07/22/25 04:17	07/23/25 23:42	1
13C2 PFDoA	40.6		10 - 130				07/22/25 04:17	07/23/25 23:42	1
13C2 PFTeDA	51.3		10 - 130				07/22/25 04:17	07/23/25 23:42	1
13C3 PFBS	95.8		40 - 135				07/22/25 04:17	07/23/25 23:42	1
13C3 PFHxS	102		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C8 PFOS	82.7		40 - 130				07/22/25 04:17	07/23/25 23:42	1
13C8 FOSA	61.1		40 - 130				07/22/25 04:17	07/23/25 23:42	1
D3-NMeFOSAA	40.7		40 - 170				07/22/25 04:17	07/23/25 23:42	1
D5-NEtFOSAA	25.9		25 - 135				07/22/25 04:17	07/23/25 23:42	1
13C2 6:2 FTS	230	*5+	40 - 200				07/22/25 04:17	07/23/25 23:42	1
13C2 8:2 FTS	182		40 - 300				07/22/25 04:17	07/23/25 23:42	1
13C3 HFPO-DA	56.4		40 - 130				07/22/25 04:17	07/23/25 23:42	1
D7-NMeFOSE	45.1		10 - 130				07/22/25 04:17	07/23/25 23:42	1
D9-NEtFOSE	15.1		10 - 130				07/22/25 04:17	07/23/25 23:42	1
D5-NEtFOSA	31.5		10 - 130				07/22/25 04:17	07/23/25 23:42	1
D3-NMeFOSA	45.4		10 - 130				07/22/25 04:17	07/23/25 23:42	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.4	0.32	ng/L		07/22/25 04:17	07/24/25 19:04	1
4:2 FTS	ND		3.4	0.37	ng/L		07/22/25 04:17	07/24/25 19:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	87.9		5 - 130				07/22/25 04:17	07/24/25 19:04	1
13C2 4:2 FTS	231	*5+	40 - 200				07/22/25 04:17	07/24/25 19:04	1

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	4.6	CI J+	1.6	0.18	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorohexanoic acid (PFHxA)	12		1.6	0.21	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoroheptanoic acid (PFHpA)	2.0		1.6	0.28	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorooctanoic acid (PFOA)	6.9		1.6	0.31	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorononanoic acid (PFNA)	0.52	J	1.6	0.36	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorodecanoic acid (PFDA)	0.75	J	1.6	0.35	ng/L		07/22/25 04:17	07/23/25 23:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.46	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorobutanesulfonic acid (PFBS)	6.2		1.6	0.22	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorohexanesulfonic acid (PFHxS)	6.6		1.6	0.19	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorooctanesulfonic acid (PFOS)	3.8		1.6	0.22	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		07/22/25 04:17	07/23/25 23:59	1
6:2 FTS	0.56 J		3.2	0.32	ng/L		07/22/25 04:17	07/23/25 23:59	1
8:2 FTS	ND		3.2	0.71	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluorooctanesulfonamide (PFOSA)	0.34 J		1.6	0.18	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.67 J		1.6	0.28	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.36 J		1.6	0.35	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.0	1.8	ng/L		07/22/25 04:17	07/23/25 23:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.0	1.9	ng/L		07/22/25 04:17	07/23/25 23:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		07/22/25 04:17	07/23/25 23:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		07/22/25 04:17	07/23/25 23:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		07/22/25 04:17	07/23/25 23:59	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		07/22/25 04:17	07/23/25 23:59	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		07/22/25 04:17	07/23/25 23:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		07/22/25 04:17	07/23/25 23:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		07/22/25 04:17	07/23/25 23:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0 J		8.0	1.4	ng/L		07/22/25 04:17	07/23/25 23:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.0	0.99	ng/L		07/22/25 04:17	07/23/25 23:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EFF-G-202507

Lab Sample ID: 320-123508-2

Date Collected: 07/15/25 10:53

Matrix: Water

Date Received: 07/17/25 09:10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	69.4		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C5 PFHxA	84.8		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C4 PFHpA	82.1		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C8 PFOA	106		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C9 PFNA	102		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C6 PFDA	104		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C7 PFUnA	95.6		30 - 130	07/22/25 04:17	07/23/25 23:59	1
13C2 PFDoA	74.8		10 - 130	07/22/25 04:17	07/23/25 23:59	1
13C2 PFTeDA	56.0		10 - 130	07/22/25 04:17	07/23/25 23:59	1
13C3 PFBS	104		40 - 135	07/22/25 04:17	07/23/25 23:59	1
13C3 PFHxS	110		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C8 PFOS	95.4		40 - 130	07/22/25 04:17	07/23/25 23:59	1
13C8 FOSA	72.7		40 - 130	07/22/25 04:17	07/23/25 23:59	1
D3-NMeFOSAA	74.0		40 - 170	07/22/25 04:17	07/23/25 23:59	1
D5-NEtFOSAA	70.6		25 - 135	07/22/25 04:17	07/23/25 23:59	1
13C2 6:2 FTS	181		40 - 200	07/22/25 04:17	07/23/25 23:59	1
13C2 8:2 FTS	132		40 - 300	07/22/25 04:17	07/23/25 23:59	1
13C3 HFPO-DA	76.3		40 - 130	07/22/25 04:17	07/23/25 23:59	1
D7-NMeFOSE	62.8		10 - 130	07/22/25 04:17	07/23/25 23:59	1
D9-NEtFOSE	64.0		10 - 130	07/22/25 04:17	07/23/25 23:59	1
D5-NEtFOSA	62.3		10 - 130	07/22/25 04:17	07/23/25 23:59	1
D3-NMeFOSA	65.8		10 - 130	07/22/25 04:17	07/23/25 23:59	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.2	0.30	ng/L		07/22/25 04:17	07/24/25 19:21	1
4:2 FTS	ND		3.2	0.35	ng/L		07/22/25 04:17	07/24/25 19:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	92.7		5 - 130				07/22/25 04:17	07/24/25 19:21	1
13C2 4:2 FTS	207	*5+	40 - 200				07/22/25 04:17	07/24/25 19:21	1

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.49	J	3.3	0.31	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorohexanoic acid (PFHxA)	0.80	J	1.6	0.22	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.37	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.19	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.23	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.20	ng/L		07/22/25 04:17	07/24/25 00:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.23	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.26	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		07/22/25 04:17	07/24/25 00:15	1
4:2 FTS	ND		3.3	0.36	ng/L		07/22/25 04:17	07/24/25 00:15	1
6:2 FTS	ND		3.3	0.33	ng/L		07/22/25 04:17	07/24/25 00:15	1
8:2 FTS	ND		3.3	0.74	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.32	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.37	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.29	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		8.2	1.9	ng/L		07/22/25 04:17	07/24/25 00:15	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		8.2	2.0	ng/L		07/22/25 04:17	07/24/25 00:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		07/22/25 04:17	07/24/25 00:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		07/22/25 04:17	07/24/25 00:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		07/22/25 04:17	07/24/25 00:15	1
9CI-PF3ONS	ND		1.6	0.48	ng/L		07/22/25 04:17	07/24/25 00:15	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		07/22/25 04:17	07/24/25 00:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		07/22/25 04:17	07/24/25 00:15	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		07/22/25 04:17	07/24/25 00:15	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.2	1.4	ng/L		07/22/25 04:17	07/24/25 00:15	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		07/22/25 04:17	07/24/25 00:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	95.3		5 - 130				07/22/25 04:17	07/24/25 00:15	1
13C5 PFPeA	110		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C5 PFHxA	110		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C4 PFHpA	108		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C9 PFNA	105		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C6 PFDA	103		40 - 130				07/22/25 04:17	07/24/25 00:15	1
13C7 PFUnA	101		30 - 130				07/22/25 04:17	07/24/25 00:15	1
13C2 PFDaA	92.7		10 - 130				07/22/25 04:17	07/24/25 00:15	1
13C2 PFTeDA	101		10 - 130				07/22/25 04:17	07/24/25 00:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: EB-01-202507

Lab Sample ID: 320-123508-3

Date Collected: 07/15/25 13:50

Matrix: Water

Date Received: 07/17/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	98.1		40 - 135	07/22/25 04:17	07/24/25 00:15	1
13C3 PFHxS	100		40 - 130	07/22/25 04:17	07/24/25 00:15	1
13C8 PFOS	98.7		40 - 130	07/22/25 04:17	07/24/25 00:15	1
13C8 FOSA	67.7		40 - 130	07/22/25 04:17	07/24/25 00:15	1
D3-NMeFOSAA	80.2		40 - 170	07/22/25 04:17	07/24/25 00:15	1
D5-NEtFOSAA	80.6		25 - 135	07/22/25 04:17	07/24/25 00:15	1
13C2 4:2 FTS	146		40 - 200	07/22/25 04:17	07/24/25 00:15	1
13C2 6:2 FTS	124		40 - 200	07/22/25 04:17	07/24/25 00:15	1
13C2 8:2 FTS	113		40 - 300	07/22/25 04:17	07/24/25 00:15	1
13C3 HFPO-DA	105		40 - 130	07/22/25 04:17	07/24/25 00:15	1
D7-NMeFOSE	70.5		10 - 130	07/22/25 04:17	07/24/25 00:15	1
D9-NEtFOSE	75.9		10 - 130	07/22/25 04:17	07/24/25 00:15	1
D5-NEtFOSA	62.5		10 - 130	07/22/25 04:17	07/24/25 00:15	1
D3-NMeFOSA	63.4		10 - 130	07/22/25 04:17	07/24/25 00:15	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		1.6	0.32	ng/L		07/22/25 04:17	07/24/25 19:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C8 PFOA	100		40 - 130				07/22/25 04:17	07/24/25 19:37	1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.1	J UJ	3.8	0.87	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoropentanoic acid (PFPeA)	4.4		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorohexanoic acid (PFHxA)	17		3.8	0.59	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoroheptanoic acid (PFHpA)	0.78	J	3.8	0.72	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorooctanoic acid (PFOA)	10		3.8	1.0	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorononanoic acid (PFNA)	1.0	J	3.8	0.42	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorodecanoic acid (PFDA)	4.2		3.8	0.91	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoroundecanoic acid (PFUnA)	1.2	J	3.8	0.80	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorododecanoic acid (PFDoA)	1.5	J	3.8	0.57	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorotridecanoic acid (PFTTrDA)	ND		3.8	0.40	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorotetradecanoic acid (PFTeDA)	ND		3.8	0.70	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorobutanesulfonic acid (PFBS)	3.6	J	3.8	0.72	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.70	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	J I J	3.8	0.55	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.93	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorooctanesulfonic acid (PFOS)	12		3.8	0.82	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.55	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	0.99	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		3.8	0.90	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluorooctanesulfonamide (PFOSA)	0.74	J	3.8	0.63	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		3.8	0.44	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.1	J	3.8	0.91	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
4:2 FTS	ND		3.8	0.97	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
6:2 FTS	ND		3.8	0.51	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
8:2 FTS	0.95	J	3.8	0.66	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.93	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.0		3.8	0.90	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.1	J	3.8	0.53	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
9CI-PF3ONS	ND		3.8	0.66	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
11CI-PF3OUdS	ND		3.8	0.59	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.74	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	28		3.8	0.72	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.1		3.8	0.78	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.76	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.86	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	✱	07/20/25 20:21	07/24/25 12:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	69		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C4 PFBA	92		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C5 PFPeA	100		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFHxA	110		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C4 PFHpA	104		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C4 PFOA	102		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C5 PFNA	101		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFDA	100		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFUnA	105		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFDoA	90		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 PFTeDA	68		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C3 PFBS	108		25 - 150	07/20/25 20:21	07/24/25 12:56	1
18O2 PFHxS	94		25 - 150	07/20/25 20:21	07/24/25 12:56	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	82		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D3-NMeFOSAA	77		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D5-NEtFOSAA	101		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 4:2 FTS	136		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 6:2 FTS	160	*5+	25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C2 8:2 FTS	143		25 - 150	07/20/25 20:21	07/24/25 12:56	1
d-N-MeFOSA-M	50		25 - 150	07/20/25 20:21	07/24/25 12:56	1
d-N-EtFOSA-M	59		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D7-NMeFOSE	54		25 - 150	07/20/25 20:21	07/24/25 12:56	1
D9-NEtFOSE	70		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C3 HFPO-DA	86		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C-6:2 FTCA	100		25 - 150	07/20/25 20:21	07/24/25 12:56	1
13C-8:2 FTCA	93		25 - 150	07/20/25 20:21	07/24/25 12:56	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	110	B	3.8	0.87	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoropentanoic acid (PFPeA)	57	*+ J	3.8	0.78	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorohexanoic acid (PFHxA)	47	*+ J	3.8	0.59	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoroheptanoic acid (PFHpA)	22		3.8	0.72	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorooctanoic acid (PFOA)	38		3.8	1.0	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorononanoic acid (PFNA)	12		3.8	0.42	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorodecanoic acid (PFDA)	9.5		3.8	0.91	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoroundecanoic acid (PFUnA)	3.9		3.8	0.80	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorododecanoic acid (PFDoA)	3.1	J	3.8	0.57	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorotridecanoic acid (PFTTrDA)	0.90	J *	3.8	0.40	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorotetradecanoic acid (PFTTeDA)	1.1	J *	3.8	0.70	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorobutanesulfonic acid (PFBS)	5.7		3.8	0.72	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.70	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	↓ I J	3.8	0.55	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	*+	3.8	0.93	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorooctanesulfonic acid (PFOS)	10		3.8	0.82	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.55	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	0.99	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorododecanesulfonic acid (PFDoS)	ND	* UJ	3.8	0.90	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		3.8	0.63	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		3.8	0.44	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.8	0.91	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
4:2 FTS	ND		3.8	0.97	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
6:2 FTS	ND		3.8	0.51	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1
8:2 FTS	ND		3.8	0.66	ug/Kg	✱	07/20/25 20:24	07/24/25 14:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.93	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		3.8	0.90	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		3.8	0.53	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
9CI-PF3ONS	ND		3.8	0.66	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.78	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
11CI-PF3OUdS	ND	* - UJ	3.8	0.59	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.74	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.78	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		3.8	0.72	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		3.8	0.78	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.76	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.86	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	☼	07/20/25 20:24	07/24/25 14:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	51		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFBA	94		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C5 PFPeA	98		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFHxA	96		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFHpA	99		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFOA	92		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C5 PFNA	82		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFDA	66		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFUnA	61		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFDoA	53		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 PFTeDA	59		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C3 PFBS	104		25 - 150	07/20/25 20:24	07/24/25 14:48	1
18O2 PFHxS	93		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C4 PFOS	73		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D3-NMeFOSAA	48		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D5-NEtFOSAA	58		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 4:2 FTS	0		0 - 10	07/20/25 20:24	07/24/25 14:48	1
13C2 6:2 FTS	86		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C2 8:2 FTS	63		25 - 150	07/20/25 20:24	07/24/25 14:48	1
d-N-MeFOSA-M	40		25 - 150	07/20/25 20:24	07/24/25 14:48	1
d-N-EtFOSA-M	34		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D7-NMeFOSE	47		25 - 150	07/20/25 20:24	07/24/25 14:48	1
D9-NEtFOSE	42		25 - 150	07/20/25 20:24	07/24/25 14:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-1

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C-6:2 FTCA	94		25 - 150	07/20/25 20:24	07/24/25 14:48	1
13C-8:2 FTCA	75		25 - 150	07/20/25 20:24	07/24/25 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	74		0.10	0.10	%			07/28/25 14:52	1
Percent Solids (EPA 1633)	26		0.10	0.10	%			07/28/25 14:52	1

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.7		1.1	0.091	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoropentanoic acid (PFPeA)	8.8		0.57	0.14	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorohexanoic acid (PFHxA)	24		0.57	0.11	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoroheptanoic acid (PFHpA)	1.3		0.57	0.093	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorooctanoic acid (PFOA)	14		0.57	0.18	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorononanoic acid (PFNA)	1.0		0.57	0.082	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorodecanoic acid (PFDA)	5.3		0.57	0.068	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoroundecanoic acid (PFUnA)	0.96		0.57	0.079	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorododecanoic acid (PFDoA)	2.4		0.57	0.076	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorotridecanoic acid (PFTTrDA)	0.55	J	0.57	0.082	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorotetradecanoic acid (PFTTeDA)	0.63		0.57	0.16	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.57	0.071	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.57	0.11	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorohexanesulfonic acid (PFHxS)	0.81		0.57	0.057	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.57	0.045	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorooctanesulfonic acid (PFOS)	8.0		0.57	0.071	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorononanesulfonic acid (PFNS)	ND		0.57	0.065	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorodecanesulfonic acid (PFDS)	0.60		0.57	0.059	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.57	0.10	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
8:2 FTS	1.5		1.1	0.12	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluorooctanesulfonamide (PFOSA)	1.2	J	0.57	0.18	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.14	J	0.57	0.10	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.17	J	0.57	0.059	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20		0.57	0.045	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.3		0.57	0.048	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.2		2.8	0.25	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.9		2.8	0.22	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.57	0.082	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.57	0.071	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.57	0.062	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.57	0.10	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.57	0.18	ug/Kg	✱	08/08/25 12:15	08/09/25 19:36	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-123508-2

Client Sample ID: BIO-A-25-202507

Lab Sample ID: 320-123508-4

Date Collected: 07/15/25 14:10

Matrix: Solid

Date Received: 07/17/25 09:10

Percent Solids: 26.3

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		0.57	0.11	ug/Kg	☆	08/08/25 12:15	08/09/25 19:36	1
11CI-PF3OUdS	ND	*4	0.57	0.21	ug/Kg	☆	08/08/25 12:15	08/09/25 19:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.57	0.11	ug/Kg	☆	08/08/25 12:15	08/09/25 19:36	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.1	0.21	ug/Kg	☆	08/08/25 12:15	08/09/25 19:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42		2.8	0.69	ug/Kg	☆	08/08/25 12:15	08/09/25 19:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	21		2.8	0.61	ug/Kg	☆	08/08/25 12:15	08/09/25 19:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	75.6		8 - 130	08/08/25 12:15	08/09/25 19:36	1
13C5 PFPeA	76.6		35 - 130	08/08/25 12:15	08/09/25 19:36	1
13C5 PFHxA	96.4		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C4 PFHpA	97.7		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C8 PFOA	86.6		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C9 PFNA	87.5		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C6 PFDA	90.2		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C7 PFUnA	65.1		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C2 PFDoA	50.4		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C2 PFTeDA	53.3		20 - 130	08/08/25 12:15	08/09/25 19:36	1
13C3 PFBS	90.2		40 - 135	08/08/25 12:15	08/09/25 19:36	1
13C3 PFHxS	96.3		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C8 PFOS	127		40 - 130	08/08/25 12:15	08/09/25 19:36	1
13C8 FOSA	39.0	*5-	40 - 130	08/08/25 12:15	08/09/25 19:36	1
D3-NMeFOSAA	72.3		40 - 135	08/08/25 12:15	08/09/25 19:36	1
D5-NEtFOSAA	91.1		40 - 150	08/08/25 12:15	08/09/25 19:36	1
13C2 8:2 FTS	261		40 - 275	08/08/25 12:15	08/09/25 19:36	1
13C3 HFPO-DA	118		40 - 130	08/08/25 12:15	08/09/25 19:36	1
D7-NMeFOSE	43.3		20 - 130	08/08/25 12:15	08/09/25 19:36	1
D9-NEtFOSE	39.0		15 - 130	08/08/25 12:15	08/09/25 19:36	1
D5-NEtFOSA	44.5		10 - 130	08/08/25 12:15	08/09/25 19:36	1
D3-NMeFOSA	44.9		10 - 130	08/08/25 12:15	08/09/25 19:36	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		1.1	0.18	ug/Kg	☼	08/08/25 12:15	08/11/25 17:16	1
6:2 FTS	0.49	J J	1.1	0.15	ug/Kg	☼	08/08/25 12:15	08/11/25 17:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 4:2 FTS	256	*5+	40 - 165				08/08/25 12:15	08/11/25 17:16	1
13C2 6:2 FTS	267	*5+	40 - 215				08/08/25 12:15	08/11/25 17:16	1

Eurofins Sacramento

August 2025

Data Quality and Usability Review – August 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 9/22/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on August 11 and 12, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDG 320-124294-1.

Samples included in this review are listed below:

- INF-COMP-202508
- EFF-G-202508

Each sample was analyzed for the following constituents.

Analyte Group	Method
PFAS (40 Analytes)	EPA Method 1633A

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;

- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The data package was found to be complete as received from the laboratory.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample INF-COMP-202508 was not shipped to the laboratory until one day after collection. The sample was stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with the analytical batch. Target analytes were not detected in the method blank.

- All samples were extracted and analyzed within the holding time, with the following exceptions.
 - Samples INF-COMP-202508 and EFF-G-202508 were extracted for PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive result for NMeFOSE in sample INF-COMP-202508 was qualified as estimated (J); no direction of bias was applied since this result was also qualified as estimated (J) by the laboratory due to detection <QL. The nondetect results for NMeFOSE in sample EFF-G-202508 and NEtFOSE in samples INF-COMP-202508 and EFF-G-202508 were qualified as estimated (UJ).
 - The positive result for NMeFOSAA in sample INF-COMP-202508 was qualified as estimated (J+) with a potential high bias. The positive results for NMeFOSAA in sample EFF-G-202508 and NEtFOSAA in samples INF-COMP-202508 and EFF-G-202508 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to detection <QL.
 - Note that the preparation method referenced for the 1633A analysis is 1633 instead of 1633A. The associated samples were prepared in accordance with method 1633A; however, the laboratory has not updated the reference appropriately in their reporting system. No validation action was taken on this basis.
- The LCS (including low-level LCS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs) for all analytes were within the method acceptance limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The following table summarizes the EIS %Rs that were outside of the method acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action
INF-COMP-202508	13C2 4:2 FTS	204	40-200	No validation action was required on this basis since 4:2 FTS was not detected in sample INF-COMP-202508.
	13C2 6:2 FTS	248		The positive result for 6:2 FTS was qualified as estimated (J) in sample INF-COMP-202508. This result was also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field pair was not collected with this sample set.
- A laboratory duplicate analysis was not performed on a sample from this sample set.
- The laboratory noted the following observations in the case narrative. No validation actions were taken on this basis.
 - Samples INF-COMP-202508 and EFF-G-202508 were discolored prior to extraction
 - Sample INF-COMP-202508 was prepared using project-specified instructions due to the excess amount of sediment and particulates. The sample was fortified with EIS and then centrifuged. The aqueous phase was decanted into a new container and extracted per standard solid phase extraction (SPE) procedures. The residual sediment was then rinsed with solvent (basic methanol) and the resulting methanolic extract was added to the aqueous phase prior to extraction to generate a combined extract. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.

- No dilutions were performed on the samples in this data set.
- The results for the following PFAS in the sample listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the sample listed below were qualified as estimated (J).
 - PFNA and PFOSA in sample EFF-G-202508*;
 - * These results were also qualified as estimated (J) by the laboratory due to detection < the QL.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narrative. No validation actions were taken on this basis since the actual CCV results were not provided for review.
- The laboratory noted in the case narrative and through the use of “CI” qualifiers that samples INF-COMP-202508 and EFF-G-202508 had chromatographic interferences that could adversely impact the identification and quantitation of PFHpA and PFPeS, respectively; the laboratory noted that the interferences could cause false positive results. Therefore, the positive result for PFHpA in sample INF-COMP-202508 was qualified as estimated (J+) with a potential high bias and the positive result for PFPeS in sample EFF-G-202508 was qualified as estimated (J); no direction of bias was applied to PFPeS in sample EFF-G-202508 since this result was also qualified as estimated (J) by the laboratory due to detection <QL.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: INF-COMP-202508

Lab Sample ID: 320-124294-1

Date Collected: 08/11/25 23:59

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	20		3.4	0.31	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.19	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorohexanoic acid (PFHxA)	13		1.7	0.23	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoroheptanoic acid (PFHpA)	1.7	GI J+	1.7	0.29	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorooctanoic acid (PFOA)	7.7		1.7	0.33	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorononanoic acid (PFNA)	0.81	J	1.7	0.38	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorodecanoic acid (PFDA)	0.68	J	1.7	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.48	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorobutanesulfonic acid (PFBS)	10		1.7	0.45	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorohexanesulfonic acid (PFHxS)	7.3		1.7	0.21	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorooctanesulfonic acid (PFOS)	7.7		1.7	0.23	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		08/20/25 04:45	08/20/25 19:05	1
4:2 FTS	ND		3.4	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
6:2 FTS	1.9	J J	3.4	0.34	ng/L		08/20/25 04:45	08/20/25 19:05	1
8:2 FTS	ND		3.4	0.75	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluorooctanesulfonamide (PFOSA)	0.26	J	1.7	0.19	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.4	J+	1.7	0.29	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.1	J J	1.7	0.37	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.1	J J	8.4	1.9	ng/L		08/20/25 04:45	08/20/25 19:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.4	2.0	ng/L		08/20/25 04:45	08/20/25 19:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		08/20/25 04:45	08/20/25 19:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.16	ng/L		08/20/25 04:45	08/20/25 19:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.22	ng/L		08/20/25 04:45	08/20/25 19:05	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.60	ng/L		08/20/25 04:45	08/20/25 19:05	1
9CI-PF3ONS	ND		1.7	0.49	ng/L		08/20/25 04:45	08/20/25 19:05	1
11CI-PF3OUdS	ND		1.7	0.25	ng/L		08/20/25 04:45	08/20/25 19:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: INF-COMP-202508

Lab Sample ID: 320-124294-1

Date Collected: 08/11/25 23:59

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		08/20/25 04:45	08/20/25 19:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.60	ng/L		08/20/25 04:45	08/20/25 19:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	56		8.4	1.4	ng/L		08/20/25 04:45	08/20/25 19:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.9 J		8.4	1.0	ng/L		08/20/25 04:45	08/20/25 19:05	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	67.2		5 - 130				08/20/25 04:45	08/20/25 19:05	1
13C5 PFPeA	49.6		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C5 PFHxA	65.6		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C4 PFHpA	66.2		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C8 PFOA	105		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C9 PFNA	91.8		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C6 PFDA	90.2		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C7 PFUnA	62.6		30 - 130				08/20/25 04:45	08/20/25 19:05	1
13C2 PFDoA	47.7		10 - 130				08/20/25 04:45	08/20/25 19:05	1
13C2 PFTeDA	58.6		10 - 130				08/20/25 04:45	08/20/25 19:05	1
13C3 PFBS	102		40 - 135				08/20/25 04:45	08/20/25 19:05	1
13C3 PFHxS	107		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C8 PFOS	93.1		40 - 130				08/20/25 04:45	08/20/25 19:05	1
13C8 FOSA	86.1		40 - 130				08/20/25 04:45	08/20/25 19:05	1
D3-NMeFOSAA	55.6		40 - 170				08/20/25 04:45	08/20/25 19:05	1
D5-NEtFOSAA	45.5		25 - 135				08/20/25 04:45	08/20/25 19:05	1
13C2 4:2 FTS	204	*5+	40 - 200				08/20/25 04:45	08/20/25 19:05	1
13C2 6:2 FTS	248	*5+	40 - 200				08/20/25 04:45	08/20/25 19:05	1
13C2 8:2 FTS	165		40 - 300				08/20/25 04:45	08/20/25 19:05	1
13C3 HFPO-DA	62.0		40 - 130				08/20/25 04:45	08/20/25 19:05	1
D7-NMeFOSE	32.0		10 - 130				08/20/25 04:45	08/20/25 19:05	1
D9-NEtFOSE	49.2		10 - 130				08/20/25 04:45	08/20/25 19:05	1
D5-NEtFOSA	29.7		10 - 130				08/20/25 04:45	08/20/25 19:05	1
D3-NMeFOSA	50.0		10 - 130				08/20/25 04:45	08/20/25 19:05	1

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	17		3.3	0.31	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.19	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorohexanoic acid (PFHxA)	18		1.6	0.22	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoroheptanoic acid (PFHpA)	3.0		1.6	0.28	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorooctanoic acid (PFOA)	9.4		1.6	0.32	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorononanoic acid (PFNA)	1.1 J I J		1.6	0.37	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorodecanoic acid (PFDA)	0.57 J		1.6	0.36	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.19	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.46	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		08/20/25 04:45	08/20/25 19:21	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	8.3		1.6	0.44	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoropentanesulfonic acid (PFPeS)	0.59	J CI J	1.6	0.18	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorohexanesulfonic acid (PFHxS)	8.4		1.6	0.20	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorooctanesulfonic acid (PFOS)	5.5		1.6	0.23	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.26	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		08/20/25 04:45	08/20/25 19:21	1
4:2 FTS	ND		3.3	0.36	ng/L		08/20/25 04:45	08/20/25 19:21	1
6:2 FTS	1.1	J	3.3	0.33	ng/L		08/20/25 04:45	08/20/25 19:21	1
8:2 FTS	ND		3.3	0.74	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluorooctanesulfonamide (PFOSA)	0.36	J I J	1.6	0.18	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.32	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.37	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	J J	1.6	0.29	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.37	J J	1.6	0.36	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	8.2	1.9	ng/L		08/20/25 04:45	08/20/25 19:21	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.2	2.0	ng/L		08/20/25 04:45	08/20/25 19:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		08/20/25 04:45	08/20/25 19:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.16	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		08/20/25 04:45	08/20/25 19:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		08/20/25 04:45	08/20/25 19:21	1
9Cl-PF3ONS	ND		1.6	0.48	ng/L		08/20/25 04:45	08/20/25 19:21	1
11Cl-PF3OUdS	ND		1.6	0.24	ng/L		08/20/25 04:45	08/20/25 19:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		08/20/25 04:45	08/20/25 19:21	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.3	0.59	ng/L		08/20/25 04:45	08/20/25 19:21	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.0	J	8.2	1.4	ng/L		08/20/25 04:45	08/20/25 19:21	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		08/20/25 04:45	08/20/25 19:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	85.1		5 - 130				08/20/25 04:45	08/20/25 19:21	1
13C5 PFPeA	85.8		40 - 130				08/20/25 04:45	08/20/25 19:21	1
13C5 PFHxA	95.9		40 - 130				08/20/25 04:45	08/20/25 19:21	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-124294-1

Client Sample ID: EFF-G-202508

Lab Sample ID: 320-124294-2

Date Collected: 08/12/25 07:25

Matrix: Water

Date Received: 08/13/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	91.0		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C8 PFOA	99.1		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C9 PFNA	92.0		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C6 PFDA	101		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C7 PFUnA	87.3		30 - 130	08/20/25 04:45	08/20/25 19:21	1
13C2 PFDoA	90.5		10 - 130	08/20/25 04:45	08/20/25 19:21	1
13C2 PFTeDA	70.4		10 - 130	08/20/25 04:45	08/20/25 19:21	1
13C3 PFBS	103		40 - 135	08/20/25 04:45	08/20/25 19:21	1
13C3 PFHxS	102		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C8 PFOS	103		40 - 130	08/20/25 04:45	08/20/25 19:21	1
13C8 FOSA	85.3		40 - 130	08/20/25 04:45	08/20/25 19:21	1
D3-NMeFOSAA	95.7		40 - 170	08/20/25 04:45	08/20/25 19:21	1
D5-NEtFOSAA	98.6		25 - 135	08/20/25 04:45	08/20/25 19:21	1
13C2 4:2 FTS	188		40 - 200	08/20/25 04:45	08/20/25 19:21	1
13C2 6:2 FTS	156		40 - 200	08/20/25 04:45	08/20/25 19:21	1
13C2 8:2 FTS	125		40 - 300	08/20/25 04:45	08/20/25 19:21	1
13C3 HFPO-DA	89.2		40 - 130	08/20/25 04:45	08/20/25 19:21	1
D7-NMeFOSE	69.7		10 - 130	08/20/25 04:45	08/20/25 19:21	1
D9-NEtFOSE	72.9		10 - 130	08/20/25 04:45	08/20/25 19:21	1
D5-NEtFOSA	76.7		10 - 130	08/20/25 04:45	08/20/25 19:21	1
D3-NMeFOSA	76.1		10 - 130	08/20/25 04:45	08/20/25 19:21	1

September 2025

Data Quality and Usability Review – September 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 10/23/2025

Madison Metropolitan Sewerage District (MMSD) collected influent, effluent, and biosolids samples at the Nine Springs wastewater treatment plant on September 8 and 9, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and total oxidizable precursor (TOP) assay PFAS by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDGs 320-125031-1 and 320-125031-2 (Revision 3).

Samples included in this review are listed below:

- BIO-A-23-202509
- BIO-A-24-202509
- BIO-A-25-202509
- BIO-B-202509
- EFF-G-202509
- INF-02-202509
- INF-07-202509
- INF-08-202509
- INF-11-202509
- INF-18-202509
- INF-COMP-202509
- EB01-202509
- EB02-202509

Each sample was analyzed for one or more the following constituents.

Analyte Group	Method
PFAS (40 Analytes) and Total Solids*	EPA Method 1633A
PFAS TOP Assay (40 Analytes)*	Modified EPA Method 537 and laboratory SOP using Isotope Dilution/WI Method Criteria

Notes:

* The laboratory does not hold Wisconsin accreditation for the full list of PFAS analytes reported by TOP Assay or total solids.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations, Document # EA-19-0001, WDNR, December 2019¹, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part

¹ The Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations were used to evaluate the TOP assay data only since the laboratory did not analyze the TOP assay samples using EPA Method 1633A.

or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose with the exception of the nondetect results for PFBA in samples INF-02-202509, INF-07-202509, INF-08-202509, INF-11-202509, INF-18-202509, and INF-COMP-202509; these results were rejected (R) due to significantly low (i.e., <5%) EIS recoveries. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below, with the exception of the rejected data mentioned above, have a minor impact on the data usability.

- The rejected data mentioned above and in the QA/QC sample summary below have a major impact on the data usability as these results are not usable for their intended purposes.

QA/QC Sample Summary

- The revised data packages were found to be complete as received from the laboratory with the following note. PFAS TOP assay analysis was not requested on the chain-of-custody (COC) for samples BIO-A-24-202509 and BIO-A-25-202509. PFAS 1633 and PFAS TOP assay analyses were not requested on the COC for samples BIO-A-23-202509 and BIO-B-202509. Addition of these analyses was requested after receipt at the laboratory. No validation actions were taken on this basis.
- The total solids analyses and select PFAS-TOP assay analytes were performed by the laboratory without Wisconsin certification. There is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - All samples in this data set, with the exception of sample EFF-G-202509, were not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS (total and TOP assay). The following table summarizes the compounds detected in the method blanks, the associated samples, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Action
MB 320-876144/1-A (post-TOP assay)	PFBA	5.44 J ng/L	The positive post-TOP assay result for PFBA in sample EFF-G-202509 was qualified as estimated (J+) with a potential high bias since the result was > the QL and <10x the blank concentration.
Associated sample: EFF-G-202509			
MB 320-878032/1-A (post-TOP assay)	PFBA	0.556 J ug/kg	No validation actions were required on this basis since the results for PFBA were >10x the blank concentration in the post-TOP assay analyses of the associated samples.
Associated samples: BIO-A-23-202509, BIO-A-24-202509, BIO-A-25-202509, BIO-B-202509			

- Two equipment blanks (EB-01-202509 and EB-02-202509) were collected and analyzed for total PFAS. No target compounds were detected in EB-02-202509. The following table summarizes the compound detected in the other equipment blank (EB-01-202509), the associated samples, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Actions
EB-01 202509 (total PFAS)	PFHxA	0.33 J ng/L	No validation actions were required on this basis for the associated sample since the results for PFHxA (total, pre-TOP, and post-TOP) were > the QL and > 10x the blank concentration in the associated samples (when adjusted for sample-specific preparation factors).
Associated sample: BIO-A-24-202509, BIO-A-25-202509			

- All samples were extracted and/or prepared and analyzed within the holding time, with the following exceptions.
 - Samples INF-02-202509, INF-07-202509, INF-08-202509, INF-11-202509, INF-18-202509, INF-COMP-202509, EFF-G-202509, EB01-202509, and EB02-202509 were extracted for total PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive results for total NMeFOSE in samples INF-02-202509, INF-07-202509, INF-08-202509, INF-18-202509, and INF-COMP-202509 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to detection <QL. The nondetect results for total NMeFOSE in samples INF-11-202509, EFF-G-202509, EB01-202509, and EB02-202509 and the nondetect results for NEtFOSE in samples INF-02-202509, INF-07-202509, INF-08-202509, INF-11-202509, INF-18-202509, INF-COMP-202509, EFF-G-202509, EB01-202509, and EB02-202509 were qualified as estimated (UJ).
 - The positive results for total NMeFOSAA and NEtFOSAA in samples INF-02-202509, INF-07-202509, INF-08-202509, INF-11-202509, INF-18-202509, INF-COMP-202509, and EFF-G-202509 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to detection <QL. No qualification was required for total NMeFOSAA and NEtFOSAA in samples EB01-202509 and EB02-202509 since these analytes were not detected in these samples.
- The LCS (including low-level LCS for method 1633A PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits except as noted in the table below. Note that the laboratory's acceptance limits for TOP assay LCS/LCSDs are different than those specified in the WI Method Criteria; the laboratory's acceptance limits are listed below but the WI Method Criteria (60-135%) were also considered in the evaluation of the data.

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	LCS/LCSD %R Limits	Validation Actions
LCS 320-876143/2-A/ LCSD 320-876143/3-A (pre-TOP assay)	NMeFOSA	61/64	72-132	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
LCS 320-876144/2-A/ LCSD 320-876144/3-A (post-TOP assay)	PFTTrDA	70/69	85-145	Professional judgement was used and no validation actions were taken on this basis since these compounds recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
	PFTeDA	-/68	72-132	
	PFPeA	219/235	151-208	Professional judgement was used and the positive result for post-TOP assay PFPeA was qualified as estimated (J) in the associated sample. See Additional note below.
	NFDHA	132/128	67-127	No validation action was required on this basis since post-TOP assay NFDHA and PFMPA were not detected in the associated sample.
	PFMPA	-/185	111-174	
Associated sample: EFF-G-202509				

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	LCS/LCSD %R Limits	Validation Actions
LCS 320-878032/2-A/ LCSD 320-878032/3-A (post-TOP assay)	PFTTrDA	-/71	78-138	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
	PFBA	274/-	167-261	Professional judgement was used and the positive results for post-TOP assay PFBA, PFPeA, PFHxA, PFOA, and PFNA were qualified as estimated (J) in the associated samples. See Additional note below.
	PFPeA	282/266	159-221	
	PFHxA	284/288	208-257	
	PFOA	516/512	372-496	
	PFNA	210/-	154-205	No validation action was required on this basis since post-TOP assay PFHpS and PFMPA were not detected in the associated samples.
	PFHpS	-/149	68-128	
PFMPA	188/184	112-172		
Associated samples: BIO-A-23-202509, BIO-A-24-202509, BIO-A-25-202509, BIO-B-202509				
LCSD 320-878028/3-A (pre-TOP assay)	8:2 FTS	-/138	75-135/-	No validation action was required on this basis since pre-TOP assay 8:2 FTS was either not detected in the associated samples or reported from a different batch.
Associated samples: BIO-A-23-202509, BIO-A-24-202509, BIO-A-25-202509, BIO-B-202509				
-: Met criteria				

Additional Note:

The laboratory has previously stated that enhanced post-TOP assay LCS/LCSD %Rs for the perfluoroalkyl carboxylic acids (PFCAs) (i.e., PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, and PFDA) is consistent with the expected oxidation of precursor analytes. The laboratory uses elevated %R acceptance limits to account for this expected oxidation; therefore, the post-TOP assay LCS/LCSD %Rs for the PFCAs were evaluated against the laboratory's limits only and were not evaluated against the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. If post-TOP assay LCS/LCSD %Rs of the PFCA compounds exceed the elevated laboratory limits, professional judgement is used and samples are qualified as estimated without a direction of bias (J). It should also be noted that the laboratory stated in the case narrative that zero %R of precursor analytes (i.e., 3:3 FTCA, 5:3 FTCA, 7:3 FTCA, ADONA, 4:2 FTS, 6:2 FTS, 8:2 FTS, PFOSA, NMeFOSAA, NEtFOSAA, NEtFOSA, NMeFOSE, and NEtFOSE) is also expected in the post-TOP assay due to the oxidation of these compounds during the TOP Assay procedure; %Rs ≤ 10% were observed for the listed precursors. No validation actions were taken on this basis. Post-TOP assay LCS/LCSD %Rs for other PFAS were evaluated against both the laboratory's limits and the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%.

- MS/MSD analyses were not performed on a sample from this data set.
- The reverse surrogate (M2-4:2 FTS) was within the laboratory's acceptance limits (0-10%) in the post-TOP assay analyses. The following table summarizes the remaining EIS %Rs that were outside of the laboratory's acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-02-202509 (total PFAS)	13C4 PFBA	1.02	5-130	The nondetect result for total PFBA was rejected (R) in sample INF-02-202509 due to significantly low (i.e., <5%) EIS recovery.
	13C5 PFPeA	21.4	40-130	The nondetect results for total PFPeA, PFMPA, PFMPA, and 3:3 FTCA were qualified as estimated (UJ) in sample INF-02-202509.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-07-202509 (total PFAS)	13C4 PFBA	1.12	5-130	The nondetect result for total PFBA was rejected (R) in sample INF-07-202509 due to significantly low (i.e., <5%) EIS recovery.
	13C5 PFPeA	23.8	40-130	The nondetect results for total PFPeA, PFMPA, PFMBA, and 3:3 FTCA were qualified as estimated (UJ) in sample INF-07-202509.
INF-08-202509 (total PFAS)	13C4 PFBA	1.61	5-130	The nondetect result for total PFBA was rejected (R) in sample INF-08-202509 due to significantly low (i.e., <5%) EIS recovery.
	13C5 PFPeA	36.4	40-130	The nondetect results for total PFPeA, PFMPA, PFMBA, and 3:3 FTCA were qualified as estimated (UJ) in sample INF-08-202509.
	13C2 4:2 FTS	208	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-08-202509.
INF-11-202509 (total PFAS)	13C4 PFBA	0.973	5-130	The nondetect result for total PFBA was rejected (R) in sample INF-11-202509 due to significantly low (i.e., <5%) EIS recovery.
	13C5 PFPeA	11.4	40-130	The nondetect results for total PFPeA, PFMPA, PFMBA, and 3:3 FTCA were qualified as estimated (UJ) in sample INF-11-202509.
	13C2 4:2 FTS	225	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-11-202509.
	13C2 6:2 FTS	212		The positive result for total 6:2 FTS was qualified as estimated (J) in sample INF-11-202509.
INF-18-202509 (total PFAS)	13C4 PFBA	0.977	5-130	The nondetect result for total PFBA was rejected (R) in sample INF-18-202509 due to significantly low (i.e., <5%) EIS recovery.
	13C5 PFPeA	11.2	40-130	The nondetect results for total PFPeA, PFMPA, PFMBA, and 3:3 FTCA were qualified as estimated (UJ) in sample INF-18-202509.
	13C2 4:2 FTS	250	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-18-202509.
	13C2 6:2 FTS	205		The positive result for total 6:2 FTS was qualified as estimated (J) in sample INF-18-202509.
INF-COMP-202509 (total PFAS)	13C4 PFBA	2.27	5-130	The nondetect result for total PFBA was rejected (R) in sample INF-COMP-202509 due to significantly low (i.e., <5%) EIS recovery.
	13C5 PFPeA	38.1	40-130	The positive and nondetect results for total PFPeA, PFMPA, PFMBA, and 3:3 FTCA were qualified as estimated (J/UJ) in sample INF-COMP-202509.
	13C2 4:2 FTS	262	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-COMP-202509.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
BIO-A-25-202509 (total PFAS)	13C2 4:2 FTS	199	40-165	No validation action was required on this basis since total 4:2 FTS was not detected in sample BIO-A-25-202509.
BIO-A-24-202509 (total PFAS)	13C2 4:2 FTS	211	40-165	No validation action was required on this basis since total 4:2 FTS was not detected in the listed samples.
BIO-A-23-202509 (total PFAS)		204		
BIO-B-202509 (total PFAS)		204		
BIO-A-25-202509 (pre-TOP assay)	13C2 6:2 FTS	167	25-150	No validation action was required on this basis since pre-TOP assay 6:2 FTS and 8:2 FTS were not detected in sample BIO-A-25-202509.
	13C2 8:2 FTS	175		
BIO-A-24-202509 (pre-TOP assay)	13C2 6:2 FTS	151	25-150	The positive result for pre-TOP assay 6:2 FTS was qualified as estimated (J) in sample BIO-A-24-202509.
	13C2 8:2 FTS	165		No validation action was required on this basis since pre-TOP assay 8:2 FTS was not detected in sample BIO-A-24-202509.
BIO-A-23-202509 (pre-TOP assay)	13C2 4:2 FTS	167	25-150	No validation action was required on this basis since pre-TOP assay 4:2 FTS was not detected in sample BIO-A-23-202509.
	13C2 6:2 FTS	199		The positive results for pre-TOP assay 6:2 FTS and 8:2 FTS were qualified as estimated (J) in sample BIO-A-23-202509.
	13C2 8:2 FTS	186		
BIO-B-202509 (pre-TOP assay)	13C2 4:2 FTS	164	25-150	No validation action was required on this basis since pre-TOP assay 4:2 FTS, 6:2 FTS, and 8:2 FTS were not detected in sample BIO-B-202509.
	13C2 6:2 FTS	160		
	13C2 8:2 FTS	184		

Notes:

- * Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.
- * Note that based on professional judgement, a "significantly low" limit of 5% was used for rejection criteria.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was performed on sample BIO-A-25-202509 for total solids. The RPD was within the laboratory's acceptance limit.
- The laboratory noted the following observations in the case narrative for the PFAS analyses. No validation actions were taken on the basis of these observations.
 - Samples INF-02-202509, INF-07-202509, INF-08-202509, INF-11-202509, INF-18-202509, and INF-COMP-202509 had a thin layer of sediment present in the bottles prior to extraction for total PFAS and were discolored prior to and following extraction for total PFAS. These samples were prepared using project-specified instructions. The samples were fortified with EIS, equilibrated, and centrifuged. The centrifuged liquid was decanted back into the original containers. The residual particulates were then rinsed with basic methanol and decanted back into the original container. The samples

were then extracted per standard solid phase extraction (SPE) procedures. The final combined extract, consisting of PFAS from both the aqueous and particulate-rinsed fractions, underwent analysis.

- Sample EFF-G-202509 had a thin layer of sediment present in the bottle prior to the extraction for total PFAS, pre-TOP assay PFAS, and post-TOP assay PFAS. Sample EFF-G-202509 was also discolored prior to and following extraction for total PFAS.
- Samples BIO-A-23-202509, BIO-A-24-202509, BIO-A-25-202509, and BIO-B-202509 were discolored following the extraction for total PFAS.
- No dilutions were performed on the samples in this data set.
- The results for the following PFAS in the samples listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - Total PFOS in samples INF-02-202509 and INF-11-202509;
 - Total PFOSA in samples INF-02-202509* and INF-COMP-202509*;
 - Pre-TOP assay PFHxS in sample BIO-A-24-202509*; and
 - Pre-TOP assay PFOS in sample BIO-B-202509*.

* This result was also qualified as estimated (J) by the laboratory due to detection < the QL.
- The percent moisture for samples BIO-A-24-202509, BIO-A-25-202509, and BIO-B-202509 were high (>70% moisture). The laboratory has been contacted during previous rounds of validation review regarding this issue and stated that biosolids samples are agitated and then immediately aliquoted for extraction after agitation, indicating that a representative sample is extracted for PFAS analysis. No validation actions were taken on this basis.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narrative of SDG 320-125031-1. No validation actions were taken on this basis since the actual CCV results were not provided for review.

QUALIFIED FORM 1s

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-02-202509

Lab Sample ID: 320-125031-1

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	R	3.4	0.29	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoropentanoic acid (PFPeA)	ND	UJ	1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorohexanoic acid (PFHxA)	3.0		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoroheptanoic acid (PFHpA)	0.90	J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorooctanoic acid (PFOA)	2.5		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorononanoic acid (PFNA)	0.43	J	1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.6	0.42	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorooctanesulfonic acid (PFOS)	4.8	I J	1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		09/24/25 06:47	09/26/25 10:08	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 10:08	1
6:2 FTS	0.41	J	3.1	0.32	ng/L		09/24/25 06:47	09/26/25 10:08	1
8:2 FTS	ND		3.1	0.70	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluorooctanesulfonamide (PFOSA)	0.27	J I J	1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.58	J	1.6	0.30	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.38	J	1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.31	J J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.41	J J	1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4.7	J J	7.9	1.8	ng/L		09/24/25 06:47	09/26/25 10:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.9	1.9	ng/L		09/24/25 06:47	09/26/25 10:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		09/24/25 06:47	09/26/25 10:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.6	0.15	ng/L		09/24/25 06:47	09/26/25 10:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		09/24/25 06:47	09/26/25 10:08	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:08	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		09/24/25 06:47	09/26/25 10:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-02-202509

Lab Sample ID: 320-125031-1

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.1	0.56	ng/L		09/24/25 06:47	09/26/25 10:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.4	J	7.9	1.4	ng/L		09/24/25 06:47	09/26/25 10:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.97	ng/L		09/24/25 06:47	09/26/25 10:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	1.02	*5-	5 - 130				09/24/25 06:47	09/26/25 10:08	1
13C5 PFPeA	21.4	*5-	40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C5 PFHxA	84.2		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C4 PFHpA	81.1		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C8 PFOA	80.2		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C9 PFNA	63.0		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C6 PFDA	72.6		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C7 PFUnA	65.3		30 - 130				09/24/25 06:47	09/26/25 10:08	1
13C2 PFDoA	54.0		10 - 130				09/24/25 06:47	09/26/25 10:08	1
13C2 PFTeDA	57.9		10 - 130				09/24/25 06:47	09/26/25 10:08	1
13C3 PFBS	76.4		40 - 135				09/24/25 06:47	09/26/25 10:08	1
13C3 PFHxS	73.8		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C8 PFOS	79.5		40 - 130				09/24/25 06:47	09/26/25 10:08	1
13C8 FOSA	63.0		40 - 130				09/24/25 06:47	09/26/25 10:08	1
D3-NMeFOSAA	46.0		40 - 170				09/24/25 06:47	09/26/25 10:08	1
D5-NEtFOSAA	56.9		25 - 135				09/24/25 06:47	09/26/25 10:08	1
13C2 4:2 FTS	193		40 - 200				09/24/25 06:47	09/26/25 10:08	1
13C2 6:2 FTS	184		40 - 200				09/24/25 06:47	09/26/25 10:08	1
13C2 8:2 FTS	128		40 - 300				09/24/25 06:47	09/26/25 10:08	1
13C3 HFPO-DA	98.9		40 - 130				09/24/25 06:47	09/26/25 10:08	1
D7-NMeFOSE	38.9		10 - 130				09/24/25 06:47	09/26/25 10:08	1
D9-NEtFOSE	72.0		10 - 130				09/24/25 06:47	09/26/25 10:08	1
D5-NEtFOSA	67.3		10 - 130				09/24/25 06:47	09/26/25 10:08	1
D3-NMeFOSA	69.5		10 - 130				09/24/25 06:47	09/26/25 10:08	1

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	R	3.4	0.34	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoropentanoic acid (PFPeA)	ND	UJ	1.7	0.19	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorohexanoic acid (PFHxA)	10		1.7	0.23	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoroheptanoic acid (PFHpA)	2.2		1.7	0.29	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorooctanoic acid (PFOA)	5.5		1.7	0.33	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorononanoic acid (PFNA)	0.62	J	1.7	0.38	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorodecanoic acid (PFDA)	0.46	J	1.7	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.19	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.48	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.68	ng/L		09/24/25 06:47	09/26/25 10:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	11		1.7	0.45	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.18	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.7	0.21	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorooctanesulfonic acid (PFOS)	5.4		1.7	0.23	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.26	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.44	ng/L		09/24/25 06:47	09/26/25 10:25	1
4:2 FTS	ND		3.4	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
6:2 FTS	1.2	J	3.4	0.34	ng/L		09/24/25 06:47	09/26/25 10:25	1
8:2 FTS	1.1	J	3.4	0.75	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.19	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.32	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.98	J J	1.7	0.29	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.92	J J	1.7	0.37	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.7	J J	8.4	1.9	ng/L		09/24/25 06:47	09/26/25 10:25	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.4	2.0	ng/L		09/24/25 06:47	09/26/25 10:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.33	ng/L		09/24/25 06:47	09/26/25 10:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.34	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.7	0.16	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.7	0.22	ng/L		09/24/25 06:47	09/26/25 10:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.60	ng/L		09/24/25 06:47	09/26/25 10:25	1
9CI-PF3ONS	ND		1.7	0.49	ng/L		09/24/25 06:47	09/26/25 10:25	1
11CI-PF3OUdS	ND		1.7	0.25	ng/L		09/24/25 06:47	09/26/25 10:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.21	ng/L		09/24/25 06:47	09/26/25 10:25	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.4	0.60	ng/L		09/24/25 06:47	09/26/25 10:25	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	60		8.4	1.4	ng/L		09/24/25 06:47	09/26/25 10:25	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.0	J	8.4	1.0	ng/L		09/24/25 06:47	09/26/25 10:25	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	1.12	*5-	5 - 130				09/24/25 06:47	09/26/25 10:25	1
13C5 PFPeA	23.8	*5-	40 - 130				09/24/25 06:47	09/26/25 10:25	1
13C5 PFHxA	79.2		40 - 130				09/24/25 06:47	09/26/25 10:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-07-202509

Lab Sample ID: 320-125031-2

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	83.8		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C8 PFOA	83.4		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C9 PFNA	72.6		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C6 PFDA	84.3		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C7 PFUnA	73.4		30 - 130	09/24/25 06:47	09/26/25 10:25	1
13C2 PFDoA	63.1		10 - 130	09/24/25 06:47	09/26/25 10:25	1
13C2 PFTeDA	65.8		10 - 130	09/24/25 06:47	09/26/25 10:25	1
13C3 PFBS	74.3		40 - 135	09/24/25 06:47	09/26/25 10:25	1
13C3 PFHxS	86.7		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C8 PFOS	87.1		40 - 130	09/24/25 06:47	09/26/25 10:25	1
13C8 FOSA	68.4		40 - 130	09/24/25 06:47	09/26/25 10:25	1
D3-NMeFOSAA	50.1		40 - 170	09/24/25 06:47	09/26/25 10:25	1
D5-NEtFOSAA	68.7		25 - 135	09/24/25 06:47	09/26/25 10:25	1
13C2 4:2 FTS	167		40 - 200	09/24/25 06:47	09/26/25 10:25	1
13C2 6:2 FTS	161		40 - 200	09/24/25 06:47	09/26/25 10:25	1
13C2 8:2 FTS	144		40 - 300	09/24/25 06:47	09/26/25 10:25	1
13C3 HFPO-DA	89.2		40 - 130	09/24/25 06:47	09/26/25 10:25	1
D7-NMeFOSE	46.9		10 - 130	09/24/25 06:47	09/26/25 10:25	1
D9-NEtFOSE	75.1		10 - 130	09/24/25 06:47	09/26/25 10:25	1
D5-NEtFOSA	74.6		10 - 130	09/24/25 06:47	09/26/25 10:25	1
D3-NMeFOSA	77.3		10 - 130	09/24/25 06:47	09/26/25 10:25	1

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	R	3.4	0.29	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoropentanoic acid (PFPeA)	ND	UJ	1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorohexanoic acid (PFHxA)	3.4		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoroheptanoic acid (PFHpA)	0.72	J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorooctanoic acid (PFOA)	2.2		1.6	0.30	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorononanoic acid (PFNA)	0.42	J	1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorodecanoic acid (PFDA)	0.38	J	1.6	0.34	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorobutanesulfonic acid (PFBS)	2.1		1.6	0.42	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorooctanesulfonic acid (PFOS)	2.8		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:41	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		09/24/25 06:47	09/26/25 10:41	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 10:41	1
6:2 FTS	3.2		3.1	0.32	ng/L		09/24/25 06:47	09/26/25 10:41	1
8:2 FTS	1.1	J	3.1	0.70	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.58	J J	1.6	0.27	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.95	J J	1.6	0.34	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.9	J J	7.8	1.8	ng/L		09/24/25 06:47	09/26/25 10:41	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.8	1.9	ng/L		09/24/25 06:47	09/26/25 10:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 10:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.6	0.15	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		09/24/25 06:47	09/26/25 10:41	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:41	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		09/24/25 06:47	09/26/25 10:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:41	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.1	0.56	ng/L		09/24/25 06:47	09/26/25 10:41	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.9	J	7.8	1.3	ng/L		09/24/25 06:47	09/26/25 10:41	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		09/24/25 06:47	09/26/25 10:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	1.61	*5-	5 - 130	09/24/25 06:47	09/26/25 10:41	1
13C5 PFPeA	36.4	*5-	40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C5 PFHxA	101		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C4 PFHpA	119		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C8 PFOA	98.2		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C9 PFNA	84.9		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C6 PFDA	88.3		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C7 PFUnA	88.4		30 - 130	09/24/25 06:47	09/26/25 10:41	1
13C2 PFDoA	70.6		10 - 130	09/24/25 06:47	09/26/25 10:41	1
13C2 PFTeDA	76.2		10 - 130	09/24/25 06:47	09/26/25 10:41	1
13C3 PFBS	85.2		40 - 135	09/24/25 06:47	09/26/25 10:41	1
13C3 PFHxS	94.9		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C8 PFOS	103		40 - 130	09/24/25 06:47	09/26/25 10:41	1
13C8 FOSA	81.1		40 - 130	09/24/25 06:47	09/26/25 10:41	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-08-202509

Lab Sample ID: 320-125031-3

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	52.6		40 - 170	09/24/25 06:47	09/26/25 10:41	1
D5-NEtFOSAA	69.5		25 - 135	09/24/25 06:47	09/26/25 10:41	1
13C2 4:2 FTS	208	*5+	40 - 200	09/24/25 06:47	09/26/25 10:41	1
13C2 6:2 FTS	195		40 - 200	09/24/25 06:47	09/26/25 10:41	1
13C2 8:2 FTS	168		40 - 300	09/24/25 06:47	09/26/25 10:41	1
13C3 HFPO-DA	119		40 - 130	09/24/25 06:47	09/26/25 10:41	1
D7-NMeFOSE	55.8		10 - 130	09/24/25 06:47	09/26/25 10:41	1
D9-NEtFOSE	88.9		10 - 130	09/24/25 06:47	09/26/25 10:41	1
D5-NEtFOSA	86.7		10 - 130	09/24/25 06:47	09/26/25 10:41	1
D3-NMeFOSA	89.8		10 - 130	09/24/25 06:47	09/26/25 10:41	1

Client Sample ID: INF-11-202509

Lab Sample ID: 320-125031-4

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	R	3.2	0.30	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoropentanoic acid (PFPeA)	ND	UJ	1.6	0.19	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorohexanoic acid (PFHxA)	2.3		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoroheptanoic acid (PFHpA)	0.64	J	1.6	0.28	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorooctanoic acid (PFOA)	2.0		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorononanoic acid (PFNA)	0.38	J	1.6	0.37	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.65	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorobutanesulfonic acid (PFBS)	1.7		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorohexanesulfonic acid (PFHxS)	1.7		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorooctanesulfonic acid (PFOS)	2.6	I J	1.6	0.22	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 10:58	1
4:2 FTS	ND		3.2	0.35	ng/L		09/24/25 06:47	09/26/25 10:58	1
6:2 FTS	0.52	J J	3.2	0.33	ng/L		09/24/25 06:47	09/26/25 10:58	1
8:2 FTS	ND		3.2	0.72	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.50	J J	1.6	0.28	ng/L		09/24/25 06:47	09/26/25 10:58	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-11-202509

Lab Sample ID: 320-125031-4

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.0	J J	1.6	0.36	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	8.1	1.8	ng/L		09/24/25 06:47	09/26/25 10:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.1	2.0	ng/L		09/24/25 06:47	09/26/25 10:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		09/24/25 06:47	09/26/25 10:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.6	0.15	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.6	0.21	ng/L		09/24/25 06:47	09/26/25 10:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.58	ng/L		09/24/25 06:47	09/26/25 10:58	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 10:58	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 10:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 10:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.2	0.58	ng/L		09/24/25 06:47	09/26/25 10:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.1	J	8.1	1.4	ng/L		09/24/25 06:47	09/26/25 10:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.1	1.0	ng/L		09/24/25 06:47	09/26/25 10:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	0.973	*5-	5 - 130	09/24/25 06:47	09/26/25 10:58	1
13C5 PFPeA	11.4	*5-	40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C5 PFHxA	94.8		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C4 PFHpA	101		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C8 PFOA	97.1		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C9 PFNA	91.0		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C6 PFDA	99.6		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C7 PFUnA	78.6		30 - 130	09/24/25 06:47	09/26/25 10:58	1
13C2 PFDoA	60.7		10 - 130	09/24/25 06:47	09/26/25 10:58	1
13C2 PFTeDA	71.6		10 - 130	09/24/25 06:47	09/26/25 10:58	1
13C3 PFBS	81.5		40 - 135	09/24/25 06:47	09/26/25 10:58	1
13C3 PFHxS	92.8		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C8 PFOS	95.5		40 - 130	09/24/25 06:47	09/26/25 10:58	1
13C8 FOSA	71.5		40 - 130	09/24/25 06:47	09/26/25 10:58	1
D3-NMeFOSAA	43.8		40 - 170	09/24/25 06:47	09/26/25 10:58	1
D5-NEtFOSAA	54.6		25 - 135	09/24/25 06:47	09/26/25 10:58	1
13C2 4:2 FTS	225	*5+	40 - 200	09/24/25 06:47	09/26/25 10:58	1
13C2 6:2 FTS	212	*5+	40 - 200	09/24/25 06:47	09/26/25 10:58	1
13C2 8:2 FTS	185		40 - 300	09/24/25 06:47	09/26/25 10:58	1
13C3 HFPO-DA	119		40 - 130	09/24/25 06:47	09/26/25 10:58	1
D7-NMeFOSE	43.7		10 - 130	09/24/25 06:47	09/26/25 10:58	1
D9-NEtFOSE	89.1		10 - 130	09/24/25 06:47	09/26/25 10:58	1
D5-NEtFOSA	76.3		10 - 130	09/24/25 06:47	09/26/25 10:58	1
D3-NMeFOSA	80.1		10 - 130	09/24/25 06:47	09/26/25 10:58	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-18-202509

Lab Sample ID: 320-125031-5

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	R	3.3	0.30	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoropentanoic acid (PFPeA)	ND	UJ	1.6	0.19	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorohexanoic acid (PFHxA)	6.3		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoroheptanoic acid (PFHpA)	2.0		1.6	0.28	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorooctanoic acid (PFOA)	8.1		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorononanoic acid (PFNA)	0.50	J	1.6	0.37	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorobutanesulfonic acid (PFBS)	3.7		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoropentanesulfonic acid (PFPeS)	1.0	J	1.6	0.17	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorohexanesulfonic acid (PFHxS)	17		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorooctanesulfonic acid (PFOS)	7.3		1.6	0.23	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 11:14	1
4:2 FTS	ND		3.3	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
6:2 FTS	2.6	J J	3.3	0.33	ng/L		09/24/25 06:47	09/26/25 11:14	1
8:2 FTS	ND		3.3	0.73	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.66	J J	1.6	0.29	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.67	J J	1.6	0.36	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.9	J J	8.2	1.9	ng/L		09/24/25 06:47	09/26/25 11:14	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.2	2.0	ng/L		09/24/25 06:47	09/26/25 11:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.32	ng/L		09/24/25 06:47	09/26/25 11:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.33	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.6	0.15	ng/L		09/24/25 06:47	09/26/25 11:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.6	0.21	ng/L		09/24/25 06:47	09/26/25 11:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.59	ng/L		09/24/25 06:47	09/26/25 11:14	1
9CI-PF3ONS	ND		1.6	0.47	ng/L		09/24/25 06:47	09/26/25 11:14	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 11:14	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-18-202509

Lab Sample ID: 320-125031-5

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 11:14	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.3	0.59	ng/L		09/24/25 06:47	09/26/25 11:14	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.2	J	8.2	1.4	ng/L		09/24/25 06:47	09/26/25 11:14	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.2	1.0	ng/L		09/24/25 06:47	09/26/25 11:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	0.977	*5-	5 - 130				09/24/25 06:47	09/26/25 11:14	1
13C5 PFPeA	11.2	*5-	40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C5 PFHxA	103		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C4 PFHpA	102		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C8 PFOA	97.5		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C9 PFNA	85.2		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C6 PFDA	90.1		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C7 PFUnA	83.6		30 - 130				09/24/25 06:47	09/26/25 11:14	1
13C2 PFDoA	67.6		10 - 130				09/24/25 06:47	09/26/25 11:14	1
13C2 PFTeDA	54.3		10 - 130				09/24/25 06:47	09/26/25 11:14	1
13C3 PFBS	88.6		40 - 135				09/24/25 06:47	09/26/25 11:14	1
13C3 PFHxS	86.3		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C8 PFOS	96.4		40 - 130				09/24/25 06:47	09/26/25 11:14	1
13C8 FOSA	88.4		40 - 130				09/24/25 06:47	09/26/25 11:14	1
D3-NMeFOSAA	58.0		40 - 170				09/24/25 06:47	09/26/25 11:14	1
D5-NEtFOSAA	68.3		25 - 135				09/24/25 06:47	09/26/25 11:14	1
13C2 4:2 FTS	250	*5+	40 - 200				09/24/25 06:47	09/26/25 11:14	1
13C2 6:2 FTS	205	*5+	40 - 200				09/24/25 06:47	09/26/25 11:14	1
13C2 8:2 FTS	183		40 - 300				09/24/25 06:47	09/26/25 11:14	1
13C3 HFPO-DA	115		40 - 130				09/24/25 06:47	09/26/25 11:14	1
D7-NMeFOSE	34.9		10 - 130				09/24/25 06:47	09/26/25 11:14	1
D9-NEtFOSE	47.3		10 - 130				09/24/25 06:47	09/26/25 11:14	1
D5-NEtFOSA	67.2		10 - 130				09/24/25 06:47	09/26/25 11:14	1
D3-NMeFOSA	77.9		10 - 130				09/24/25 06:47	09/26/25 11:14	1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	R	3.4	0.29	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoropentanoic acid (PFPeA)	4.3	J	1.5	0.18	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorohexanoic acid (PFHxA)	5.1		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoroheptanoic acid (PFHpA)	1.5		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorooctanoic acid (PFOA)	4.7		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorononanoic acid (PFNA)	0.50	J	1.5	0.35	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.43	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		09/24/25 06:47	09/26/25 11:30	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	3.8		1.5	0.42	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.14	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorooctanesulfonic acid (PFOS)	5.2		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 11:30	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
6:2 FTS	1.2	J	3.1	0.31	ng/L		09/24/25 06:47	09/26/25 11:30	1
8:2 FTS	ND		3.1	0.69	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluorooctanesulfonamide (PFOSA)	0.19	J I J	1.5	0.17	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.62	J J	1.5	0.27	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.93	J J	1.5	0.34	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.2	J J	7.7	1.8	ng/L		09/24/25 06:47	09/26/25 11:30	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.7	1.9	ng/L		09/24/25 06:47	09/26/25 11:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 11:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	1.5	0.15	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	1.5	0.20	ng/L		09/24/25 06:47	09/26/25 11:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.56	ng/L		09/24/25 06:47	09/26/25 11:30	1
9Cl-PF3ONS	ND		1.5	0.45	ng/L		09/24/25 06:47	09/26/25 11:30	1
11Cl-PF3OUdS	ND		1.5	0.23	ng/L		09/24/25 06:47	09/26/25 11:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 11:30	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	3.1	0.56	ng/L		09/24/25 06:47	09/26/25 11:30	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		7.7	1.3	ng/L		09/24/25 06:47	09/26/25 11:30	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.96	ng/L		09/24/25 06:47	09/26/25 11:30	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	2.27	*5-	5 - 130				09/24/25 06:47	09/26/25 11:30	1
13C5 PFPeA	38.1	*5-	40 - 130				09/24/25 06:47	09/26/25 11:30	1
13C5 PFHxA	103		40 - 130				09/24/25 06:47	09/26/25 11:30	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: INF-COMP-202509

Lab Sample ID: 320-125031-6

Date Collected: 09/08/25 23:59

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	117		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C8 PFOA	96.9		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C9 PFNA	87.3		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C6 PFDA	96.5		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C7 PFUnA	86.2		30 - 130	09/24/25 06:47	09/26/25 11:30	1
13C2 PFDoA	70.8		10 - 130	09/24/25 06:47	09/26/25 11:30	1
13C2 PFTeDA	70.6		10 - 130	09/24/25 06:47	09/26/25 11:30	1
13C3 PFBS	89.4		40 - 135	09/24/25 06:47	09/26/25 11:30	1
13C3 PFHxS	90.1		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C8 PFOS	87.9		40 - 130	09/24/25 06:47	09/26/25 11:30	1
13C8 FOSA	79.3		40 - 130	09/24/25 06:47	09/26/25 11:30	1
D3-NMeFOSAA	51.1		40 - 170	09/24/25 06:47	09/26/25 11:30	1
D5-NEtFOSAA	66.1		25 - 135	09/24/25 06:47	09/26/25 11:30	1
13C2 4:2 FTS	262	*5+	40 - 200	09/24/25 06:47	09/26/25 11:30	1
13C2 6:2 FTS	198		40 - 200	09/24/25 06:47	09/26/25 11:30	1
13C2 8:2 FTS	179		40 - 300	09/24/25 06:47	09/26/25 11:30	1
13C3 HFPO-DA	124		40 - 130	09/24/25 06:47	09/26/25 11:30	1
D7-NMeFOSE	45.9		10 - 130	09/24/25 06:47	09/26/25 11:30	1
D9-NEtFOSE	68.2		10 - 130	09/24/25 06:47	09/26/25 11:30	1
D5-NEtFOSA	71.2		10 - 130	09/24/25 06:47	09/26/25 11:30	1
D3-NMeFOSA	74.4		10 - 130	09/24/25 06:47	09/26/25 11:30	1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	10		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoropentanoic acid (PFPeA)	20		1.5	0.18	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorohexanoic acid (PFHxA)	12		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoroheptanoic acid (PFHpA)	1.6		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorooctanoic acid (PFOA)	7.1		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorononanoic acid (PFNA)	0.54 J		1.5	0.35	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorodecanoic acid (PFDA)	0.56 J		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.42	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorobutanesulfonic acid (PFBS)	4.3		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoropentanesulfonic acid (PFPeS)	0.58 J		1.5	0.16	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorohexanesulfonic acid (PFHxS)	7.5		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorooctanesulfonic acid (PFOS)	6.1		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:20	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:20	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
6:2 FTS	0.65	J	3.1	0.31	ng/L		09/24/25 06:47	09/26/25 12:20	1
8:2 FTS	ND		3.1	0.69	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluorooctanesulfonamide (PFOSA)	0.53	J	1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.70	J J	1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	J J	1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	7.7	1.7	ng/L		09/24/25 06:47	09/26/25 12:20	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.7	1.9	ng/L		09/24/25 06:47	09/26/25 12:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 12:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		09/24/25 06:47	09/26/25 12:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		09/24/25 06:47	09/26/25 12:20	1
9CI-PF3ONS	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 12:20	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		09/24/25 06:47	09/26/25 12:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:20	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		09/24/25 06:47	09/26/25 12:20	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.2	J	7.7	1.3	ng/L		09/24/25 06:47	09/26/25 12:20	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.95	ng/L		09/24/25 06:47	09/26/25 12:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79.7		5 - 130	09/24/25 06:47	09/26/25 12:20	1
13C5 PFPeA	98.0		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C5 PFHxA	102		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C4 PFHpA	114		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C8 PFOA	91.4		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C9 PFNA	81.5		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C6 PFDA	93.3		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C7 PFUnA	93.7		30 - 130	09/24/25 06:47	09/26/25 12:20	1
13C2 PFDoA	77.7		10 - 130	09/24/25 06:47	09/26/25 12:20	1
13C2 PFTeDA	51.7		10 - 130	09/24/25 06:47	09/26/25 12:20	1
13C3 PFBS	97.7		40 - 135	09/24/25 06:47	09/26/25 12:20	1
13C3 PFHxS	90.7		40 - 130	09/24/25 06:47	09/26/25 12:20	1
13C8 PFOS	98.2		40 - 130	09/24/25 06:47	09/26/25 12:20	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	82.6		40 - 130	09/24/25 06:47	09/26/25 12:20	1
D3-NMeFOSAA	84.1		40 - 170	09/24/25 06:47	09/26/25 12:20	1
D5-NEtFOSAA	81.5		25 - 135	09/24/25 06:47	09/26/25 12:20	1
13C2 4:2 FTS	186		40 - 200	09/24/25 06:47	09/26/25 12:20	1
13C2 6:2 FTS	86.0		40 - 200	09/24/25 06:47	09/26/25 12:20	1
13C2 8:2 FTS	85.5		40 - 300	09/24/25 06:47	09/26/25 12:20	1
13C3 HFPO-DA	115		40 - 130	09/24/25 06:47	09/26/25 12:20	1
D7-NMeFOSE	66.1		10 - 130	09/24/25 06:47	09/26/25 12:20	1
D9-NEtFOSE	64.1		10 - 130	09/24/25 06:47	09/26/25 12:20	1
D5-NEtFOSA	65.2		10 - 130	09/24/25 06:47	09/26/25 12:20	1
D3-NMeFOSA	66.8		10 - 130	09/24/25 06:47	09/26/25 12:20	1

Client Sample ID: EB01-202509

Lab Sample ID: 320-125031-8

Date Collected: 09/08/25 13:40

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.1	0.29	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoropentanoic acid (PFPeA)	ND		1.5	0.18	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorohexanoic acid (PFHxA)	0.33	J	1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoroheptanoic acid (PFHpA)	ND		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorooctanoic acid (PFOA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorononanoic acid (PFNA)	ND		1.5	0.35	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorodecanoic acid (PFDA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.5	0.43	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.5	0.44	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.5	0.62	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.16	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.13	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.5	0.21	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.5	0.24	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.41	ng/L		09/24/25 06:47	09/26/25 12:36	1
4:2 FTS	ND		3.1	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1
6:2 FTS	ND		3.1	0.31	ng/L		09/24/25 06:47	09/26/25 12:36	1
8:2 FTS	ND		3.1	0.69	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.5	0.17	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.30	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.5	0.27	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.5	0.34	ng/L		09/24/25 06:47	09/26/25 12:36	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB01-202509

Lab Sample ID: 320-125031-8

Date Collected: 09/08/25 13:40

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	7.7	1.8	ng/L		09/24/25 06:47	09/26/25 12:36	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.7	1.9	ng/L		09/24/25 06:47	09/26/25 12:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.30	ng/L		09/24/25 06:47	09/26/25 12:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.31	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.15	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.20	ng/L		09/24/25 06:47	09/26/25 12:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.55	ng/L		09/24/25 06:47	09/26/25 12:36	1
9CI-PF3ONS	ND		1.5	0.45	ng/L		09/24/25 06:47	09/26/25 12:36	1
11CI-PF3OUdS	ND		1.5	0.23	ng/L		09/24/25 06:47	09/26/25 12:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.19	ng/L		09/24/25 06:47	09/26/25 12:36	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.55	ng/L		09/24/25 06:47	09/26/25 12:36	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		7.7	1.3	ng/L		09/24/25 06:47	09/26/25 12:36	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.7	0.95	ng/L		09/24/25 06:47	09/26/25 12:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	87.8		5 - 130	09/24/25 06:47	09/26/25 12:36	1
13C5 PFPeA	102		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C5 PFHxA	114		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C4 PFHpA	102		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C8 PFOA	99.8		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C9 PFNA	82.9		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C6 PFDA	104		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C7 PFUnA	107		30 - 130	09/24/25 06:47	09/26/25 12:36	1
13C2 PFDoA	92.6		10 - 130	09/24/25 06:47	09/26/25 12:36	1
13C2 PFTeDA	76.9		10 - 130	09/24/25 06:47	09/26/25 12:36	1
13C3 PFBS	93.9		40 - 135	09/24/25 06:47	09/26/25 12:36	1
13C3 PFHxS	92.4		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C8 PFOS	98.1		40 - 130	09/24/25 06:47	09/26/25 12:36	1
13C8 FOSA	87.6		40 - 130	09/24/25 06:47	09/26/25 12:36	1
D3-NMeFOSAA	92.0		40 - 170	09/24/25 06:47	09/26/25 12:36	1
D5-NEtFOSAA	86.1		25 - 135	09/24/25 06:47	09/26/25 12:36	1
13C2 4:2 FTS	111		40 - 200	09/24/25 06:47	09/26/25 12:36	1
13C2 6:2 FTS	98.3		40 - 200	09/24/25 06:47	09/26/25 12:36	1
13C2 8:2 FTS	83.3		40 - 300	09/24/25 06:47	09/26/25 12:36	1
13C3 HFPO-DA	106		40 - 130	09/24/25 06:47	09/26/25 12:36	1
D7-NMeFOSE	78.1		10 - 130	09/24/25 06:47	09/26/25 12:36	1
D9-NEtFOSE	82.9		10 - 130	09/24/25 06:47	09/26/25 12:36	1
D5-NEtFOSA	72.4		10 - 130	09/24/25 06:47	09/26/25 12:36	1
D3-NMeFOSA	76.4		10 - 130	09/24/25 06:47	09/26/25 12:36	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.5		3.4	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoropentanoic acid (PFPeA)	11		1.7	0.41	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorohexanoic acid (PFHxA)	15		1.7	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoroheptanoic acid (PFHpA)	0.88	J	1.7	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorooctanoic acid (PFOA)	10		1.7	0.52	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorononanoic acid (PFNA)	1.4	J	1.7	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorodecanoic acid (PFDA)	4.8		1.7	0.20	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoroundecanoic acid (PFUnA)	1.0	J	1.7	0.24	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorododecanoic acid (PFDoA)	2.8		1.7	0.23	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorotridecanoic acid (PFTrDA)	0.74	J	1.7	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorotetradecanoic acid (PFTeDA)	1.2	J	1.7	0.49	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.57	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.95	J	1.7	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.14	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorooctanesulfonic acid (PFOS)	11		1.7	0.21	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorodecanesulfonic acid (PFDS)	1.2	J	1.7	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.31	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
4:2 FTS	ND		3.4	0.55	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
6:2 FTS	ND		3.4	0.46	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
8:2 FTS	1.4	J	3.4	0.37	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluorooctanesulfonamide (PFOSA)	1.3	J	1.7	0.53	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.42	J	1.7	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24		1.7	0.14	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.7		1.7	0.14	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	18		8.4	0.74	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.8	J	8.4	0.65	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.7	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.21	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:19	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.52	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
9CI-PF3ONS	ND		1.7	0.32	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
11CI-PF3OUdS	ND		1.7	0.63	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.7	0.32	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.4	0.63	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		8.4	2.1	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	29		8.4	1.8	ug/Kg	☆	09/23/25 20:55	09/26/25 00:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	73.1		8 - 130	09/23/25 20:55	09/26/25 00:19	1
13C5 PFPeA	76.7		35 - 130	09/23/25 20:55	09/26/25 00:19	1
13C5 PFHxA	89.0		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C4 PFHpA	82.8		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C8 PFOA	82.6		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C9 PFNA	84.2		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C6 PFDA	85.3		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C7 PFUnA	71.5		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C2 PFDoA	45.8		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C2 PFTeDA	55.6		20 - 130	09/23/25 20:55	09/26/25 00:19	1
13C3 PFBS	79.5		40 - 135	09/23/25 20:55	09/26/25 00:19	1
13C3 PFHxS	82.3		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C8 PFOS	98.3		40 - 130	09/23/25 20:55	09/26/25 00:19	1
13C8 FOSA	52.8		40 - 130	09/23/25 20:55	09/26/25 00:19	1
D3-NMeFOSAA	57.4		40 - 135	09/23/25 20:55	09/26/25 00:19	1
D5-NEtFOSAA	80.1		40 - 150	09/23/25 20:55	09/26/25 00:19	1
13C2 4:2 FTS	199	*5+	40 - 165	09/23/25 20:55	09/26/25 00:19	1
13C2 6:2 FTS	150		40 - 215	09/23/25 20:55	09/26/25 00:19	1
13C2 8:2 FTS	184		40 - 275	09/23/25 20:55	09/26/25 00:19	1
13C3 HFPO-DA	90.7		40 - 130	09/23/25 20:55	09/26/25 00:19	1
D7-NMeFOSE	63.2		20 - 130	09/23/25 20:55	09/26/25 00:19	1
D9-NEtFOSE	62.1		15 - 130	09/23/25 20:55	09/26/25 00:19	1
D5-NEtFOSA	63.5		10 - 130	09/23/25 20:55	09/26/25 00:19	1
D3-NMeFOSA	57.5		10 - 130	09/23/25 20:55	09/26/25 00:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	77		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	23		0.10	0.10	%			09/11/25 14:11	1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.7		3.0	0.24	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
Perfluoropentanoic acid (PFPeA)	34		1.5	0.37	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	40		1.5	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoroheptanoic acid (PFHpA)	2.9		1.5	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorooctanoic acid (PFOA)	23		1.5	0.46	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorononanoic acid (PFNA)	1.8		1.5	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorodecanoic acid (PFDA)	8.3		1.5	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoroundecanoic acid (PFUnA)	1.2	J	1.5	0.21	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorododecanoic acid (PFDoA)	3.9		1.5	0.20	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorotridecanoic acid (PFTTrDA)	0.71	J	1.5	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorotetradecanoic acid (PFTeDA)	1.2	J	1.5	0.43	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.5	0.50	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.5	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.5	0.15	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.5	0.12	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorooctanesulfonic acid (PFOS)	11		1.5	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorononanesulfonic acid (PFNS)	ND		1.5	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorodecanesulfonic acid (PFDS)	2.5		1.5	0.16	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.5	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
4:2 FTS	ND		3.0	0.49	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
6:2 FTS	1.4	J	3.0	0.40	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
8:2 FTS	0.90	J	3.0	0.33	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluorooctanesulfonamide (PFOSA)	1.2	J	1.5	0.47	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.5	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.34	J	1.5	0.16	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	28		1.5	0.12	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	7.9		1.5	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	17		7.5	0.66	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.8	J	7.5	0.58	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.5	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.5	0.19	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.5	0.16	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.5	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.5	0.46	ug/Kg	✱	09/23/25 20:55	09/26/25 00:35	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		1.5	0.28	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
11CI-PF3OUdS	ND		1.5	0.56	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.5	0.28	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.0	0.56	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42		7.5	1.8	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	21		7.5	1.6	ug/Kg	☆	09/23/25 20:55	09/26/25 00:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	82.1		8 - 130	09/23/25 20:55	09/26/25 00:35	1
13C5 PFPeA	81.9		35 - 130	09/23/25 20:55	09/26/25 00:35	1
13C5 PFHxA	90.3		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C4 PFHpA	91.4		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C8 PFOA	90.2		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C9 PFNA	83.2		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C6 PFDA	91.1		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C7 PFUnA	79.7		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C2 PFDoA	58.3		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C2 PFTeDA	73.4		20 - 130	09/23/25 20:55	09/26/25 00:35	1
13C3 PFBS	81.6		40 - 135	09/23/25 20:55	09/26/25 00:35	1
13C3 PFHxS	85.3		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C8 PFOS	88.4		40 - 130	09/23/25 20:55	09/26/25 00:35	1
13C8 FOSA	60.6		40 - 130	09/23/25 20:55	09/26/25 00:35	1
D3-NMeFOSAA	59.0		40 - 135	09/23/25 20:55	09/26/25 00:35	1
D5-NEtFOSAA	81.7		40 - 150	09/23/25 20:55	09/26/25 00:35	1
13C2 4:2 FTS	211	*5+	40 - 165	09/23/25 20:55	09/26/25 00:35	1
13C2 6:2 FTS	133		40 - 215	09/23/25 20:55	09/26/25 00:35	1
13C2 8:2 FTS	146		40 - 275	09/23/25 20:55	09/26/25 00:35	1
13C3 HFPO-DA	95.4		40 - 130	09/23/25 20:55	09/26/25 00:35	1
D7-NMeFOSE	74.6		20 - 130	09/23/25 20:55	09/26/25 00:35	1
D9-NEtFOSE	82.4		15 - 130	09/23/25 20:55	09/26/25 00:35	1
D5-NEtFOSA	74.9		10 - 130	09/23/25 20:55	09/26/25 00:35	1
D3-NMeFOSA	64.8		10 - 130	09/23/25 20:55	09/26/25 00:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	76		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	24		0.10	0.10	%			09/11/25 14:11	1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.2	0.30	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.28	ng/L		09/24/25 06:47	09/26/25 12:52	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.46	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.43	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.22	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		09/24/25 06:47	09/26/25 12:52	1
4:2 FTS	ND		3.2	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
6:2 FTS	ND		3.2	0.32	ng/L		09/24/25 06:47	09/26/25 12:52	1
8:2 FTS	ND		3.2	0.71	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.28	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UU	8.0	1.8	ng/L		09/24/25 06:47	09/26/25 12:52	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UU	8.0	1.9	ng/L		09/24/25 06:47	09/26/25 12:52	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		09/24/25 06:47	09/26/25 12:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.21	ng/L		09/24/25 06:47	09/26/25 12:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.57	ng/L		09/24/25 06:47	09/26/25 12:52	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		09/24/25 06:47	09/26/25 12:52	1
11CI-PF3OUdS	ND		1.6	0.24	ng/L		09/24/25 06:47	09/26/25 12:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		09/24/25 06:47	09/26/25 12:52	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		09/24/25 06:47	09/26/25 12:52	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		8.0	1.4	ng/L		09/24/25 06:47	09/26/25 12:52	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.0	0.99	ng/L		09/24/25 06:47	09/26/25 12:52	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: EB02-202509

Lab Sample ID: 320-125031-11

Date Collected: 09/08/25 14:51

Matrix: Water

Date Received: 09/10/25 10:00

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	89.8		5 - 130	09/24/25 06:47	09/26/25 12:52	1
13C5 PFPeA	91.0		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C5 PFHxA	94.5		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C4 PFHpA	96.5		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C8 PFOA	92.0		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C9 PFNA	80.3		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C6 PFDA	98.9		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C7 PFUnA	111		30 - 130	09/24/25 06:47	09/26/25 12:52	1
13C2 PFDoA	106		10 - 130	09/24/25 06:47	09/26/25 12:52	1
13C2 PFTeDA	78.4		10 - 130	09/24/25 06:47	09/26/25 12:52	1
13C3 PFBS	87.7		40 - 135	09/24/25 06:47	09/26/25 12:52	1
13C3 PFHxS	91.2		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C8 PFOS	92.5		40 - 130	09/24/25 06:47	09/26/25 12:52	1
13C8 FOSA	87.7		40 - 130	09/24/25 06:47	09/26/25 12:52	1
D3-NMeFOSAA	86.5		40 - 170	09/24/25 06:47	09/26/25 12:52	1
D5-NEtFOSAA	88.2		25 - 135	09/24/25 06:47	09/26/25 12:52	1
13C2 4:2 FTS	105		40 - 200	09/24/25 06:47	09/26/25 12:52	1
13C2 6:2 FTS	90.7		40 - 200	09/24/25 06:47	09/26/25 12:52	1
13C2 8:2 FTS	94.9		40 - 300	09/24/25 06:47	09/26/25 12:52	1
13C3 HFPO-DA	107		40 - 130	09/24/25 06:47	09/26/25 12:52	1
D7-NMeFOSE	79.4		10 - 130	09/24/25 06:47	09/26/25 12:52	1
D9-NEtFOSE	82.6		10 - 130	09/24/25 06:47	09/26/25 12:52	1
D5-NEtFOSA	70.4		10 - 130	09/24/25 06:47	09/26/25 12:52	1
D3-NMeFOSA	71.1		10 - 130	09/24/25 06:47	09/26/25 12:52	1

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.7		1.8	0.15	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoropentanoic acid (PFPeA)	33		0.92	0.22	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorohexanoic acid (PFHxA)	46		0.92	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoroheptanoic acid (PFHpA)	4.3		0.92	0.15	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorooctanoic acid (PFOA)	45		0.92	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorononanoic acid (PFNA)	2.4		0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorodecanoic acid (PFDA)	17		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoroundecanoic acid (PFUnA)	1.3		0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorododecanoic acid (PFDoA)	4.8		0.92	0.12	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorotridecanoic acid (PFTTrDA)	0.87	J	0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorotetradecanoic acid (PFTeDA)	1.6		0.92	0.27	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorobutanesulfonic acid (PFBS)	3.0		0.92	0.31	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.92	0.18	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorohexanesulfonic acid (PFHxS)	1.4		0.92	0.092	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.92	0.073	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorooctanesulfonic acid (PFOS)	13		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorononanesulfonic acid (PFNS)	ND		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorodecanesulfonic acid (PFDS)	1.9		0.92	0.096	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
4:2 FTS	ND		1.8	0.30	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
6:2 FTS	3.4		1.8	0.25	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
8:2 FTS	1.6	J	1.8	0.20	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluorooctanesulfonamide (PFOSA)	1.7		0.92	0.29	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.25	J	0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.22	J	0.92	0.096	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	32		0.92	0.073	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.1		0.92	0.078	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	11		4.6	0.40	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	4.6		4.6	0.35	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.92	0.13	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.92	0.11	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.92	0.10	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.92	0.28	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
9Cl-PF3ONS	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
11Cl-PF3OUdS	ND		0.92	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.92	0.17	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.8	0.34	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	37		4.6	1.1	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	18		4.6	0.98	ug/Kg	✱	09/23/25 20:55	09/26/25 00:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	75.3		8 - 130	09/23/25 20:55	09/26/25 00:51	1
13C5 PFPeA	70.3		35 - 130	09/23/25 20:55	09/26/25 00:51	1
13C5 PFHxA	94.4		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C4 PFHpA	91.7		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C8 PFOA	77.5		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C9 PFNA	88.3		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C6 PFDA	83.8		40 - 130	09/23/25 20:55	09/26/25 00:51	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C7 PFUnA	81.0		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C2 PFDoA	59.9		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C2 PFTeDA	65.5		20 - 130	09/23/25 20:55	09/26/25 00:51	1
13C3 PFBS	86.4		40 - 135	09/23/25 20:55	09/26/25 00:51	1
13C3 PFHxS	86.2		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C8 PFOS	86.2		40 - 130	09/23/25 20:55	09/26/25 00:51	1
13C8 FOSA	59.4		40 - 130	09/23/25 20:55	09/26/25 00:51	1
D3-NMeFOSAA	60.9		40 - 135	09/23/25 20:55	09/26/25 00:51	1
D5-NEtFOSAA	76.4		40 - 150	09/23/25 20:55	09/26/25 00:51	1
13C2 4:2 FTS	204	*5+	40 - 165	09/23/25 20:55	09/26/25 00:51	1
13C2 6:2 FTS	140		40 - 215	09/23/25 20:55	09/26/25 00:51	1
13C2 8:2 FTS	156		40 - 275	09/23/25 20:55	09/26/25 00:51	1
13C3 HFPO-DA	96.7		40 - 130	09/23/25 20:55	09/26/25 00:51	1
D7-NMeFOSE	65.0		20 - 130	09/23/25 20:55	09/26/25 00:51	1
D9-NEtFOSE	66.5		15 - 130	09/23/25 20:55	09/26/25 00:51	1
D5-NEtFOSA	65.1		10 - 130	09/23/25 20:55	09/26/25 00:51	1
D3-NMeFOSA	57.9		10 - 130	09/23/25 20:55	09/26/25 00:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	58		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	42		0.10	0.10	%			09/11/25 14:11	1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		14	1.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoropentanoic acid (PFPeA)	ND		6.8	1.7	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorohexanoic acid (PFHxA)	1.7	J	6.8	1.4	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoroheptanoic acid (PFHpA)	ND		6.8	1.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorooctanoic acid (PFOA)	ND		6.8	2.1	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorononanoic acid (PFNA)	ND		6.8	0.99	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorodecanoic acid (PFDA)	2.0	J	6.8	0.82	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoroundecanoic acid (PFUnA)	ND		6.8	0.95	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorododecanoic acid (PFDoA)	1.6	J	6.8	0.92	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorotridecanoic acid (PFTTrDA)	ND		6.8	0.99	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorotetradecanoic acid (PFTeDA)	ND		6.8	2.0	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		6.8	2.3	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		6.8	1.4	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	J	6.8	0.68	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		6.8	0.54	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorooctanesulfonic acid (PFOS)	7.5		6.8	0.85	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1
Perfluorononanesulfonic acid (PFNS)	ND		6.8	0.78	ug/Kg	✱	09/23/25 20:55	09/26/25 01:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	0.91	J	6.8	0.71	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		6.8	1.3	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
4:2 FTS	ND		14	2.2	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
6:2 FTS	ND		14	1.8	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
8:2 FTS	ND		14	1.5	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Perfluorooctanesulfonamide (PFOSA)	ND		6.8	2.1	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		6.8	1.2	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		6.8	0.71	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		6.8	0.54	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7	J	6.8	0.58	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12	J	34	3.0	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.1	J	34	2.6	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		6.8	0.99	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		6.8	0.85	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		6.8	0.75	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		6.8	1.2	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		6.8	2.1	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
9CI-PF3ONS	ND		6.8	1.3	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
11CI-PF3OUdS	ND		6.8	2.6	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		6.8	1.3	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		14	2.6	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		34	8.3	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11	J	34	7.3	ug/Kg	☼	09/23/25 20:55	09/26/25 01:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	83.5		8 - 130	09/23/25 20:55	09/26/25 01:08	1
13C5 PFPeA	83.0		35 - 130	09/23/25 20:55	09/26/25 01:08	1
13C5 PFHxA	108		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C4 PFHpA	104		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C8 PFOA	106		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C9 PFNA	93.1		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C6 PFDA	81.6		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C7 PFUnA	101		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C2 PFDoA	72.6		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C2 PFTeDA	73.7		20 - 130	09/23/25 20:55	09/26/25 01:08	1
13C3 PFBS	92.9		40 - 135	09/23/25 20:55	09/26/25 01:08	1
13C3 PFHxS	93.6		40 - 130	09/23/25 20:55	09/26/25 01:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	91.3		40 - 130	09/23/25 20:55	09/26/25 01:08	1
13C8 FOSA	79.5		40 - 130	09/23/25 20:55	09/26/25 01:08	1
D3-NMeFOSAA	71.5		40 - 135	09/23/25 20:55	09/26/25 01:08	1
D5-NEtFOSAA	83.0		40 - 150	09/23/25 20:55	09/26/25 01:08	1
13C2 4:2 FTS	204	*5+	40 - 165	09/23/25 20:55	09/26/25 01:08	1
13C2 6:2 FTS	138		40 - 215	09/23/25 20:55	09/26/25 01:08	1
13C2 8:2 FTS	182		40 - 275	09/23/25 20:55	09/26/25 01:08	1
13C3 HFPO-DA	105		40 - 130	09/23/25 20:55	09/26/25 01:08	1
D7-NMeFOSE	70.6		20 - 130	09/23/25 20:55	09/26/25 01:08	1
D9-NEtFOSE	80.5		15 - 130	09/23/25 20:55	09/26/25 01:08	1
D5-NEtFOSA	75.1		10 - 130	09/23/25 20:55	09/26/25 01:08	1
D3-NMeFOSA	73.0		10 - 130	09/23/25 20:55	09/26/25 01:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	94		0.10	0.10	%			09/11/25 14:11	1
Percent Solids (EPA 1633)	5.6		0.10	0.10	%			09/11/25 14:11	1

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.4	J	13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoropentanoic acid (PFPeA)	12		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorohexanoic acid (PFHxA)	16		5.0	1.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorooctanoic acid (PFOA)	9.1		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorobutanesulfonic acid (PFBS)	6.5		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorohexanesulfonic acid (PFHxS)	7.9		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorooctanesulfonic acid (PFOS)	4.5	J	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
4:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
6:2 FTS	ND		13	3.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
8:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND	*	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		09/17/25 19:40	09/21/25 17:08	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		09/17/25 19:40	09/21/25 17:08	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		09/17/25 19:40	09/21/25 17:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.0	J	5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		09/17/25 19:40	09/21/25 17:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		09/17/25 19:40	09/21/25 17:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	76		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFBA	91		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C5 PFPeA	94		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFHxA	104		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFHpA	101		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFOA	89		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C5 PFNA	88		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFDA	75		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFUnA	66		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFDoA	55		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 PFTeDA	52		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C3 PFBS	100		25 - 150				09/17/25 19:40	09/21/25 17:08	1
18O2 PFHxS	90		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C4 PFOS	79		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D3-NMeFOSAA	75		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D5-NEtFOSAA	82		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 4:2 FTS	94		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 6:2 FTS	77		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C2 8:2 FTS	70		25 - 150				09/17/25 19:40	09/21/25 17:08	1
d-N-MeFOSA-M	50		25 - 150				09/17/25 19:40	09/21/25 17:08	1
d-N-EtFOSA-M	40		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D7-NMeFOSE	40		25 - 150				09/17/25 19:40	09/21/25 17:08	1
D9-NEtFOSE	39		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C3 HFPO-DA	103		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C-6:2 FTCA	105		25 - 150				09/17/25 19:40	09/21/25 17:08	1
13C-8:2 FTCA	115		25 - 150				09/17/25 19:40	09/21/25 17:08	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	50	B J+	13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoropentanoic acid (PFPeA)	21	*+ J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorohexanoic acid (PFHxA)	19		5.0	1.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoroheptanoic acid (PFHpA)	2.1	J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorooctanoic acid (PFOA)	9.7		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorotridecanoic acid (PFTeDA)	ND	*	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorotetradecanoic acid (PFTeDA)	ND	*	5.0	1.8	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorobutanesulfonic acid (PFBS)	4.6	J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorohexanesulfonic acid (PFHxS)	7.9		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorooctanesulfonic acid (PFOS)	3.9	J	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.0	2.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
4:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
6:2 FTS	ND		13	3.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
8:2 FTS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		09/17/25 19:44	09/21/25 20:53	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		09/17/25 19:44	09/21/25 20:53	1
11CI-PF3OUdS	ND		5.0	1.7	ng/L		09/17/25 19:44	09/21/25 20:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		09/17/25 19:44	09/21/25 20:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	*+	5.0	1.6	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		09/17/25 19:44	09/21/25 20:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	78		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C4 PFBA	97		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C5 PFPeA	92		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFHxA	97		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C4 PFHpA	102		25 - 150	09/17/25 19:44	09/21/25 20:53	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: EFF-G-202509

Lab Sample ID: 320-125031-7

Date Collected: 09/09/25 08:00

Matrix: Water

Date Received: 09/10/25 10:00

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	90		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C5 PFNA	89		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFDA	84		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFUnA	89		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFDoA	83		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 PFTeDA	77		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C3 PFBS	97		25 - 150	09/17/25 19:44	09/21/25 20:53	1
18O2 PFHxS	87		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C4 PFOS	82		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D3-NMeFOSAA	90		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D5-NEtFOSAA	104		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 4:2 FTS	0		0 - 10	09/17/25 19:44	09/21/25 20:53	1
13C2 6:2 FTS	71		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C2 8:2 FTS	66		25 - 150	09/17/25 19:44	09/21/25 20:53	1
d-N-MeFOSA-M	65		25 - 150	09/17/25 19:44	09/21/25 20:53	1
d-N-EtFOSA-M	53		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D7-NMeFOSE	68		25 - 150	09/17/25 19:44	09/21/25 20:53	1
D9-NEtFOSE	62		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C3 HFPO-DA	108		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C-6:2 FTCA	105		25 - 150	09/17/25 19:44	09/21/25 20:53	1
13C-8:2 FTCA	117		25 - 150	09/17/25 19:44	09/21/25 20:53	1

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6		4.4	1.1	ug/Kg	☼	09/28/25 19:52	10/01/25 23:55	1
8:2 FTS	ND	*+	4.4	0.77	ug/Kg	☼	09/28/25 19:52	10/01/25 23:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	110		25 - 150				09/28/25 19:52	10/01/25 23:55	1
13C2 8:2 FTS	175	*5+	25 - 150				09/28/25 19:52	10/01/25 23:55	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0	J	4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoropentanoic acid (PFPeA)	12		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorohexanoic acid (PFHxA)	12		4.4	0.68	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoroheptanoic acid (PFHpA)	ND		4.4	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorooctanoic acid (PFOA)	9.8		4.4	1.2	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorononanoic acid (PFNA)	1.2	J	4.4	0.48	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorodecanoic acid (PFDA)	5.5		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoroundecanoic acid (PFUnA)	ND		4.4	0.92	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorododecanoic acid (PFDoA)	1.7	J	4.4	0.66	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorotridecanoic acid (PFTTrDA)	ND		4.4	0.46	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorotetradecanoic acid (PFTeDA)	ND		4.4	0.81	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorobutanesulfonic acid (PFBS)	5.0		4.4	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		4.4	0.81	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		4.4	0.64	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorooctanesulfonic acid (PFOS)	16		4.4	0.95	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorononanesulfonic acid (PFNS)	ND		4.4	0.64	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluorooctanesulfonamide (PFOSA)	1.0 J		4.4	0.72	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	16		4.4	0.51	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
4:2 FTS	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
6:2 FTS	ND		4.4	0.59	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.4	1.1	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.6		4.4	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.1		4.4	0.62	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
9CI-PF3ONS	ND		4.4	0.77	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
11CI-PF3OUdS	ND		4.4	0.68	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.4	0.86	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	48		4.4	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	14		4.4	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.4	0.88	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.4	0.99	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.4	0.53	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		4.4	0.70	ug/Kg	☼	10/05/25 19:13	10/07/25 01:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	72		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFBA	77		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C5 PFPeA	80		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFHxA	92		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFHpA	90		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFOA	91		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C5 PFNA	89		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFDA	89		25 - 150	10/05/25 19:13	10/07/25 01:40	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PUnA	94		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFDaA	74		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 PFTeDA	41		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C3 PFBS	86		25 - 150	10/05/25 19:13	10/07/25 01:40	1
18O2 PFHxS	84		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C4 PFOS	78		25 - 150	10/05/25 19:13	10/07/25 01:40	1
D3-NMeFOSAA	61		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 4:2 FTS	150		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C2 6:2 FTS	167	*5+	25 - 150	10/05/25 19:13	10/07/25 01:40	1
d-N-MeFOSA-M	47		25 - 150	10/05/25 19:13	10/07/25 01:40	1
d-N-EtFOSA-M	38		25 - 150	10/05/25 19:13	10/07/25 01:40	1
D7-NMeFOSE	43		25 - 150	10/05/25 19:13	10/07/25 01:40	1
D9-NEtFOSE	52		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C3 HFPO-DA	79		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C-6:2 FTCA	86		25 - 150	10/05/25 19:13	10/07/25 01:40	1
13C-8:2 FTCA	90		25 - 150	10/05/25 19:13	10/07/25 01:40	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	96	B *+ J	4.3	0.99	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoropentanoic acid (PFPeA)	67	*+ J	4.3	0.89	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorohexanoic acid (PFHxA)	42	*+ J	4.3	0.67	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoroheptanoic acid (PFHpA)	19		4.3	0.82	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorooctanoic acid (PFOA)	40	*+ J	4.3	1.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorononanoic acid (PFNA)	12	*+ J	4.3	0.47	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorodecanoic acid (PFDA)	11		4.3	1.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoroundecanoic acid (PFUnA)	4.5		4.3	0.90	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorododecanoic acid (PFDoA)	4.0	J	4.3	0.65	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorotridecanoic acid (PFTTrDA)	1.3	J *	4.3	0.45	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorotetradecanoic acid (PFTeDA)	1.4	J	4.3	0.80	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorobutanesulfonic acid (PFBS)	13		4.3	0.82	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.3	0.80	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	4.3	0.62	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	*+	4.3	1.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorooctanesulfonic acid (PFOS)	13		4.3	0.93	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorononanesulfonic acid (PFNS)	ND		4.3	0.62	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.3	1.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.3	1.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
Perfluorooctanesulfonamide (PFOSA)	ND		4.3	0.71	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.3	0.50	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.3	1.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:11	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	ND		4.3	1.1	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
6:2 FTS	ND		4.3	0.58	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
8:2 FTS	ND		4.3	0.75	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.3	1.0	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.3	1.1	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.3	1.0	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.3	0.60	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
9Cl-PF3ONS	ND		4.3	0.75	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.3	0.89	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
11Cl-PF3OUdS	ND		4.3	0.67	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.3	0.84	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.3	0.89	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.3	0.82	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.3	0.89	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.3	0.86	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.3	0.97	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	✱	4.3	0.52	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		4.3	0.69	ug/Kg	☼	09/28/25 20:30	10/02/25 03:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	58		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFBA	98		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C5 PFPeA	95		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFHxA	103		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFHpA	102		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFOA	90		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C5 PFNA	83		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFDA	68		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFUnA	74		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFDoA	68		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 PFTeDA	76		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C3 PFBS	107		25 - 150	09/28/25 20:30	10/02/25 03:11	1
18O2 PFHxS	100		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C4 PFOS	74		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D3-NMeFOSAA	65		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D5-NEtFOSAA	78		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:11	1
13C2 6:2 FTS	89		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C2 8:2 FTS	67		25 - 150	09/28/25 20:30	10/02/25 03:11	1
d-N-MeFOSA-M	56		25 - 150	09/28/25 20:30	10/02/25 03:11	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-25-202509

Lab Sample ID: 320-125031-9

Date Collected: 09/08/25 14:38

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 22.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d-N-EtFOSA-M	46		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D7-NMeFOSE	55		25 - 150	09/28/25 20:30	10/02/25 03:11	1
D9-NEtFOSE	53		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C3 HFPO-DA	105		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C-6:2 FTCA	95		25 - 150	09/28/25 20:30	10/02/25 03:11	1
13C-8:2 FTCA	88		25 - 150	09/28/25 20:30	10/02/25 03:11	1

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	ND		4.0	0.74	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		4.0	1.0	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
N-ethylperfluorooctanesulfonami doacetic acid (NetFOSAA)	6.6		4.0	0.96	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
8:2 FTS	ND	*+	4.0	0.70	ug/Kg	☼	09/28/25 19:52	10/02/25 00:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFTeDA	57		25 - 150				09/28/25 19:52	10/02/25 00:09	1
13C4 PFOS	100		25 - 150				09/28/25 19:52	10/02/25 00:09	1
D5-NetFOSAA	122		25 - 150				09/28/25 19:52	10/02/25 00:09	1
13C2 8:2 FTS	165	*5+	25 - 150				09/28/25 19:52	10/02/25 00:09	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.6		4.0	0.92	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoropentanoic acid (PFPeA)	23		4.0	0.83	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorohexanoic acid (PFHxA)	34		4.0	0.62	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoroheptanoic acid (PFHpA)	4.0		4.0	0.76	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorooctanoic acid (PFOA)	31		4.0	1.1	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorononanoic acid (PFNA)	1.9 J		4.0	0.44	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorodecanoic acid (PFDA)	15		4.0	0.96	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoroundecanoic acid (PFUnA)	1.7 J		4.0	0.84	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorododecanoic acid (PFDoA)	3.3 J		4.0	0.60	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		4.0	0.42	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorobutanesulfonic acid (PFBS)	5.5		4.0	0.76	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.0	0.74	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorohexanesulfonic acid (PFHxS)	2.7 J I J		4.0	0.58	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		4.0	0.99	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorooctanesulfonic acid (PFOS)	15		4.0	0.87	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorononanesulfonic acid (PFNS)	ND		4.0	0.58	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.0	0.95	ug/Kg	✱	10/05/25 19:13	10/07/25 01:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (PFOSA)	1.5	J	4.0	0.66	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	28		4.0	0.46	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
4:2 FTS	ND		4.0	1.0	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
6:2 FTS	1.3	JJ	4.0	0.54	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.0	0.95	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.0	0.99	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.2		4.0	0.95	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.6		4.0	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
9CI-PF3ONS	ND		4.0	0.70	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.0	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
11CI-PF3OUdS	ND		4.0	0.62	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.0	0.78	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	17		4.0	0.76	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.6		4.0	0.83	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.0	0.80	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.0	0.91	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		4.0	0.48	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		4.0	0.64	ug/Kg	☼	10/05/25 19:13	10/07/25 01:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	75		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFBA	84		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C5 PFPeA	84		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFHxA	92		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFHpA	93		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFOA	94		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C5 PFNA	92		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFDA	89		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFUnA	98		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 PFDoA	82		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C3 PFBS	86		25 - 150				10/05/25 19:13	10/07/25 01:54	1
18O2 PFHxS	87		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C4 PFOS	81		25 - 150				10/05/25 19:13	10/07/25 01:54	1
D3-NMeFOSAA	72		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 4:2 FTS	130		25 - 150				10/05/25 19:13	10/07/25 01:54	1
13C2 6:2 FTS	151	*5+	25 - 150				10/05/25 19:13	10/07/25 01:54	1
d-N-MeFOSA-M	57		25 - 150				10/05/25 19:13	10/07/25 01:54	1
d-N-EtFOSA-M	56		25 - 150				10/05/25 19:13	10/07/25 01:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D7-NMeFOSE	57		25 - 150	10/05/25 19:13	10/07/25 01:54	1
D9-NEtFOSE	65		25 - 150	10/05/25 19:13	10/07/25 01:54	1
13C3 HFPO-DA	80		25 - 150	10/05/25 19:13	10/07/25 01:54	1
13C-6:2 FTCA	92		25 - 150	10/05/25 19:13	10/07/25 01:54	1
13C-8:2 FTCA	78		25 - 150	10/05/25 19:13	10/07/25 01:54	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	200	B*+ J	4.0	0.93	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoropentanoic acid (PFPeA)	150	*+ J	4.0	0.83	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorohexanoic acid (PFHxA)	100	*+ J	4.0	0.63	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoroheptanoic acid (PFHpA)	49		4.0	0.77	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorooctanoic acid (PFOA)	82	*+ J	4.0	1.1	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorononanoic acid (PFNA)	23	*+ J	4.0	0.44	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorodecanoic acid (PFDA)	23		4.0	0.97	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoroundecanoic acid (PFUnA)	7.4		4.0	0.85	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorododecanoic acid (PFDoA)	6.9		4.0	0.61	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorotridecanoic acid (PFTTrDA)	1.9	J *	4.0	0.42	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorotetradecanoic acid (PFTeDA)	2.3	J	4.0	0.75	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorobutanesulfonic acid (PFBS)	22		4.0	0.77	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoropentanesulfonic acid (PFPeS)	ND		4.0	0.75	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	4.0	0.59	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	*+	4.0	1.0	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorooctanesulfonic acid (PFOS)	13		4.0	0.87	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorononanesulfonic acid (PFNS)	ND		4.0	0.59	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorodecanesulfonic acid (PFDS)	1.2	J	4.0	1.1	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorododecanesulfonic acid (PFDoS)	ND		4.0	0.95	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
Perfluorooctanesulfonamide (PFOSA)	ND		4.0	0.67	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.0	0.47	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.0	0.97	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
4:2 FTS	ND		4.0	1.0	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
6:2 FTS	ND		4.0	0.55	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
8:2 FTS	ND		4.0	0.71	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		4.0	0.95	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		4.0	1.0	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		4.0	0.95	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		4.0	0.57	ug/Kg	✧	09/28/25 20:30	10/02/25 03:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-24-202509

Lab Sample ID: 320-125031-10

Date Collected: 09/08/25 14:09

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 24.5

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	ND		4.0	0.71	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		4.0	0.83	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
11CI-PF3OUdS	ND		4.0	0.63	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		4.0	0.79	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		4.0	0.83	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		4.0	0.77	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		4.0	0.83	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		4.0	0.81	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		4.0	0.91	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	4.0	0.49	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		4.0	0.65	ug/Kg	☼	09/28/25 20:30	10/02/25 03:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	66		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFBA	95		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C5 PFPeA	93		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFHxA	100		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFHpA	106		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFOA	90		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C5 PFNA	88		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFDA	76		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFUnA	82		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFDoA	73		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 PFTeDA	79		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C3 PFBS	104		25 - 150	09/28/25 20:30	10/02/25 03:25	1
18O2 PFHxS	94		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C4 PFOS	75		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D3-NMeFOSAA	80		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D5-NEtFOSAA	91		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:25	1
13C2 6:2 FTS	84		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C2 8:2 FTS	81		25 - 150	09/28/25 20:30	10/02/25 03:25	1
d-N-MeFOSA-M	64		25 - 150	09/28/25 20:30	10/02/25 03:25	1
d-N-EtFOSA-M	57		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D7-NMeFOSE	65		25 - 150	09/28/25 20:30	10/02/25 03:25	1
D9-NEtFOSE	61		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C3 HFPO-DA	103		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C-6:2 FTCA	104		25 - 150	09/28/25 20:30	10/02/25 03:25	1
13C-8:2 FTCA	93		25 - 150	09/28/25 20:30	10/02/25 03:25	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.6		2.4	0.57	ug/Kg	☼	09/28/25 19:52	10/02/25 00:23	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	113		25 - 150				09/28/25 19:52	10/02/25 00:23	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.0		2.4	0.55	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoropentanoic acid (PFPeA)	18		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorohexanoic acid (PFHxA)	37		2.4	0.37	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoroheptanoic acid (PFHpA)	3.0		2.4	0.45	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorooctanoic acid (PFOA)	35		2.4	0.63	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorononanoic acid (PFNA)	1.7 J		2.4	0.26	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorodecanoic acid (PFDA)	13		2.4	0.57	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoroundecanoic acid (PFUnA)	1.1 J		2.4	0.50	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorododecanoic acid (PFDoA)	2.9		2.4	0.36	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorotridecanoic acid (PFTTrDA)	0.30 J		2.4	0.25	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorotetradecanoic acid (PFTeDA)	0.93 J		2.4	0.44	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorobutanesulfonic acid (PFBS)	5.4		2.4	0.45	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.4	0.44	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorohexanesulfonic acid (PFHxS)	1.8 J		2.4	0.35	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.4	0.59	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorooctanesulfonic acid (PFOS)	13		2.4	0.51	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorononanesulfonic acid (PFNS)	ND		2.4	0.35	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorodecanesulfonic acid (PFDS)	1.4 J		2.4	0.62	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.4	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluorooctanesulfonamide (PFOSA)	1.1 J		2.4	0.39	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	23		2.4	0.27	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
4:2 FTS	ND		2.4	0.61	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
6:2 FTS	2.5 J		2.4	0.32	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
8:2 FTS	1.1 J J		2.4	0.42	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.4	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.4	0.59	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.2		2.4	0.56	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5.2		2.4	0.33	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
9CI-PF3ONS	ND		2.4	0.42	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
11CI-PF3OUdS	ND		2.4	0.37	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.4	0.46	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	15		2.4	0.45	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	11		2.4	0.49	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.4	0.48	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.4	0.54	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.4	0.29	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.4	0.38	ug/Kg	☼	10/05/25 19:13	10/07/25 02:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	85		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFBA	87		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C5 PFPeA	88		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFHxA	95		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFHpA	98		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFOA	101		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C5 PFNA	99		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFDA	100		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFUnA	108		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFDoA	85		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 PFTeDA	41		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C3 PFBS	92		25 - 150	10/05/25 19:13	10/07/25 02:08	1
18O2 PFHxS	89		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C4 PFOS	82		25 - 150	10/05/25 19:13	10/07/25 02:08	1
D3-NMeFOSAA	78		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 4:2 FTS	167	*5+	25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 6:2 FTS	199	*5+	25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C2 8:2 FTS	186	*5+	25 - 150	10/05/25 19:13	10/07/25 02:08	1
d-N-MeFOSA-M	58		25 - 150	10/05/25 19:13	10/07/25 02:08	1
d-N-EtFOSA-M	44		25 - 150	10/05/25 19:13	10/07/25 02:08	1
D7-NMeFOSE	56		25 - 150	10/05/25 19:13	10/07/25 02:08	1
D9-NEtFOSE	58		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C3 HFPO-DA	84		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C-6:2 FTCA	99		25 - 150	10/05/25 19:13	10/07/25 02:08	1
13C-8:2 FTCA	91		25 - 150	10/05/25 19:13	10/07/25 02:08	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	200	B *+ J	2.4	0.55	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1
Perfluoropentanoic acid (PFPeA)	120	*+ J	2.4	0.49	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1
Perfluorohexanoic acid (PFHxA)	99	*+ J	2.4	0.37	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1
Perfluoroheptanoic acid (PFHpA)	38		2.4	0.45	ug/Kg	☼	09/28/25 20:30	10/02/25 03:39	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	83	*+ J	2.4	0.63	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorononanoic acid (PFNA)	19	*+ J	2.4	0.26	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorodecanoic acid (PFDA)	23		2.4	0.57	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoroundecanoic acid (PFUnA)	5.5		2.4	0.50	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorododecanoic acid (PFDoA)	6.1		2.4	0.36	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorotridecanoic acid (PFTTrDA)	1.5	J *	2.4	0.25	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorotetradecanoic acid (PFTeDA)	1.9	J	2.4	0.44	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorobutanesulfonic acid (PFBS)	32		2.4	0.45	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.4	0.44	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	J	2.4	0.35	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	*+	2.4	0.59	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorooctanesulfonic acid (PFOS)	12		2.4	0.51	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorononanesulfonic acid (PFNS)	ND		2.4	0.35	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorodecanesulfonic acid (PFDS)	0.81	J	2.4	0.62	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.4	0.56	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.4	0.39	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.4	0.27	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.4	0.57	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
4:2 FTS	ND		2.4	0.61	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
6:2 FTS	ND		2.4	0.32	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
8:2 FTS	ND		2.4	0.42	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		2.4	0.56	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		2.4	0.59	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.4	0.56	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.4	0.33	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
9CI-PF3ONS	ND		2.4	0.42	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.4	0.49	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
11CI-PF3OUdS	ND		2.4	0.37	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.4	0.46	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		2.4	0.49	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		2.4	0.45	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		2.4	0.49	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-A-23-202509

Lab Sample ID: 320-125031-12

Date Collected: 09/08/25 15:08

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 42.0

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.4	0.48	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.4	0.54	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	✱	2.4	0.29	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		2.4	0.38	ug/Kg	☆	09/28/25 20:30	10/02/25 03:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	64		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFBA	97		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C5 PFPeA	96		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFHxA	103		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFHpA	104		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFOA	89		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C5 PFNA	90		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFDA	76		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFUnA	76		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFDoA	68		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 PFTeDA	79		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C3 PFBS	107		25 - 150	09/28/25 20:30	10/02/25 03:39	1
18O2 PFHxS	102		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C4 PFOS	82		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D3-NMeFOSAA	72		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D5-NEtFOSAA	85		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:39	1
13C2 6:2 FTS	94		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C2 8:2 FTS	80		25 - 150	09/28/25 20:30	10/02/25 03:39	1
d-N-MeFOSA-M	63		25 - 150	09/28/25 20:30	10/02/25 03:39	1
d-N-EtFOSA-M	56		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D7-NMeFOSE	60		25 - 150	09/28/25 20:30	10/02/25 03:39	1
D9-NEtFOSE	58		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C3 HFPO-DA	105		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C-6:2 FTCA	100		25 - 150	09/28/25 20:30	10/02/25 03:39	1
13C-8:2 FTCA	101		25 - 150	09/28/25 20:30	10/02/25 03:39	1

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.2	ug/Kg	☼	09/28/25 19:52	10/02/25 00:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
D5-NEtFOSAA	118		25 - 150				09/28/25 19:52	10/02/25 00:37	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		18	4.0	ug/Kg	☆	10/05/25 19:13	10/07/25 02:22	1
Perfluoropentanoic acid (PFPeA)	ND		18	3.6	ug/Kg	☆	10/05/25 19:13	10/07/25 02:22	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		18	2.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoroheptanoic acid (PFHpA)	ND		18	3.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorooctanoic acid (PFOA)	ND		18	4.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorononanoic acid (PFNA)	ND		18	1.9	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorodecanoic acid (PFDA)	ND		18	4.2	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoroundecanoic acid (PFUnA)	ND		18	3.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorododecanoic acid (PFDoA)	ND		18	2.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorotridecanoic acid (PFTrDA)	ND		18	1.8	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.2	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		18	3.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.2	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorooctanesulfonic acid (PFOS)	15	J J	18	3.8	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorododecanesulfonic acid (PFDoS)	ND		18	4.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	2.9	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10	J	18	2.0	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
4:2 FTS	ND		18	4.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
6:2 FTS	ND		18	2.4	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
8:2 FTS	ND		18	3.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
9CI-PF3ONS	ND		18	3.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
11CI-PF3OUdS	ND		18	2.7	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.4	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	130		18	3.3	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	6.9	J	18	3.6	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.5	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.0	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		18	2.1	ug/Kg	☼	10/05/25 19:13	10/07/25 02:22	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		18	2.8	ug/Kg	☆	10/05/25 19:13	10/07/25 02:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	81		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFBA	84		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C5 PFPeA	85		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFHxA	97		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFHpA	96		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFOA	93		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C5 PFNA	97		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFDA	97		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFUnA	98		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFDaA	86		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 PFTeDA	51		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C3 PFBS	94		25 - 150				10/05/25 19:13	10/07/25 02:22	1
18O2 PFHxS	91		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C4 PFOS	88		25 - 150				10/05/25 19:13	10/07/25 02:22	1
D3-NMeFOSAA	80		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 4:2 FTS	164	*5+	25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 6:2 FTS	160	*5+	25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C2 8:2 FTS	184	*5+	25 - 150				10/05/25 19:13	10/07/25 02:22	1
d-N-MeFOSA-M	60		25 - 150				10/05/25 19:13	10/07/25 02:22	1
d-N-EtFOSA-M	59		25 - 150				10/05/25 19:13	10/07/25 02:22	1
D7-NMeFOSE	56		25 - 150				10/05/25 19:13	10/07/25 02:22	1
D9-NEtFOSE	68		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C3 HFPO-DA	87		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C-6:2 FTCA	89		25 - 150				10/05/25 19:13	10/07/25 02:22	1
13C-8:2 FTCA	87		25 - 150				10/05/25 19:13	10/07/25 02:22	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	170	B*+ J	18	4.1	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoropentanoic acid (PFPeA)	130	*+ J	18	3.6	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorohexanoic acid (PFHxA)	53	*+ J	18	2.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoroheptanoic acid (PFHpA)	37		18	3.4	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorooctanoic acid (PFOA)	41	*+ J	18	4.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorononanoic acid (PFNA)	23	*+ J	18	1.9	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorodecanoic acid (PFDA)	12	J	18	4.2	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoroundecanoic acid (PFUnA)	9.0	J	18	3.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorododecanoic acid (PFDaA)	5.6	J	18	2.7	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorotridecanoic acid (PFTTrDA)	ND	*	18	1.9	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorotetradecanoic acid (PFTeDA)	3.7	J	18	3.3	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorobutanesulfonic acid (PFBS)	7.5	J	18	3.4	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.3	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.6	ug/Kg	☆	09/28/25 20:30	10/02/25 03:53	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND	*+	18	4.3	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorooctanesulfonic acid (PFOS)	11	J	18	3.8	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	2.9	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
4:2 FTS	ND		18	4.5	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
6:2 FTS	ND		18	2.4	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
8:2 FTS	ND		18	3.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.3	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.2	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.5	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
9CI-PF3ONS	ND		18	3.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
11CI-PF3OUdS	ND		18	2.7	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.4	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		18	3.4	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		18	3.6	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.5	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.0	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	18	2.1	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	2.8	ug/Kg	✱	09/28/25 20:30	10/02/25 03:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	64		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFBA	99		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C5 PFPeA	95		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFHxA	103		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFHpA	102		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFOA	88		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C5 PFNA	86		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFDA	73		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFUnA	73		25 - 150	09/28/25 20:30	10/02/25 03:53	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-125031-2

Client Sample ID: BIO-B-202509

Lab Sample ID: 320-125031-13

Date Collected: 09/08/25 15:21

Matrix: Solid

Date Received: 09/10/25 10:00

Percent Solids: 5.6

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	69		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 PFTeDA	77		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C3 PFBS	112		25 - 150	09/28/25 20:30	10/02/25 03:53	1
18O2 PFHxS	103		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C4 PFOS	75		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D3-NMeFOSAA	70		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D5-NEtFOSAA	78		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 4:2 FTS	0		0 - 10	09/28/25 20:30	10/02/25 03:53	1
13C2 6:2 FTS	93		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C2 8:2 FTS	83		25 - 150	09/28/25 20:30	10/02/25 03:53	1
d-N-MeFOSA-M	60		25 - 150	09/28/25 20:30	10/02/25 03:53	1
d-N-EtFOSA-M	54		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D7-NMeFOSE	58		25 - 150	09/28/25 20:30	10/02/25 03:53	1
D9-NEtFOSE	55		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C3 HFPO-DA	108		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C-6:2 FTCA	104		25 - 150	09/28/25 20:30	10/02/25 03:53	1
13C-8:2 FTCA	92		25 - 150	09/28/25 20:30	10/02/25 03:53	1

October 2025

Data Quality and Usability Review – October 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 11/7/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on October 13 and 14, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDG 320-126326-1 (Revision 1).

Samples included in this review are listed below:

- INF-COMP-202510
- EFF-G-202510

Each sample was analyzed for the following constituents.

Analyte Group	Method
PFAS (40 Analytes)	EPA Method 1633A

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;

- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The revised data package was found to be complete as received from the laboratory.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample INF-COMP-202510 was not shipped to the laboratory until one day after collection. The sample was stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch. Target analytes were not detected in the method blanks.
- All samples were extracted and analyzed within the holding time, with the following exceptions.
 - Sample INF-COMP-202510 was extracted for PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive results for NMeFOSE, NMeFOSAA, and NEtFOSAA in sample INF-COMP-202510 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory

due to detection <QL. The nondetect result for NEtFOSE in sample INF-COMP-202510 was qualified as estimated (UJ).

- The LCS (including low-level LCS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), as applicable, for all analytes were within the method acceptance limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The following table summarizes the EIS %Rs that were outside of the method acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action
INF-COMP-202510	13C2 4:2 FTS	268	40-200	No validation action was required on this basis since 4:2 FTS was not detected in sample INF-COMP-202510.
	13C2 6:2 FTS	222		The positive result for 6:2 FTS was qualified as estimated (J) in sample INF-COMP-202510. This result was also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this sample set.
- A laboratory duplicate analysis was not performed on a sample from this sample set.
- The laboratory noted the following observations in the case narrative. No validation actions were taken on this basis.
 - Sample EFF-G-202510 yielded a discolored extract.
 - Sample INF-COMP-202510 was discolored and contained particulates prior to extraction and yielded a discolored extract. This sample was prepared using project-specified instructions due to elevated total suspended solids (TSS). The sample was fortified with EIS, equilibrated, and centrifuged. The aqueous phase was separated and then extracted using solid phase extraction (SPE). The solid residue was then rinsed with solvent (basic methanol) and the resulting methanolic extract was added to the aqueous phase prior to SPE, such that the final extract represents the combined contribution of both solid and aqueous fractions. The final combined extract underwent analysis.
- No dilutions were performed on the samples in this data set.
- The results for the following PFAS in the sample listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the sample listed below were qualified as estimated (J).
 - PFPeS and PFOSA in sample INF-COMP-202510*;
 - PFPeS in sample EFF-G-202510*.

* These results were also qualified as estimated (J) by the laboratory due to detection < the QL.
- The laboratory noted select continuing calibration verification (CCV) and/or continuing calibration blank (CCB) nonconformances in the case narrative. No validation actions were taken on this basis since the actual CCV and CCB results were not provided for review.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: INF-COMP-202510

Lab Sample ID: 320-126326-1

Date Collected: 10/13/25 23:59

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.1		3.1	0.29	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoropentanoic acid (PFPeA)	4.6		1.6	0.18	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorohexanoic acid (PFHxA)	5.3		1.6	0.21	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	1.6	0.27	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorooctanoic acid (PFOA)	5.2		1.6	0.31	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorononanoic acid (PFNA)	0.46	J	1.6	0.35	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.35	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorobutanesulfonic acid (PFBS)	3.5		1.6	0.42	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoropentanesulfonic acid (PFPeS)	0.49	J I J	1.6	0.17	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorohexanesulfonic acid (PFHxS)	6.1		1.6	0.19	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorooctanesulfonic acid (PFOS)	4.1		1.6	0.22	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		10/23/25 19:45	10/24/25 18:07	1
4:2 FTS	ND		3.1	0.34	ng/L		10/23/25 19:45	10/24/25 18:07	1
6:2 FTS	1.3	J J	3.1	0.32	ng/L		10/23/25 19:45	10/24/25 18:07	1
8:2 FTS	ND		3.1	0.70	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluorooctanesulfonamide (PFOSA)	0.20	J I J	1.6	0.18	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.68	J J	1.6	0.27	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.79	J J	1.6	0.34	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.6	J J	7.8	1.8	ng/L		10/23/25 19:45	10/24/25 18:07	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	7.8	1.9	ng/L		10/23/25 19:45	10/24/25 18:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		10/23/25 19:45	10/24/25 18:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		10/23/25 19:45	10/24/25 18:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		10/23/25 19:45	10/24/25 18:07	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		10/23/25 19:45	10/24/25 18:07	1
9CI-PF3ONS	ND		1.6	0.45	ng/L		10/23/25 19:45	10/24/25 18:07	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		10/23/25 19:45	10/24/25 18:07	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: INF-COMP-202510

Lab Sample ID: 320-126326-1

Date Collected: 10/13/25 23:59

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.19	ng/L		10/23/25 19:45	10/24/25 18:07	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		10/23/25 19:45	10/24/25 18:07	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	21		7.8	1.3	ng/L		10/23/25 19:45	10/24/25 18:07	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.0	J	7.8	0.97	ng/L		10/23/25 19:45	10/24/25 18:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	82.4		5 - 130				10/23/25 19:45	10/24/25 18:07	1
13C5 PFPeA	86.8		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C5 PFHxA	88.3		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C4 PFHpA	94.4		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C8 PFOA	86.3		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C9 PFNA	97.3		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C6 PFDA	81.6		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C7 PFUnA	46.0		30 - 130				10/23/25 19:45	10/24/25 18:07	1
13C2 PFDoA	37.8		10 - 130				10/23/25 19:45	10/24/25 18:07	1
13C2 PFTeDA	47.4		10 - 130				10/23/25 19:45	10/24/25 18:07	1
13C3 PFBS	86.7		40 - 135				10/23/25 19:45	10/24/25 18:07	1
13C3 PFHxS	99.4		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C8 PFOS	83.7		40 - 130				10/23/25 19:45	10/24/25 18:07	1
13C8 FOSA	57.8		40 - 130				10/23/25 19:45	10/24/25 18:07	1
D3-NMeFOSAA	61.3		40 - 170				10/23/25 19:45	10/24/25 18:07	1
D5-NeFOSAA	68.6		25 - 135				10/23/25 19:45	10/24/25 18:07	1
13C2 4:2 FTS	268	*5+	40 - 200				10/23/25 19:45	10/24/25 18:07	1
13C2 6:2 FTS	222	*5+	40 - 200				10/23/25 19:45	10/24/25 18:07	1
13C2 8:2 FTS	239		40 - 300				10/23/25 19:45	10/24/25 18:07	1
13C3 HFPO-DA	98.4		40 - 130				10/23/25 19:45	10/24/25 18:07	1
D7-NMeFOSE	25.2		10 - 130				10/23/25 19:45	10/24/25 18:07	1
D9-NeFOSE	49.0		10 - 130				10/23/25 19:45	10/24/25 18:07	1
D5-NeFOSA	46.2		10 - 130				10/23/25 19:45	10/24/25 18:07	1
D3-NMeFOSA	41.9		10 - 130				10/23/25 19:45	10/24/25 18:07	1

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.6		3.1	0.29	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoropentanoic acid (PFPeA)	19		1.6	0.18	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorohexanoic acid (PFHxA)	8.2		1.6	0.21	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.6	0.27	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorooctanoic acid (PFOA)	7.1		1.6	0.31	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.36	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorodecanoic acid (PFDA)	0.56	J	1.6	0.35	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.43	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.6	0.45	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.63	ng/L		10/17/25 04:23	10/21/25 01:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.8		1.6	0.42	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoropentanesulfonic acid (PFPeS)	0.44	J I J	1.6	0.17	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorohexanesulfonic acid (PFHxS)	5.9		1.6	0.19	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorooctanesulfonic acid (PFOS)	2.9		1.6	0.22	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.41	ng/L		10/17/25 04:23	10/21/25 01:47	1
4:2 FTS	ND		3.1	0.34	ng/L		10/17/25 04:23	10/21/25 01:47	1
6:2 FTS	0.76	J	3.1	0.32	ng/L		10/17/25 04:23	10/21/25 01:47	1
8:2 FTS	ND		3.1	0.70	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluorooctanesulfonamide (PFOSA)	0.84	J	1.6	0.18	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.81	J	1.6	0.27	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.34	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		7.8	1.8	ng/L		10/17/25 04:23	10/21/25 01:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		7.8	1.9	ng/L		10/17/25 04:23	10/21/25 01:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		10/17/25 04:23	10/21/25 01:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.31	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		10/17/25 04:23	10/21/25 01:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.6	0.56	ng/L		10/17/25 04:23	10/21/25 01:47	1
9Cl-PF3ONS	ND		1.6	0.45	ng/L		10/17/25 04:23	10/21/25 01:47	1
11Cl-PF3OUdS	ND		1.6	0.23	ng/L		10/17/25 04:23	10/21/25 01:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		10/17/25 04:23	10/21/25 01:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.1	0.56	ng/L		10/17/25 04:23	10/21/25 01:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.3	J	7.8	1.3	ng/L		10/17/25 04:23	10/21/25 01:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.8	0.97	ng/L		10/17/25 04:23	10/21/25 01:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	90.2		5 - 130				10/17/25 04:23	10/21/25 01:47	1
13C5 PFPeA	108		40 - 130				10/17/25 04:23	10/21/25 01:47	1
13C5 PFHxA	121		40 - 130				10/17/25 04:23	10/21/25 01:47	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-126326-1

Client Sample ID: EFF-G-202510

Lab Sample ID: 320-126326-2

Date Collected: 10/14/25 07:35

Matrix: Water

Date Received: 10/15/25 09:20

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	98.8		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C8 PFOA	104		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C9 PFNA	95.8		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C6 PFDA	92.0		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C7 PFUnA	78.6		30 - 130	10/17/25 04:23	10/21/25 01:47	1
13C2 PFDoA	80.2		10 - 130	10/17/25 04:23	10/21/25 01:47	1
13C2 PFTeDA	59.4		10 - 130	10/17/25 04:23	10/21/25 01:47	1
13C3 PFBS	104		40 - 135	10/17/25 04:23	10/21/25 01:47	1
13C3 PFHxS	111		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C8 PFOS	101		40 - 130	10/17/25 04:23	10/21/25 01:47	1
13C8 FOSA	87.4		40 - 130	10/17/25 04:23	10/21/25 01:47	1
D3-NMeFOSAA	88.1		40 - 170	10/17/25 04:23	10/21/25 01:47	1
D5-NEtFOSAA	81.2		25 - 135	10/17/25 04:23	10/21/25 01:47	1
13C2 4:2 FTS	158		40 - 200	10/17/25 04:23	10/21/25 01:47	1
13C2 6:2 FTS	117		40 - 200	10/17/25 04:23	10/21/25 01:47	1
13C2 8:2 FTS	152		40 - 300	10/17/25 04:23	10/21/25 01:47	1
13C3 HFPO-DA	95.1		40 - 130	10/17/25 04:23	10/21/25 01:47	1
D7-NMeFOSE	68.4		10 - 130	10/17/25 04:23	10/21/25 01:47	1
D9-NEtFOSE	66.6		10 - 130	10/17/25 04:23	10/21/25 01:47	1
D5-NEtFOSA	67.2		10 - 130	10/17/25 04:23	10/21/25 01:47	1
D3-NMeFOSA	68.7		10 - 130	10/17/25 04:23	10/21/25 01:47	1

November 2025

Data Quality and Usability Review – November 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Elizabeth Denly

Date: 12/29/2025

Madison Metropolitan Sewerage District (MMSD) collected influent and effluent samples at the Nine Springs wastewater treatment plant on November 10 and 11, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and/or total suspended solids (TSS) by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDG 320-127316-1 (Revision 1).

Samples included in this review are listed below:

- INF-COMP-202511
- EFF-G-202511

Each sample was analyzed for one or more of the following constituents.

Analyte Group	Method
PFAS (40 Analytes)	EPA Method 1633A
TSS*	EPA Method 1633 TSS

Notes:

* The laboratory does not hold Wisconsin accreditation for TSS.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page, case narrative, and/or sample receiving notes;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;

- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The revised data package was found to be complete as received from the laboratory. The data package was revised to include elevated quantitation limits (QLs) for PFBA and PFPeA in sample EFF-G-202511 due to matrix interferences.
- TSS analysis was not requested on the chain-of-custody (COC) for sample INF-COMP-202511. This analysis was added per a request from TRC. The laboratory does not hold Wisconsin accreditation for this analysis; however, no validation action was taken on this basis as the result was for internal use only.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - Sample INF-COMP-202511 was not shipped to the laboratory until one day after collection. The sample was stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.

- A method blank was analyzed with each analytical batch. Target analytes were not detected in the method blanks.
- All samples were extracted and analyzed within the holding time, with the following exceptions.
 - Samples INF-COMP-202511 and EFF-G-202511 were extracted for PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive result for NMeFOSE in sample INF-COMP-202511 was qualified as estimated (J); no direction of bias was applied since this result was also qualified as estimated (J) by the laboratory due to a detection < the QL. The nondetect results for NMeFOSE in sample EFF-G-202511, and NEtFOSE in samples INF-COMP-202511 and EFF-G-202511 were qualified as estimated (UJ).
 - The positive results for NMeFOSAA in samples INF-COMP-202511 and EFF-G-202511 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to a detection <QL. No qualification was required for NEtFOSAA in samples INF-COMP-202511 and EFF-G-202511 since this analyte was not detected in these samples.
- The LCS (including low-level LCS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), as applicable, for all analytes were within the method acceptance limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The following table summarizes the EIS %Rs that were outside of the method acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action
INF-COMP-202511	13C5 PFHxA	6.28	40-130	The positive result for 5:3 FTCA was qualified as estimated (J) and the nondetect results for PFHxA, NFDHA, PFEESA, and 7:3 FTCA were qualified as estimated (UJ) in sample INF-COMP-202511.
	13C4 PFHpA	29.3		The nondetect results for PFHpA, PFBS, 4:2 FTS, HFPO-DA, ADONA, 9Cl-PF3ONS, and 11Cl-PF3OUdS were qualified as estimated (UJ) in sample INF-COMP-202511.
	13C3 PFBS	24.4	40-135	
	13C2 4:2 FTS	7.10	40-200	
	13C3 HFPO-DA	6.99	40-130	

- A field duplicate pair was not collected with this data set.
- A laboratory duplicate analysis was not performed on a sample from this data set.

- The laboratory noted the following observations in the case narrative. No validation actions were taken on this basis.
 - Samples INF-COMP-202511 and EFF-G-202511 contained particulates, were discolored prior to extraction, and yielded discolored extracts.
 - Sample INF-COMP-202511 was initially prepared using project-specified instructions due to elevated TSS. The sample was fortified with EIS, equilibrated, and centrifuged. The aqueous phase was separated and then extracted using solid phase extraction (SPE). The solid residue was then rinsed with solvent (basic methanol) and the resulting methanolic extract was added to the aqueous phase prior to SPE, such that the final extract represents the combined contribution of both solid and aqueous fractions. The final combined extract underwent analysis.
- Sample INF-COMP-202511 was re-extracted at a reduced volume (i.e., subsampled for extraction) due to excessively low %Rs of the EIS compounds 13C4-PFBA and 13C5-PFPeA in the original extraction. The laboratory extracted 12.5 mL of sample rather than the typical 150 mL. Therefore, the nondetect results for PFBA, PFPeA, PFMPA, PFMBA, and 3:3 FTCA in sample INF-COMP-202511 were qualified as estimated (UJ) due to subsampling; QLs were elevated accordingly. No analytical dilutions were performed on the samples in this data set.
- The laboratory noted in the case narrative and through the use of “G” qualifiers that sample EFF-G-202511 had matrix interferences that required elevation of the QLs for PFBA and PFPeA in this sample. The QLs and method detection limits (MDLs) were raised by the laboratory to be equal to the matrix interference. No validation action was taken on this basis.
- The results for the following PFAS in the sample listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the sample listed below were qualified as estimated (J).
 - PFPeS and 5:3 FTCA in sample EFF-G-202511*.
- * These results were also qualified as estimated (J) by the laboratory due to detection < the QL.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narrative. No validation actions were taken on this basis since the actual CCV results were not provided for review.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: INF-COMP-202511

Lab Sample ID: 320-127316-1

Date Collected: 11/10/25 23:59

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633 TSS - Total Suspended Solids

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	490		50	50	mg/L			12/02/25 16:25	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND	UJ	1.6	0.22	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoroheptanoic acid (PFHpA)	ND	UJ	1.6	0.28	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorooctanoic acid (PFOA)	5.4		1.6	0.32	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.37	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.47	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.66	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorobutanesulfonic acid (PFBS)	ND	UJ	1.6	0.44	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.17	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorohexanesulfonic acid (PFHxS)	6.8		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorooctanesulfonic acid (PFOS)	4.8		1.6	0.23	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.25	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.25	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.43	ng/L		11/21/25 05:31	11/21/25 18:28	1
4:2 FTS	ND	UJ	3.3	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
6:2 FTS	0.88	J	3.3	0.33	ng/L		11/21/25 05:31	11/21/25 18:28	1
8:2 FTS	ND		3.3	0.73	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.31	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.1	J J	1.6	0.29	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.8	J J	8.2	1.9	ng/L		11/21/25 05:31	11/21/25 18:28	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.2	2.0	ng/L		11/21/25 05:31	11/21/25 18:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	UJ	1.2	0.32	ng/L		11/21/25 05:31	11/21/25 18:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	UJ	1.6	0.33	ng/L		11/21/25 05:31	11/21/25 18:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	△+ UJ	1.6	0.59	ng/L		11/21/25 05:31	11/21/25 18:28	1
9Cl-PF3ONS	ND	UJ	1.6	0.47	ng/L		11/21/25 05:31	11/21/25 18:28	1
11Cl-PF3OUdS	ND	UJ	1.6	0.24	ng/L		11/21/25 05:31	11/21/25 18:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND	UJ	1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:28	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	29	J	8.2	1.4	ng/L		11/21/25 05:31	11/21/25 18:28	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: INF-COMP-202511

Lab Sample ID: 320-127316-1

Date Collected: 11/10/25 23:59

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND	UJ	8.2	1.0	ng/L		11/21/25 05:31	11/21/25 18:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C5 PFHxA	6.28	*5-	40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C4 PFHpA	29.3	*5-	40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C8 PFOA	72.7		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C9 PFNA	88.7		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C6 PFDA	91.0		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C7 PFUnA	80.4		30 - 130				11/21/25 05:31	11/21/25 18:28	1
13C2 PFDoA	68.1		10 - 130				11/21/25 05:31	11/21/25 18:28	1
13C2 PFTeDA	54.5		10 - 130				11/21/25 05:31	11/21/25 18:28	1
13C3 PFBS	24.4	*5-	40 - 135				11/21/25 05:31	11/21/25 18:28	1
13C3 PFHxS	74.8		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C8 PFOS	91.3		40 - 130				11/21/25 05:31	11/21/25 18:28	1
13C8 FOSA	78.1		40 - 130				11/21/25 05:31	11/21/25 18:28	1
D3-NMeFOSAA	54.6		40 - 170				11/21/25 05:31	11/21/25 18:28	1
D5-NEtFOSAA	27.4		25 - 135				11/21/25 05:31	11/21/25 18:28	1
13C2 4:2 FTS	7.10	*5-	40 - 200				11/21/25 05:31	11/21/25 18:28	1
13C2 6:2 FTS	134		40 - 200				11/21/25 05:31	11/21/25 18:28	1
13C2 8:2 FTS	119		40 - 300				11/21/25 05:31	11/21/25 18:28	1
13C3 HFPO-DA	6.99	*5-	40 - 130				11/21/25 05:31	11/21/25 18:28	1
D7-NMeFOSE	32.4		10 - 130				11/21/25 05:31	11/21/25 18:28	1
D9-NEtFOSE	45.4		10 - 130				11/21/25 05:31	11/21/25 18:28	1
D5-NEtFOSA	23.4		10 - 130				11/21/25 05:31	11/21/25 18:28	1
D3-NMeFOSA	65.7		10 - 130				11/21/25 05:31	11/21/25 18:28	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	UJ	40	3.7	ng/L		12/04/25 04:11	12/04/25 15:49	1
Perfluoropentanoic acid (PFPeA)	ND	UJ	20	2.3	ng/L		12/04/25 04:11	12/04/25 15:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	UJ	20	1.9	ng/L		12/04/25 04:11	12/04/25 15:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	UJ	20	2.6	ng/L		12/04/25 04:11	12/04/25 15:49	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND	UJ	40	7.2	ng/L		12/04/25 04:11	12/04/25 15:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	110		5 - 130				12/04/25 04:11	12/04/25 15:49	1
13C5 PFPeA	64.5		40 - 130				12/04/25 04:11	12/04/25 15:49	1

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	G	4.1	4.1	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoropentanoic acid (PFPeA)	ND	G	14	14	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorohexanoic acid (PFHxA)	11		1.6	0.21	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoroheptanoic acid (PFHpA)	1.7		1.6	0.27	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorooctanoic acid (PFOA)	7.7		1.6	0.31	ng/L		11/21/25 05:31	11/21/25 18:45	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	0.68	J	1.6	0.36	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorodecanoic acid (PFDA)	0.58	J	1.6	0.35	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.45	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.6	0.64	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.6	0.42	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoropentanesulfonic acid (PFPeS)	0.47	J I J	1.6	0.17	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.6	0.19	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.6	0.14	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorooctanesulfonic acid (PFOS)	3.1		1.6	0.22	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.24	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.24	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.6	0.42	ng/L		11/21/25 05:31	11/21/25 18:45	1
4:2 FTS	ND		3.2	0.34	ng/L		11/21/25 05:31	11/21/25 18:45	1
6:2 FTS	ND		3.2	0.32	ng/L		11/21/25 05:31	11/21/25 18:45	1
8:2 FTS	ND		3.2	0.71	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.18	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.6	0.30	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.6	0.35	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.71	J J	1.6	0.28	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.35	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	7.9	1.8	ng/L		11/21/25 05:31	11/21/25 18:45	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	7.9	1.9	ng/L		11/21/25 05:31	11/21/25 18:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.2	0.31	ng/L		11/21/25 05:31	11/21/25 18:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.6	0.32	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.6	0.15	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	△	1.6	0.57	ng/L		11/21/25 05:31	11/21/25 18:45	1
9CI-PF3ONS	ND		1.6	0.46	ng/L		11/21/25 05:31	11/21/25 18:45	1
11CI-PF3OUdS	ND		1.6	0.23	ng/L		11/21/25 05:31	11/21/25 18:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.6	0.20	ng/L		11/21/25 05:31	11/21/25 18:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.2	0.57	ng/L		11/21/25 05:31	11/21/25 18:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.6	J I J	7.9	1.4	ng/L		11/21/25 05:31	11/21/25 18:45	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-127316-1

Client Sample ID: EFF-G-202511

Lab Sample ID: 320-127316-2

Date Collected: 11/11/25 07:08

Matrix: Water

Date Received: 11/12/25 09:10

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		7.9	0.98	ng/L		11/21/25 05:31	11/21/25 18:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.8		5 - 130				11/21/25 05:31	11/21/25 18:45	1
13C5 PFPeA	62.1		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C5 PFHxA	87.4		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C4 PFHpA	84.7		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C8 PFOA	99.8		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C9 PFNA	103		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C6 PFDA	98.2		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C7 PFUnA	94.4		30 - 130				11/21/25 05:31	11/21/25 18:45	1
13C2 PFDoA	83.0		10 - 130				11/21/25 05:31	11/21/25 18:45	1
13C2 PFTeDA	51.9		10 - 130				11/21/25 05:31	11/21/25 18:45	1
13C3 PFBS	96.7		40 - 135				11/21/25 05:31	11/21/25 18:45	1
13C3 PFHxS	101		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C8 PFOS	101		40 - 130				11/21/25 05:31	11/21/25 18:45	1
13C8 FOSA	88.1		40 - 130				11/21/25 05:31	11/21/25 18:45	1
D3-NMeFOSAA	90.1		40 - 170				11/21/25 05:31	11/21/25 18:45	1
D5-NEtFOSAA	84.4		25 - 135				11/21/25 05:31	11/21/25 18:45	1
13C2 4:2 FTS	174		40 - 200				11/21/25 05:31	11/21/25 18:45	1
13C2 6:2 FTS	151		40 - 200				11/21/25 05:31	11/21/25 18:45	1
13C2 8:2 FTS	127		40 - 300				11/21/25 05:31	11/21/25 18:45	1
13C3 HFPO-DA	77.5		40 - 130				11/21/25 05:31	11/21/25 18:45	1
D7-NMeFOSE	85.2		10 - 130				11/21/25 05:31	11/21/25 18:45	1
D9-NEtFOSE	74.4		10 - 130				11/21/25 05:31	11/21/25 18:45	1
D5-NEtFOSA	72.5		10 - 130				11/21/25 05:31	11/21/25 18:45	1
D3-NMeFOSA	75.7		10 - 130				11/21/25 05:31	11/21/25 18:45	1

December 2025

Data Quality and Usability Review – December 2025

Data Reviewer: Jessica Esser

Peer Reviewer: Kristen Morin

Date: 1/14/2025

Madison Metropolitan Sewerage District (MMSD) collected influent, effluent, and biosolids samples at the Nine Springs wastewater treatment plant on December 8 and 9, 2025 as part of ongoing monitoring activities conducted by TRC. Samples were analyzed for 40 per- and polyfluoroalkyl substances (PFAS) and total oxidizable precursor (TOP) assay PFAS by Eurofins in West Sacramento, California. The laboratory analytical results were reported in laboratory SDGs 320-128161-1 and 320-128161-2.

Samples included in this review are listed below:

- BIO-A-24-202512
- BIO-A-25-202512
- BIO-B-202512
- EFF-G-202512
- INF-02-202512
- INF-07-202512
- INF-08-202512
- INF-11-202512
- INF-18-202512
- INF-Comp-202512
- EB-01-202512
- EB-02-202512

Each sample was analyzed for one or more of the following constituents.

Analyte Group	Method
PFAS (40 Analytes)	EPA Method 1633A
PFAS TOP Assay (40 Analytes)*	Modified EPA Method 537 and laboratory SOP using Isotope Dilution/WI Method Criteria
Total Solids*	EPA Method 1633

Notes:

* The laboratory does not hold Wisconsin accreditation for the full list of PFAS analytes reported by TOP Assay or total solids.

TRC performed a limited validation of the laboratory data to assess data usability. The following sections summarize the data validation procedure and the results of the validation.

Data Usability Review Procedure

The analytical data were reviewed using the USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018, USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA 542-R-20-007), November 2020, Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations, Document # EA-19-0001, WDNR, December 2019¹, and EPA Method 1633A as guidance for data review. EPA 910-R-18-001 applies to method 537 and drinking water matrices only but the guidance can be applied in part

¹ The Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations were used to evaluate the TOP assay data only since the laboratory did not analyze the TOP assay samples using EPA Method 1633A.

or in whole to evaluate data in non-drinking water matrices. The following items were specifically included in the evaluation of the data:

- Data completeness;
- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Data for method blanks, equipment blanks, and field blanks, when collected. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) (including low-level LCSs for PFAS) and laboratory control sample duplicates (LCSDs), when performed (referred to as on-going precision and recovery [OPR] standards in EPA method 1633A). The LCSs and/or LCSDs are used to assess the accuracy and precision of the analytical method using a clean matrix;
- Percent recoveries for matrix spike (MS) and matrix spike duplicate (MSD), when performed on project samples. The MS/MSDs are used to assess accuracy and precision bias due to sample matrix effects;
- Percent recoveries for extracted internal standards (EIS). Percent recoveries are calculated for each EIS and used to assess the accuracy of the extraction procedure and bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates, when collected. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances, and issues identified in this evaluation are noted below.

- The reviewed PFAS data will be utilized for the purposes of ongoing monitoring activities.
- The issues noted in the quality assurance (QA)/QC sample summary below have a minor impact on the data usability.

QA/QC Sample Summary

- The data packages were found to be complete as received from the laboratory.
- The total solids analyses and select PFAS-TOP assay analytes were performed by the laboratory without Wisconsin certification. There is no adverse impact on the data usability due to this issue. No validation actions were taken on this basis.
- The cooler temperature upon receipt at the laboratory was within the acceptance criteria (0-6°C).
 - All samples in this data set, with the exception of sample EFF-G-202512, were not shipped to the laboratory until one day after collection. The samples were stored in a walk-in cooler at the site before being transferred into a cooler with ice for shipment to the laboratory. No validation actions were required on this basis since the samples were either kept refrigerated or in coolers, on ice, prior to delivery to the laboratory and were received at an acceptable temperature by the laboratory.
- A method blank was analyzed with each analytical batch for PFAS (total and TOP assay). The following table summarizes the compounds detected in the method blanks, the associated samples, and the validation actions.

Blank ID	Compound	Blank Concentration	Validation Action
MB 320-892893/1-A (post-TOP assay)	PFBA	0.745 J ug/kg	No validation actions were required on this basis since the results for PFBA and PFPeA were >10x the blank concentration in the post-TOP assay analyses of the associated samples.
	PFPeA	0.279 J ug/kg	
Associated samples: BIO-A-24-202512, BIO-A-25-202512, BIO-B-202512			
MB 320-893005/1-A (post-TOP assay)	PFBA	4.38 J ng/L	The positive post-TOP assay result for PFBA in sample EFF-G-202512 was qualified as estimated (J+) with a potential high bias since the result was > the QL and <10x the blank concentration.
	PFOS	1.89 J ng/L	The positive post-TOP assay result for PFOS in sample EFF-G-202512 was qualified as an estimated nondetect (UJ) at the reported concentration since the result was ≤ the QL.
Associated sample: EFF-G-202512			

- Two equipment blanks (EB-01-202512 and EB-02-202512) were collected and analyzed for total PFAS. No target compounds were detected in the equipment blanks.
- All samples were extracted and/or prepared and analyzed within the holding time, with the following exceptions.
 - Samples INF-02-202512, INF-07-202512, INF-08-202512, INF-11-202512, INF-18-202512, INF-Comp-202512, EFF-G-202512, EB01-202512, and EB02-202512 were extracted for total PFAS >7 days but <28 days after collection. Results were qualified as follows:
 - The positive results for total NMeFOSE in samples INF-07-202512 and INF-11-202512 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to detection <QL. The nondetect results for total NMeFOSE in samples EFF-G-202512, INF-02-202512, INF-08-202512, INF-18-202512, INF-Comp-202512, EB-01-202512, and EB-02-202512 and total NEtFOSE in samples EFF-G-202512, INF-02-202512, INF-07-202512, INF-08-202512, INF-11-202512, INF-18-202512, INF-Comp-202512, EB-01-202512, and EB-02-202512 were qualified as estimated (UJ).

- The positive results for total NMeFOSAA in samples EFF-G-202512, INF-07-202512, INF-08-202512, INF-11-202512, INF-18-202512, and INF-Comp-202512 and total NEtFOSAA in samples EFF-G-202512, INF-02-202512, INF-07-202512, INF-08-202512, INF-18-202512, and INF-Comp-202512 were qualified as estimated (J); no direction of bias was applied since these results were also qualified as estimated (J) by the laboratory due to detection <QL. No qualification was required for total NMeFOSAA in samples INF-02-202512, EB-01-202512, and EB-02-202512 and total NEtFOSAA in samples INF-11-202512, EB-01-202512, and EB-02-202512 since these analytes were not detected in these samples.
- The LCS (including low-level LCS for method 1633A PFAS) and LCSD percent recoveries (%Rs) and relative percent differences (RPDs), where applicable, for all analytes were within the acceptance limits except as noted in the table below. Note that the laboratory's acceptance limits for TOP assay LCS/LCSDs are different than those specified in the WI Method Criteria; the laboratory's acceptance limits are listed below but the WI Method Criteria (60-135%) were also considered in the evaluation of the data.

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	LCS/ LCSD RPDs	LCS/LCSD/ RPD Limits	Validation Actions
-/LCSD 320-893003/3-A (pre-TOP assay)	PFDoS	-/49	-	59-142/-	Professional judgement was used and the nondetect result for pre-TOP assay PFDoS was qualified as estimated (UJ) in the associated sample. See Additional note below.
	11Cl-PF3OUdS	-/64	-	70-142/-	Professional judgement was used and no validation actions were taken on this basis since this compound recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
LCS 320-893005/2-A/ LCSD 320-893005/3-A (post-TOP assay)	PFTTrDA	-/66	42	85-145/30	Professional judgement was used and no validation actions were taken on this basis since these compounds recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135% and these compounds were not detected in the associated sample. See Additional note below.
	PFTTeDA	-/70	51	72-132/30	
	PFNS	-/70	-	79-139/-	
	PFDS	-/59	41	71-131/30	Professional judgement was used and the nondetect results for post-TOP assay PFDS, PFDoS, and 11Cl-PF3OUdS were qualified as estimated (UJ) in the associated sample. See Additional note below.
	PFDoS	-/37	55	52-139/30	
	11Cl-PF3OUdS	-/26	58	45-105/30	Professional judgement was used and the positive results for post-TOP assay PFPeA, PFHxA, and PFOA were qualified as estimated (J) in the associated sample. See Additional note below.
	PFPeA	223/228	-	151-208/-	
	PFHxA	330/281	-	194-269/-	
	PFOA	521/-	-	351-490/-	No validation action was required on this basis since post-TOP assay PFNA, HFPO-DA, and PFMPA were not detected in the associated sample.
	PFNA	232/-	-	145-205/-	
	HFPO-DA	118/113	-	52-112/-	
	PFMPA	-/176	-	111-174/-	
Associated sample: EFF-G-202512					

LCS/LCSD ID	Compound	LCS/ LCSD %Rs	LCS/ LCSD RPDs	LCS/LCSD/ RPD Limits	Validation Actions
-/LCSD 320-892887/3-A (pre-TOP assay)	PFDoS	-/63	-	70-130/-	Professional judgement was used and no validation actions were taken on this basis since these compounds recovered within the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. See Additional note below.
LCS 320-892893/2-A LCSD 320-892893/3-A (post-TOP assay)	9Cl-PF3ONS	72/69	-	74-134/-	Professional judgement was used and the nondetect results for post-TOP assay PFDS, PFDoS, and 11Cl-PF3OUdS were qualified as estimated (UJ) in the associated samples. See Additional note below.
	PFDS	-/52	-	66-126/-	
	PFDoS	45/44	-	47-107/-	
	11Cl-PF3OUdS	35/32	-	46-106/-	Professional judgement was used and the positive results for post-TOP assay PFPeA and PFHxA were qualified as estimated (J) in the associated samples. See Additional note below.
	PFPeA	260/228	-	159-221/-	
	PFHxA	272/287	-	208-257/-	No validation action was required on this basis since post-TOP assay PFMPA was not detected in the associated samples.
	PFMPA	185/186	-	112-172/-	
Associated samples: BIO-A-24-202512, BIO-A-25-202512, BIO-B-202512					
-: Met criteria					

Additional Note:

The laboratory has previously stated that enhanced post-TOP assay LCS/LCSD %Rs for the perfluoroalkyl carboxylic acids [PFCAs] (i.e., PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFNA, and PFDA) is consistent with the expected oxidation of precursor analytes. The laboratory uses elevated %R acceptance limits to account for this expected oxidation; therefore, the post-TOP assay LCS/LCSD %Rs for the PFCAs were evaluated against the laboratory's limits only and were not evaluated against the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%. If post-TOP assay LCS/LCSD %Rs of the PFCA compounds exceed the elevated laboratory limits, professional judgement is used and samples are qualified as estimated without a direction of bias (J). It should also be noted that the laboratory stated in the case narrative that zero %R of precursor analytes (i.e., 3:3 FTCA, 5:3 FTCA, 7:3 FTCA, ADONA, 4:2 FTS, 6:2 FTS, 8:2 FTS, PFOSA, NMeFOSAA, NEtFOSAA, NEtFOSA, NMeFOSA, NMeFOSE, and NEtFOSE) is also expected in the post-TOP assay due to the oxidation of these compounds during the TOP Assay procedure; %Rs ≤ 10% were observed for the listed precursors. No validation actions were taken on this basis. Post-TOP assay LCS/LCSD %Rs for other PFAS were evaluated against both the laboratory's limits and the applicable Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations acceptance limits of 60-135%.

- MS/MSD analyses were not performed on a sample from this data set.
- The reverse surrogate (M2-4:2 FTS) was within the laboratory's acceptance limits (0-10%) in the post-TOP assay analyses. The following table summarizes the remaining EIS %Rs that were outside of the laboratory's acceptance limits, the associated samples, and the validation actions.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-02-202512 (total PFAS)	D3-NMeFOSAA	28.8	40-170	The nondetect result for total NMeFOSAA was qualified as estimated (UJ) in sample INF-02-202512.
	13C2 4:2 FTS	217	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-02-202512.
	13C2 6:2 FTS	225		The positive result for total 6:2 FTS was qualified as estimated (J) in sample INF-02-202512.

Sample ID	EIS	%R	%R Acceptance Limits	Validation Action*
INF-07-202512 (total PFAS)	D3- NMeFOSAA	36.2	40-170	The positive results for total NMeFOSAA were qualified as estimated (J) in samples INF-07-202512, INF-08-202512, INF-11-202512, and INF-18-202512.
INF-08-202512 (total PFAS)		37.2		
INF-11-202512 (total PFAS)		35.9		
INF-18-202512 (total PFAS)	D3- NMeFOSAA	39.2	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-18-202512.
	13C2 4:2 FTS	247		
INF-Comp-202512 (total PFAS)	D3- NMeFOSAA	37.3	40-170	The positive result for total NMeFOSAA was qualified as estimated (J) in sample INF-Comp-202512.
	13C2 4:2 FTS	222	40-200	No validation action was required on this basis since total 4:2 FTS was not detected in sample INF-Comp-202512.
BIO-A-25-202512 (total PFAS-reanalysis)	13C2 PFDaA	33.5	40-130	The positive result for total PFTTrDA was qualified as estimated (J) in the reanalysis of sample BIO-A-25-202512. No validation action was required on this basis for total PFDaA since this compound was not reported from the reanalysis of sample BIO-A-25-202512.
BIO-A-24-202512 (total PFAS-original analysis)	D5- NEtFOSAA	33.2	40-150	The positive result for total NEtFOSAA was qualified as estimated (J) in the original analysis of sample BIO-A-25-202512.
BIO-A-24-202512 (total PFAS-reanalysis)	13C2 PFDaA	31.6	40-130	The positive result for total PFTTrDA was qualified as estimated (J) in the reanalysis of sample BIO-A-24-202512. No validation action was required on this basis for total PFDaA since this compound was not reported from the reanalysis of sample BIO-A-24-202512.
	13C2 4:2 FTS	168	40-165	No validation action was required on this basis since total 4:2 FTS was not detected in the reanalysis of sample BIO-A-24-202512.
BIO-B-202512 (total PFAS-reanalysis)	13C2 PFDaA	37.7	40-130	The positive result for total PFTTrDA was qualified as estimated (J) in the reanalysis of sample BIO-B-202512. No validation action was required on this basis for total PFDaA since this compound was not reported from the reanalysis of sample BIO-B-202512.
	13C2 4:2 FTS	179	40-165	No validation action was required on this basis since total 4:2 FTS was not detected in the reanalysis of sample BIO-B-202512.
EFF-G-202512 (pre-TOP assay)	D9-NEtFOSE	24	25-150	The nondetect result for pre-TOP assay NEtFOSE was qualified as estimated (UJ) in sample EFF-G-202512.
BIO-B-202512 (pre-TOP assay)	13C2 8:2 FTS	160	25-150	No validation action was required on this basis since pre-TOP assay 8:2 FTS was not detected in sample BIO-B-202512.

Notes:

* Select results were also qualified as estimated (J) by the laboratory due to detection < the QL.

- A field duplicate pair was not collected with this data set.
- A laboratory duplicate analysis was not performed on a sample from this data set.
- The laboratory noted the following observations in the case narrative for the PFAS analyses. No validation actions were taken on the basis of these observations.
 - Samples INF-02-202512, INF-07-202512, INF-08-202512, INF-11-202512, INF-18-202512, and INF-Comp-202512 had particulates present in the bottles prior to extraction and were discolored prior to and following extraction for total PFAS. These samples were prepared using project-specified instructions. The samples were fortified with EIS, equilibrated, and centrifuged. The aqueous phase was separated and then extracted using solid phase extraction (SPE). A rinse of the solid residue using basic methanol was added to the aqueous sample prior to SPE, such that the final extract represents the combined contribution of both solid and aqueous fractions.
 - Sample EFF-G-202512 was discolored prior to and following extraction for pre-TOP assay and post-TOP assay PFAS.
 - Samples BIO-A-24-202512, BIO-A-25-202512, and BIO-B-202512 were discolored prior to extraction and yielded discolored and foamy extracts for total PFAS. Samples BIO-A-24-202512, BIO-A-25-202512, and BIO-B-202512 also yielded discolored extracts for pre-TOP assay and post-TOP assay PFAS.
- No dilutions were performed on the samples in this data set.
- The results for the following PFAS in the samples listed below were flagged with an “I” by the laboratory indicating that the ion transition ratio did not meet the acceptance limits; thus, the positive results for the listed PFAS in the samples listed below were qualified as estimated (J).
 - Total PFNA in samples INF-02-202512*, INF-07-202512*, and BIO-B-202512*;
 - Total PFPeS in samples INF-02-202512*, INF-07-202512*, INF-08-202512*, INF-11-202512*, and INF-Comp-202512*;
 - Total PFOS in samples INF-02-202512, INF-08-202512, INF-11-202512, INF-18-202512, and INF-Comp-202512; and
 - Pre-TOP assay PFOS in sample BIO-B-202512*.

* This result was also qualified as estimated (J) by the laboratory due to detection < the QL.
- The percent moisture for samples BIO-A-24-202512, BIO-A-25-202512, and BIO-B-202512 were high (>70% moisture). The laboratory has been contacted during previous rounds of validation review regarding this issue and stated that biosolids samples are agitated and then immediately aliquoted for extraction after agitation, indicating that a representative sample is extracted for PFAS analysis. No validation actions were taken on this basis.
- The laboratory noted select continuing calibration verification (CCV) nonconformances in the case narrative of SDGs 320-128161-1 and 320-128161-2. No validation actions were taken on this basis since the actual CCV results were not provided for review.

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-02-202512

Lab Sample ID: 320-128161-1

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.5	J	3.6	0.34	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoropentanoic acid (PFPeA)	2.6		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoroheptanoic acid (PFHpA)	0.90	J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorooctanoic acid (PFOA)	2.7		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorononanoic acid (PFNA)	0.53	J I J	1.8	0.41	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.73	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorobutanesulfonic acid (PFBS)	1.9		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoropentanesulfonic acid (PFPeS)	0.67	J I J	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorooctanesulfonic acid (PFOS)	5.8	I J	1.8	0.25	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 09:53	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
6:2 FTS	0.63	J J	3.6	0.37	ng/L		12/29/25 04:56	12/30/25 09:53	1
8:2 FTS	ND		3.6	0.81	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	U J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.70	J J	1.8	0.40	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	U J	9.1	2.1	ng/L		12/29/25 04:56	12/30/25 09:53	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	9.1	2.2	ng/L		12/29/25 04:56	12/30/25 09:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.35	ng/L		12/29/25 04:56	12/30/25 09:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 09:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 09:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.65	ng/L		12/29/25 04:56	12/30/25 09:53	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 09:53	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 09:53	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-02-202512

Lab Sample ID: 320-128161-1

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 09:53	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.65	ng/L		12/29/25 04:56	12/30/25 09:53	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 09:53	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.1	1.1	ng/L		12/29/25 04:56	12/30/25 09:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	95.4		5 - 130				12/29/25 04:56	12/30/25 09:53	1
13C5 PFPeA	80.7		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C5 PFHxA	96.9		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C4 PFHpA	87.9		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C8 PFOA	93.3		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C9 PFNA	87.5		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C6 PFDA	76.5		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C7 PFUnA	42.6		30 - 130				12/29/25 04:56	12/30/25 09:53	1
13C2 PFDoA	28.0		10 - 130				12/29/25 04:56	12/30/25 09:53	1
13C2 PFTeDA	43.2		10 - 130				12/29/25 04:56	12/30/25 09:53	1
13C3 PFBS	94.5		40 - 135				12/29/25 04:56	12/30/25 09:53	1
13C3 PFHxS	98.2		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C8 PFOS	72.4		40 - 130				12/29/25 04:56	12/30/25 09:53	1
13C8 FOSA	44.0		40 - 130				12/29/25 04:56	12/30/25 09:53	1
D3-NMeFOSAA	28.8	*5-	40 - 170				12/29/25 04:56	12/30/25 09:53	1
D5-NEtFOSAA	43.3		25 - 135				12/29/25 04:56	12/30/25 09:53	1
13C2 4:2 FTS	217	*5+	40 - 200				12/29/25 04:56	12/30/25 09:53	1
13C2 6:2 FTS	225	*5+	40 - 200				12/29/25 04:56	12/30/25 09:53	1
13C2 8:2 FTS	210		40 - 300				12/29/25 04:56	12/30/25 09:53	1
13C3 HFPO-DA	97.2		40 - 130				12/29/25 04:56	12/30/25 09:53	1
D7-NMeFOSE	23.1		10 - 130				12/29/25 04:56	12/30/25 09:53	1
D9-NEtFOSE	20.5		10 - 130				12/29/25 04:56	12/30/25 09:53	1
D5-NEtFOSA	25.9		10 - 130				12/29/25 04:56	12/30/25 09:53	1
D3-NMeFOSA	26.0		10 - 130				12/29/25 04:56	12/30/25 09:53	1

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	19		3.6	0.34	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoropentanoic acid (PFPeA)	4.4		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorohexanoic acid (PFHxA)	11		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoroheptanoic acid (PFHpA)	2.1		1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorooctanoic acid (PFOA)	6.3		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorononanoic acid (PFNA)	0.87	J I J	1.8	0.41	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.74	ng/L		12/29/25 04:56	12/30/25 10:09	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	9.4		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoropentanesulfonic acid (PFPeS)	0.76	J I J	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorohexanesulfonic acid (PFHxS)	5.7		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorooctanesulfonic acid (PFOS)	3.5		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 10:09	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
6:2 FTS	1.1	J	3.6	0.37	ng/L		12/29/25 04:56	12/30/25 10:09	1
8:2 FTS	ND		3.6	0.82	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	J J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.88	J J	1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.4	J J	9.1	2.1	ng/L		12/29/25 04:56	12/30/25 10:09	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	9.1	2.2	ng/L		12/29/25 04:56	12/30/25 10:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.35	ng/L		12/29/25 04:56	12/30/25 10:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.65	ng/L		12/29/25 04:56	12/30/25 10:09	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 10:09	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:09	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.85	J	3.6	0.65	ng/L		12/29/25 04:56	12/30/25 10:09	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	70		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 10:09	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	4.2	J	9.1	1.1	ng/L		12/29/25 04:56	12/30/25 10:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99.7		5 - 130				12/29/25 04:56	12/30/25 10:09	1
13C5 PFPeA	96.7		40 - 130				12/29/25 04:56	12/30/25 10:09	1
13C5 PFHxA	96.0		40 - 130				12/29/25 04:56	12/30/25 10:09	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-07-202512

Lab Sample ID: 320-128161-2

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	89.7		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C8 PFOA	92.8		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C9 PFNA	93.3		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C6 PFDA	88.9		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C7 PFUnA	53.9		30 - 130	12/29/25 04:56	12/30/25 10:09	1
13C2 PFDoA	37.3		10 - 130	12/29/25 04:56	12/30/25 10:09	1
13C2 PFTeDA	46.4		10 - 130	12/29/25 04:56	12/30/25 10:09	1
13C3 PFBS	96.1		40 - 135	12/29/25 04:56	12/30/25 10:09	1
13C3 PFHxS	97.6		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C8 PFOS	80.6		40 - 130	12/29/25 04:56	12/30/25 10:09	1
13C8 FOSA	65.4		40 - 130	12/29/25 04:56	12/30/25 10:09	1
D3-NMeFOSAA	36.2	*5-	40 - 170	12/29/25 04:56	12/30/25 10:09	1
D5-NEtFOSAA	48.5		25 - 135	12/29/25 04:56	12/30/25 10:09	1
13C2 4:2 FTS	193		40 - 200	12/29/25 04:56	12/30/25 10:09	1
13C2 6:2 FTS	155		40 - 200	12/29/25 04:56	12/30/25 10:09	1
13C2 8:2 FTS	186		40 - 300	12/29/25 04:56	12/30/25 10:09	1
13C3 HFPO-DA	84.8		40 - 130	12/29/25 04:56	12/30/25 10:09	1
D7-NMeFOSE	37.5		10 - 130	12/29/25 04:56	12/30/25 10:09	1
D9-NEtFOSE	32.7		10 - 130	12/29/25 04:56	12/30/25 10:09	1
D5-NEtFOSA	37.1		10 - 130	12/29/25 04:56	12/30/25 10:09	1
D3-NMeFOSA	39.4		10 - 130	12/29/25 04:56	12/30/25 10:09	1

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.2		3.6	0.33	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoropentanoic acid (PFPeA)	3.0		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorohexanoic acid (PFHxA)	3.5		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoroheptanoic acid (PFHpA)	0.87	J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorooctanoic acid (PFOA)	2.2		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.72	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorobutanesulfonic acid (PFBS)	1.8		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoropentanesulfonic acid (PFPeS)	0.78	J I J	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorohexanesulfonic acid (PFHxS)	3.1		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorooctanesulfonic acid (PFOS)	2.0	I J	1.8	0.25	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 10:26	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.47	ng/L		12/29/25 04:56	12/30/25 10:26	1
4:2 FTS	ND		3.6	0.39	ng/L		12/29/25 04:56	12/30/25 10:26	1
6:2 FTS	ND		3.6	0.36	ng/L		12/29/25 04:56	12/30/25 10:26	1
8:2 FTS	ND		3.6	0.80	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.34	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	J J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	J J	1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	9.0	2.0	ng/L		12/29/25 04:56	12/30/25 10:26	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	9.0	2.2	ng/L		12/29/25 04:56	12/30/25 10:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.35	ng/L		12/29/25 04:56	12/30/25 10:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.64	ng/L		12/29/25 04:56	12/30/25 10:26	1
9CI-PF3ONS	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 10:26	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:26	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.64	ng/L		12/29/25 04:56	12/30/25 10:26	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.0	J	9.0	1.5	ng/L		12/29/25 04:56	12/30/25 10:26	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.0	1.1	ng/L		12/29/25 04:56	12/30/25 10:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	98.0		5 - 130	12/29/25 04:56	12/30/25 10:26	1
13C5 PFPeA	100		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C5 PFHxA	97.8		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C4 PFHpA	85.7		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C8 PFOA	90.7		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C9 PFNA	87.2		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C6 PFDA	83.8		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C7 PFUnA	52.5		30 - 130	12/29/25 04:56	12/30/25 10:26	1
13C2 PFDoA	37.6		10 - 130	12/29/25 04:56	12/30/25 10:26	1
13C2 PFTeDA	45.3		10 - 130	12/29/25 04:56	12/30/25 10:26	1
13C3 PFBS	88.6		40 - 135	12/29/25 04:56	12/30/25 10:26	1
13C3 PFHxS	96.1		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C8 PFOS	81.5		40 - 130	12/29/25 04:56	12/30/25 10:26	1
13C8 FOSA	61.6		40 - 130	12/29/25 04:56	12/30/25 10:26	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-08-202512

Lab Sample ID: 320-128161-3

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D3-NMeFOSAA	37.2	*5-	40 - 170	12/29/25 04:56	12/30/25 10:26	1
D5-NEtFOSAA	49.9		25 - 135	12/29/25 04:56	12/30/25 10:26	1
13C2 4:2 FTS	171		40 - 200	12/29/25 04:56	12/30/25 10:26	1
13C2 6:2 FTS	155		40 - 200	12/29/25 04:56	12/30/25 10:26	1
13C2 8:2 FTS	178		40 - 300	12/29/25 04:56	12/30/25 10:26	1
13C3 HFPO-DA	89.5		40 - 130	12/29/25 04:56	12/30/25 10:26	1
D7-NMeFOSE	39.8		10 - 130	12/29/25 04:56	12/30/25 10:26	1
D9-NEtFOSE	32.4		10 - 130	12/29/25 04:56	12/30/25 10:26	1
D5-NEtFOSA	35.5		10 - 130	12/29/25 04:56	12/30/25 10:26	1
D3-NMeFOSA	36.6		10 - 130	12/29/25 04:56	12/30/25 10:26	1

Client Sample ID: INF-11-202512

Lab Sample ID: 320-128161-4

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.9	J	3.5	0.33	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoropentanoic acid (PFPeA)	2.1		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorohexanoic acid (PFHxA)	2.7		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoroheptanoic acid (PFHpA)	0.53	J	1.8	0.30	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorooctanoic acid (PFOA)	2.3		1.8	0.34	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorotridecanoic acid (PFTriDA)	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.71	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.8	0.47	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoropentanesulfonic acid (PFPeS)	0.80	J I J	1.8	0.19	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.15	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorooctanesulfonic acid (PFOS)	6.5	I J	1.8	0.24	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.47	ng/L		12/29/25 04:56	12/30/25 10:42	1
4:2 FTS	ND		3.5	0.38	ng/L		12/29/25 04:56	12/30/25 10:42	1
6:2 FTS	ND		3.5	0.36	ng/L		12/29/25 04:56	12/30/25 10:42	1
8:2 FTS	ND		3.5	0.79	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.34	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.36	J J	1.8	0.31	ng/L		12/29/25 04:56	12/30/25 10:42	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-11-202512

Lab Sample ID: 320-128161-4

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.39	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.5	J J	8.8	2.0	ng/L		12/29/25 04:56	12/30/25 10:42	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.8	2.1	ng/L		12/29/25 04:56	12/30/25 10:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.34	ng/L		12/29/25 04:56	12/30/25 10:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 10:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.63	ng/L		12/29/25 04:56	12/30/25 10:42	1
9CI-PF3ONS	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 10:42	1
11CI-PF3OUdS	ND		1.8	0.26	ng/L		12/29/25 04:56	12/30/25 10:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 10:42	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.5	0.63	ng/L		12/29/25 04:56	12/30/25 10:42	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.5	J	8.8	1.5	ng/L		12/29/25 04:56	12/30/25 10:42	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.8	1.1	ng/L		12/29/25 04:56	12/30/25 10:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	95.2		5 - 130	12/29/25 04:56	12/30/25 10:42	1
13C5 PFPeA	83.3		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C5 PFHxA	93.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C4 PFHpA	87.2		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C8 PFOA	94.8		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C9 PFNA	90.3		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C6 PFDA	81.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C7 PFUnA	50.2		30 - 130	12/29/25 04:56	12/30/25 10:42	1
13C2 PFDoA	42.7		10 - 130	12/29/25 04:56	12/30/25 10:42	1
13C2 PFTeDA	58.3		10 - 130	12/29/25 04:56	12/30/25 10:42	1
13C3 PFBS	90.3		40 - 135	12/29/25 04:56	12/30/25 10:42	1
13C3 PFHxS	92.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C8 PFOS	80.1		40 - 130	12/29/25 04:56	12/30/25 10:42	1
13C8 FOSA	56.5		40 - 130	12/29/25 04:56	12/30/25 10:42	1
D3-NMeFOSAA	35.9	*5-	40 - 170	12/29/25 04:56	12/30/25 10:42	1
D5-NEtFOSAA	40.6		25 - 135	12/29/25 04:56	12/30/25 10:42	1
13C2 4:2 FTS	200		40 - 200	12/29/25 04:56	12/30/25 10:42	1
13C2 6:2 FTS	172		40 - 200	12/29/25 04:56	12/30/25 10:42	1
13C2 8:2 FTS	188		40 - 300	12/29/25 04:56	12/30/25 10:42	1
13C3 HFPO-DA	90.7		40 - 130	12/29/25 04:56	12/30/25 10:42	1
D7-NMeFOSE	52.8		10 - 130	12/29/25 04:56	12/30/25 10:42	1
D9-NEtFOSE	50.8		10 - 130	12/29/25 04:56	12/30/25 10:42	1
D5-NEtFOSA	55.1		10 - 130	12/29/25 04:56	12/30/25 10:42	1
D3-NMeFOSA	52.6		10 - 130	12/29/25 04:56	12/30/25 10:42	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-18-202512

Lab Sample ID: 320-128161-5

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		3.9	0.36	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoropentanoic acid (PFPeA)	5.2		1.9	0.22	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorohexanoic acid (PFHxA)	6.4		1.9	0.26	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoroheptanoic acid (PFHpA)	1.9		1.9	0.33	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorooctanoic acid (PFOA)	8.4		1.9	0.38	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.44	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.43	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.22	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.53	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.9	0.56	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.9	0.78	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.52	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoropentanesulfonic acid (PFPeS)	1.4 J		1.9	0.21	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorohexanesulfonic acid (PFHxS)	13		1.9	0.24	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.9	0.17	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorooctanesulfonic acid (PFOS)	7.9 I J		1.9	0.27	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorononanesulfonic acid (PFNS)	ND		1.9	0.30	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.30	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.9	0.51	ng/L		12/29/25 04:56	12/30/25 10:58	1
4:2 FTS	ND		3.9	0.42	ng/L		12/29/25 04:56	12/30/25 10:58	1
6:2 FTS	2.4 J		3.9	0.39	ng/L		12/29/25 04:56	12/30/25 10:58	1
8:2 FTS	ND		3.9	0.86	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.9	0.22	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.9	0.37	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.9	0.43	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47 J J		1.9	0.34	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.81 J J		1.9	0.42	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND UJ		9.7	2.2	ng/L		12/29/25 04:56	12/30/25 10:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND UJ		9.7	2.3	ng/L		12/29/25 04:56	12/30/25 10:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.38	ng/L		12/29/25 04:56	12/30/25 10:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.9	0.39	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.9	0.18	ng/L		12/29/25 04:56	12/30/25 10:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.9	0.25	ng/L		12/29/25 04:56	12/30/25 10:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.9	0.69	ng/L		12/29/25 04:56	12/30/25 10:58	1
9CI-PF3ONS	ND		1.9	0.56	ng/L		12/29/25 04:56	12/30/25 10:58	1
11CI-PF3OUs	ND		1.9	0.29	ng/L		12/29/25 04:56	12/30/25 10:58	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-18-202512

Lab Sample ID: 320-128161-5

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.9	0.24	ng/L		12/29/25 04:56	12/30/25 10:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.9	0.69	ng/L		12/29/25 04:56	12/30/25 10:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	4.1	J	9.7	1.7	ng/L		12/29/25 04:56	12/30/25 10:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.7	1.2	ng/L		12/29/25 04:56	12/30/25 10:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130				12/29/25 04:56	12/30/25 10:58	1
13C5 PFPeA	99.3		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C5 PFHxA	103		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C4 PFHpA	88.4		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C8 PFOA	98.0		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C9 PFNA	94.7		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C6 PFDA	87.7		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C7 PFUnA	58.8		30 - 130				12/29/25 04:56	12/30/25 10:58	1
13C2 PFDoA	47.2		10 - 130				12/29/25 04:56	12/30/25 10:58	1
13C2 PFTeDA	61.7		10 - 130				12/29/25 04:56	12/30/25 10:58	1
13C3 PFBS	96.2		40 - 135				12/29/25 04:56	12/30/25 10:58	1
13C3 PFHxS	99.3		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C8 PFOS	82.2		40 - 130				12/29/25 04:56	12/30/25 10:58	1
13C8 FOSA	54.8		40 - 130				12/29/25 04:56	12/30/25 10:58	1
D3-NMeFOSAA	39.2	*5-	40 - 170				12/29/25 04:56	12/30/25 10:58	1
D5-NEtFOSAA	49.5		25 - 135				12/29/25 04:56	12/30/25 10:58	1
13C2 4:2 FTS	247	*5+	40 - 200				12/29/25 04:56	12/30/25 10:58	1
13C2 6:2 FTS	168		40 - 200				12/29/25 04:56	12/30/25 10:58	1
13C2 8:2 FTS	228		40 - 300				12/29/25 04:56	12/30/25 10:58	1
13C3 HFPO-DA	94.8		40 - 130				12/29/25 04:56	12/30/25 10:58	1
D7-NMeFOSE	48.3		10 - 130				12/29/25 04:56	12/30/25 10:58	1
D9-NEtFOSE	47.1		10 - 130				12/29/25 04:56	12/30/25 10:58	1
D5-NEtFOSA	54.3		10 - 130				12/29/25 04:56	12/30/25 10:58	1
D3-NMeFOSA	52.0		10 - 130				12/29/25 04:56	12/30/25 10:58	1

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.4		3.7	0.34	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoropentanoic acid (PFPeA)	3.2		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorohexanoic acid (PFHxA)	4.8		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoroheptanoic acid (PFHpA)	1.3	J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorooctanoic acid (PFOA)	4.9		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.42	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.74	ng/L		12/29/25 04:56	12/30/25 11:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	3.0		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoropentanesulfonic acid (PFPeS)	0.83	J I J	1.8	0.20	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorohexanesulfonic acid (PFHxS)	6.3		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorooctanesulfonic acid (PFOS)	6.2	I J	1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.29	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 11:15	1
4:2 FTS	ND		3.7	0.40	ng/L		12/29/25 04:56	12/30/25 11:15	1
6:2 FTS	1.1	J	3.7	0.37	ng/L		12/29/25 04:56	12/30/25 11:15	1
8:2 FTS	ND		3.7	0.82	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.62	J J	1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.61	J J	1.8	0.40	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	U J	9.2	2.1	ng/L		12/29/25 04:56	12/30/25 11:15	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	U J	9.2	2.2	ng/L		12/29/25 04:56	12/30/25 11:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.36	ng/L		12/29/25 04:56	12/30/25 11:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.37	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 11:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.66	ng/L		12/29/25 04:56	12/30/25 11:15	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:15	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 11:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 11:15	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.7	0.66	ng/L		12/29/25 04:56	12/30/25 11:15	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	9.7		9.2	1.6	ng/L		12/29/25 04:56	12/30/25 11:15	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.2	1.1	ng/L		12/29/25 04:56	12/30/25 11:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	96.3		5 - 130				12/29/25 04:56	12/30/25 11:15	1
13C5 PFPeA	97.2		40 - 130				12/29/25 04:56	12/30/25 11:15	1
13C5 PFHxA	103		40 - 130				12/29/25 04:56	12/30/25 11:15	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: INF-Comp-202512

Lab Sample ID: 320-128161-6

Date Collected: 12/08/25 23:59

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	89.6		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C8 PFOA	90.4		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C9 PFNA	89.8		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C6 PFDA	81.6		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C7 PFUnA	53.7		30 - 130	12/29/25 04:56	12/30/25 11:15	1
13C2 PFDoA	43.1		10 - 130	12/29/25 04:56	12/30/25 11:15	1
13C2 PFTeDA	55.8		10 - 130	12/29/25 04:56	12/30/25 11:15	1
13C3 PFBS	87.3		40 - 135	12/29/25 04:56	12/30/25 11:15	1
13C3 PFHxS	96.1		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C8 PFOS	80.3		40 - 130	12/29/25 04:56	12/30/25 11:15	1
13C8 FOSA	59.8		40 - 130	12/29/25 04:56	12/30/25 11:15	1
D3-NMeFOSAA	37.3	*5-	40 - 170	12/29/25 04:56	12/30/25 11:15	1
D5-NEtFOSAA	49.2		25 - 135	12/29/25 04:56	12/30/25 11:15	1
13C2 4:2 FTS	222	*5+	40 - 200	12/29/25 04:56	12/30/25 11:15	1
13C2 6:2 FTS	190		40 - 200	12/29/25 04:56	12/30/25 11:15	1
13C2 8:2 FTS	214		40 - 300	12/29/25 04:56	12/30/25 11:15	1
13C3 HFPO-DA	91.5		40 - 130	12/29/25 04:56	12/30/25 11:15	1
D7-NMeFOSE	45.3		10 - 130	12/29/25 04:56	12/30/25 11:15	1
D9-NEtFOSE	42.4		10 - 130	12/29/25 04:56	12/30/25 11:15	1
D5-NEtFOSA	51.0		10 - 130	12/29/25 04:56	12/30/25 11:15	1
D3-NMeFOSA	48.0		10 - 130	12/29/25 04:56	12/30/25 11:15	1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	9.8		3.5	0.33	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoropentanoic acid (PFPeA)	6.5		1.7	0.20	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorohexanoic acid (PFHxA)	11		1.7	0.24	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.7	0.30	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorooctanoic acid (PFOA)	5.6		1.7	0.34	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.40	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.39	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.20	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.7	0.50	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.7	0.71	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorobutanesulfonic acid (PFBS)	3.1		1.7	0.47	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	J	1.7	0.19	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		1.7	0.21	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.15	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorooctanesulfonic acid (PFOS)	3.4		1.7	0.24	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.27	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		12/29/25 04:56	12/30/25 11:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		1.7	0.46	ng/L		12/29/25 04:56	12/30/25 11:31	1
4:2 FTS	ND		3.5	0.38	ng/L		12/29/25 04:56	12/30/25 11:31	1
6:2 FTS	0.75	J	3.5	0.35	ng/L		12/29/25 04:56	12/30/25 11:31	1
8:2 FTS	ND		3.5	0.78	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluorooctanesulfonamide (PFOSA)	0.70	J	1.7	0.20	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.7	0.34	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.7	0.39	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.75	J J	1.7	0.31	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	J J	1.7	0.38	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	8.7	2.0	ng/L		12/29/25 04:56	12/30/25 11:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	8.7	2.1	ng/L		12/29/25 04:56	12/30/25 11:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.3	0.34	ng/L		12/29/25 04:56	12/30/25 11:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.35	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	0.17	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	0.23	ng/L		12/29/25 04:56	12/30/25 11:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	0.63	ng/L		12/29/25 04:56	12/30/25 11:31	1
9CI-PF3ONS	ND		1.7	0.51	ng/L		12/29/25 04:56	12/30/25 11:31	1
11CI-PF3OUdS	ND		1.7	0.26	ng/L		12/29/25 04:56	12/30/25 11:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.7	0.22	ng/L		12/29/25 04:56	12/30/25 11:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.5	0.63	ng/L		12/29/25 04:56	12/30/25 11:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.8	J	8.7	1.5	ng/L		12/29/25 04:56	12/30/25 11:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		8.7	1.1	ng/L		12/29/25 04:56	12/30/25 11:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	99.7		5 - 130	12/29/25 04:56	12/30/25 11:31	1
13C5 PFPeA	101		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C5 PFHxA	103		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C4 PFHpA	88.3		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C8 PFOA	99.3		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C9 PFNA	92.9		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C6 PFDA	101		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C7 PFUnA	107		30 - 130	12/29/25 04:56	12/30/25 11:31	1
13C2 PFDoA	101		10 - 130	12/29/25 04:56	12/30/25 11:31	1
13C2 PFTeDA	68.0		10 - 130	12/29/25 04:56	12/30/25 11:31	1
13C3 PFBS	105		40 - 135	12/29/25 04:56	12/30/25 11:31	1
13C3 PFHxS	94.2		40 - 130	12/29/25 04:56	12/30/25 11:31	1
13C8 PFOS	91.9		40 - 130	12/29/25 04:56	12/30/25 11:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	85.9		40 - 130	12/29/25 04:56	12/30/25 11:31	1
D3-NMeFOSAA	95.0		40 - 170	12/29/25 04:56	12/30/25 11:31	1
D5-NEtFOSAA	113		25 - 135	12/29/25 04:56	12/30/25 11:31	1
13C2 4:2 FTS	151		40 - 200	12/29/25 04:56	12/30/25 11:31	1
13C2 6:2 FTS	115		40 - 200	12/29/25 04:56	12/30/25 11:31	1
13C2 8:2 FTS	135		40 - 300	12/29/25 04:56	12/30/25 11:31	1
13C3 HFPO-DA	87.6		40 - 130	12/29/25 04:56	12/30/25 11:31	1
D7-NMeFOSE	79.0		10 - 130	12/29/25 04:56	12/30/25 11:31	1
D9-NEtFOSE	69.8		10 - 130	12/29/25 04:56	12/30/25 11:31	1
D5-NEtFOSA	76.8		10 - 130	12/29/25 04:56	12/30/25 11:31	1
D3-NMeFOSA	78.7		10 - 130	12/29/25 04:56	12/30/25 11:31	1

Client Sample ID: EB-01-202512

Lab Sample ID: 320-128161-8

Date Collected: 12/08/25 13:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.6	0.34	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.51	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.74	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.19	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 11:48	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 11:48	1
6:2 FTS	ND		3.6	0.37	ng/L		12/29/25 04:56	12/30/25 11:48	1
8:2 FTS	ND		3.6	0.82	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 11:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EB-01-202512

Lab Sample ID: 320-128161-8

Date Collected: 12/08/25 13:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	9.1	2.1	ng/L		12/29/25 04:56	12/30/25 11:48	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	9.1	2.2	ng/L		12/29/25 04:56	12/30/25 11:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.36	ng/L		12/29/25 04:56	12/30/25 11:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 11:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.66	ng/L		12/29/25 04:56	12/30/25 11:48	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 11:48	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 11:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 11:48	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.66	ng/L		12/29/25 04:56	12/30/25 11:48	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 11:48	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.1	1.1	ng/L		12/29/25 04:56	12/30/25 11:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130	12/29/25 04:56	12/30/25 11:48	1
13C5 PFPeA	110		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C5 PFHxA	94.9		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C4 PFHpA	88.1		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C8 PFOA	100		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C9 PFNA	100		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C6 PFDA	103		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C7 PFUnA	106		30 - 130	12/29/25 04:56	12/30/25 11:48	1
13C2 PFDoA	99.9		10 - 130	12/29/25 04:56	12/30/25 11:48	1
13C2 PFTeDA	80.0		10 - 130	12/29/25 04:56	12/30/25 11:48	1
13C3 PFBS	102		40 - 135	12/29/25 04:56	12/30/25 11:48	1
13C3 PFHxS	98.2		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C8 PFOS	94.2		40 - 130	12/29/25 04:56	12/30/25 11:48	1
13C8 FOSA	82.4		40 - 130	12/29/25 04:56	12/30/25 11:48	1
D3-NMeFOSAA	94.4		40 - 170	12/29/25 04:56	12/30/25 11:48	1
D5-NEtFOSAA	115		25 - 135	12/29/25 04:56	12/30/25 11:48	1
13C2 4:2 FTS	115		40 - 200	12/29/25 04:56	12/30/25 11:48	1
13C2 6:2 FTS	113		40 - 200	12/29/25 04:56	12/30/25 11:48	1
13C2 8:2 FTS	120		40 - 300	12/29/25 04:56	12/30/25 11:48	1
13C3 HFPO-DA	90.4		40 - 130	12/29/25 04:56	12/30/25 11:48	1
D7-NMeFOSE	75.2		10 - 130	12/29/25 04:56	12/30/25 11:48	1
D9-NEtFOSE	65.0		10 - 130	12/29/25 04:56	12/30/25 11:48	1
D5-NEtFOSA	76.0		10 - 130	12/29/25 04:56	12/30/25 11:48	1
D3-NMeFOSA	76.5		10 - 130	12/29/25 04:56	12/30/25 11:48	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.8		0.76	0.061	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoropentanoic acid (PFPeA)	6.5		0.38	0.093	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorohexanoic acid (PFHxA)	19		0.38	0.076	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoroheptanoic acid (PFHpA)	0.79		0.38	0.063	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorooctanoic acid (PFOA)	7.7		0.38	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorononanoic acid (PFNA)	0.78		0.38	0.055	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorodecanoic acid (PFDA)	5.3		0.38	0.046	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoroundecanoic acid (PFUnA)	0.71		0.38	0.053	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorododecanoic acid (PFDoA)	1.5		0.38	0.051	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.38	0.11	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.38	0.13	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.38	0.076	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorohexanesulfonic acid (PFHxS)	0.59		0.38	0.038	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.38	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorooctanesulfonic acid (PFOS)	8.5		0.38	0.048	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorononanesulfonic acid (PFNS)	ND		0.38	0.044	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorodecanesulfonic acid (PFDS)	0.76		0.38	0.040	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.38	0.070	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluorooctanesulfonamide (PFOSA)	0.68		0.38	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.38	0.069	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.38	0.040	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12		0.38	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7		0.38	0.032	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.2		1.9	0.17	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.0		1.9	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.38	0.055	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.38	0.048	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.38	0.042	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.38	0.069	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.38	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
9CI-PF3ONS	ND		0.38	0.072	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
11CI-PF3OUdS	ND		0.38	0.14	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.38	0.072	ug/Kg	✱	01/05/26 10:53	01/06/26 11:46	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.76	0.14	ug/Kg	☼	01/05/26 10:53	01/06/26 11:46	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50		1.9	0.47	ug/Kg	☼	01/05/26 10:53	01/06/26 11:46	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20		1.9	0.41	ug/Kg	☼	01/05/26 10:53	01/06/26 11:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	59.0		8 - 130				01/05/26 10:53	01/06/26 11:46	1
13C5 PFPeA	45.5		35 - 130				01/05/26 10:53	01/06/26 11:46	1
13C5 PFHxA	45.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C4 PFHpA	50.9		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C8 PFOA	71.1		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C9 PFNA	76.1		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C6 PFDA	66.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C7 PFUnA	55.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C2 PFDoA	48.9		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C2 PFTeDA	30.6		20 - 130				01/05/26 10:53	01/06/26 11:46	1
13C3 PFBS	67.4		40 - 135				01/05/26 10:53	01/06/26 11:46	1
13C3 PFHxS	70.8		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C8 PFOS	65.6		40 - 130				01/05/26 10:53	01/06/26 11:46	1
13C8 FOSA	45.9		40 - 130				01/05/26 10:53	01/06/26 11:46	1
D3-NMeFOSAA	48.3		40 - 135				01/05/26 10:53	01/06/26 11:46	1
D5-NEtFOSAA	42.3		40 - 150				01/05/26 10:53	01/06/26 11:46	1
13C3 HFPO-DA	53.2		40 - 130				01/05/26 10:53	01/06/26 11:46	1
D7-NMeFOSE	57.3		20 - 130				01/05/26 10:53	01/06/26 11:46	1
D9-NEtFOSE	72.0		15 - 130				01/05/26 10:53	01/06/26 11:46	1
D5-NEtFOSA	34.3		10 - 130				01/05/26 10:53	01/06/26 11:46	1
D3-NMeFOSA	54.0		10 - 130				01/05/26 10:53	01/06/26 11:46	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.34	J J	0.38	0.055	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
4:2 FTS	ND		0.76	0.12	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
6:2 FTS	0.25	J	0.76	0.10	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
8:2 FTS	0.87		0.76	0.084	ug/Kg	☼	01/05/26 10:53	01/06/26 13:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFDoA	33.5	*5-	40 - 130				01/05/26 10:53	01/06/26 13:28	1
13C2 PFTeDA	29.6		20 - 130				01/05/26 10:53	01/06/26 13:28	1
13C2 4:2 FTS	146		40 - 165				01/05/26 10:53	01/06/26 13:28	1
13C2 6:2 FTS	175		40 - 215				01/05/26 10:53	01/06/26 13:28	1
13C2 8:2 FTS	174		40 - 275				01/05/26 10:53	01/06/26 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	74		0.10	0.10	%			12/16/25 14:12	1
Percent Solids (EPA 1633)	26		0.10	0.10	%			12/16/25 14:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.2		0.75	0.060	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoropentanoic acid (PFPeA)	15		0.37	0.092	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorohexanoic acid (PFHxA)	23		0.37	0.075	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoroheptanoic acid (PFHpA)	1.6		0.37	0.062	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorooctanoic acid (PFOA)	17		0.37	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorononanoic acid (PFNA)	1.2		0.37	0.054	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorodecanoic acid (PFDA)	8.3		0.37	0.045	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoroundecanoic acid (PFUnA)	1.1		0.37	0.052	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorododecanoic acid (PFDoA)	2.8		0.37	0.051	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorotetradecanoic acid (PFTeDA)	0.68		0.37	0.11	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorobutanesulfonic acid (PFBS)	2.3		0.37	0.13	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.37	0.075	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorohexanesulfonic acid (PFHxS)	0.80		0.37	0.037	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.37	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorooctanesulfonic acid (PFOS)	6.2		0.37	0.047	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorononanesulfonic acid (PFNS)	ND		0.37	0.043	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.37	0.039	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.37	0.069	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluorooctanesulfonamide (PFOSA)	0.92		0.37	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.25 J		0.37	0.067	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.23 J		0.37	0.039	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	17		0.37	0.030	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.1 J		0.37	0.032	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.3		1.9	0.16	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.9		1.9	0.14	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		0.37	0.054	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.37	0.047	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.37	0.041	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.37	0.067	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.37	0.12	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
9CI-PF3ONS	ND		0.37	0.071	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
11CI-PF3OUdS	ND		0.37	0.14	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		0.37	0.071	ug/Kg	✱	01/05/26 10:53	01/06/26 12:02	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		0.75	0.14	ug/Kg	☆	01/05/26 10:53	01/06/26 12:02	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	47		1.9	0.46	ug/Kg	☆	01/05/26 10:53	01/06/26 12:02	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	26		1.9	0.40	ug/Kg	☆	01/05/26 10:53	01/06/26 12:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	65.9		8 - 130				01/05/26 10:53	01/06/26 12:02	1
13C5 PFPeA	52.6		35 - 130				01/05/26 10:53	01/06/26 12:02	1
13C5 PFHxA	49.5		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C4 PFHpA	60.0		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C8 PFOA	70.3		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C9 PFNA	77.8		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C6 PFDA	84.0		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C7 PFUnA	56.3		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C2 PFDoA	51.1		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C2 PFTeDA	37.1		20 - 130				01/05/26 10:53	01/06/26 12:02	1
13C3 PFBS	88.6		40 - 135				01/05/26 10:53	01/06/26 12:02	1
13C3 PFHxS	76.1		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C8 PFOS	100		40 - 130				01/05/26 10:53	01/06/26 12:02	1
13C8 FOSA	43.7		40 - 130				01/05/26 10:53	01/06/26 12:02	1
D3-NMeFOSAA	41.0		40 - 135				01/05/26 10:53	01/06/26 12:02	1
D5-NEtFOSAA	33.2	*5-	40 - 150				01/05/26 10:53	01/06/26 12:02	1
13C3 HFPO-DA	59.5		40 - 130				01/05/26 10:53	01/06/26 12:02	1
D7-NMeFOSE	72.8		20 - 130				01/05/26 10:53	01/06/26 12:02	1
D9-NEtFOSE	77.4		15 - 130				01/05/26 10:53	01/06/26 12:02	1
D5-NEtFOSA	38.4		10 - 130				01/05/26 10:53	01/06/26 12:02	1
D3-NMeFOSA	55.2		10 - 130				01/05/26 10:53	01/06/26 12:02	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.49	J	0.37	0.054	ug/Kg	☆	01/05/26 10:53	01/06/26 13:45	1
4:2 FTS	ND		0.75	0.12	ug/Kg	☆	01/05/26 10:53	01/06/26 13:45	1
6:2 FTS	0.88		0.75	0.10	ug/Kg	☆	01/05/26 10:53	01/06/26 13:45	1
8:2 FTS	0.67	J	0.75	0.082	ug/Kg	☆	01/05/26 10:53	01/06/26 13:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFDoA	31.6	*5-	40 - 130				01/05/26 10:53	01/06/26 13:45	1
13C2 PFTeDA	26.2		20 - 130				01/05/26 10:53	01/06/26 13:45	1
13C2 4:2 FTS	168	*5+	40 - 165				01/05/26 10:53	01/06/26 13:45	1
13C2 6:2 FTS	186		40 - 215				01/05/26 10:53	01/06/26 13:45	1
13C2 8:2 FTS	180		40 - 275				01/05/26 10:53	01/06/26 13:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	74		0.10	0.10	%			12/16/25 14:12	1
Percent Solids (EPA 1633)	26		0.10	0.10	%			12/16/25 14:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.90	J	3.6	0.29	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.45	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.36	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.30	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorooctanoic acid (PFOA)	0.91	J	1.8	0.56	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorononanoic acid (PFNA)	0.59	J I J	1.8	0.26	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorodecanoic acid (PFDA)	2.2		1.8	0.22	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoroundecanoic acid (PFUnA)	0.36	J	1.8	0.25	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorododecanoic acid (PFDoA)	1.6	J	1.8	0.25	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.53	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.61	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.36	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.70	J	1.8	0.18	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorooctanesulfonic acid (PFOS)	5.1		1.8	0.23	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.21	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.19	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.34	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.57	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.33	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.19	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.9		1.8	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.7		1.8	0.15	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8	J	9.1	0.80	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.2	J	9.1	0.70	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.8	0.26	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.23	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.20	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.33	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.56	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
9CI-PF3ONS	ND		1.8	0.35	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
11CI-PF3OUdS	ND		1.8	0.68	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.35	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.68	ug/Kg	✱	01/05/26 10:53	01/06/26 12:19	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	150		9.1	2.2	ug/Kg	☆	01/05/26 10:53	01/06/26 12:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	14		9.1	1.9	ug/Kg	☆	01/05/26 10:53	01/06/26 12:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	76.2		8 - 130				01/05/26 10:53	01/06/26 12:19	1
13C5 PFPeA	57.4		35 - 130				01/05/26 10:53	01/06/26 12:19	1
13C5 PFHxA	60.3		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C4 PFHpA	71.0		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C8 PFOA	84.8		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C9 PFNA	83.1		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C6 PFDA	82.7		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C7 PFUnA	62.1		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C2 PFDoA	59.4		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C2 PFTeDA	60.0		20 - 130				01/05/26 10:53	01/06/26 12:19	1
13C3 PFBS	91.6		40 - 135				01/05/26 10:53	01/06/26 12:19	1
13C3 PFHxS	92.6		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C8 PFOS	99.3		40 - 130				01/05/26 10:53	01/06/26 12:19	1
13C8 FOSA	61.8		40 - 130				01/05/26 10:53	01/06/26 12:19	1
D3-NMeFOSAA	59.8		40 - 135				01/05/26 10:53	01/06/26 12:19	1
D5-NEtFOSAA	64.9		40 - 150				01/05/26 10:53	01/06/26 12:19	1
13C3 HFPO-DA	75.5		40 - 130				01/05/26 10:53	01/06/26 12:19	1
D7-NMeFOSE	86.8		20 - 130				01/05/26 10:53	01/06/26 12:19	1
D9-NEtFOSE	50.8		15 - 130				01/05/26 10:53	01/06/26 12:19	1
D5-NEtFOSA	72.8		10 - 130				01/05/26 10:53	01/06/26 12:19	1
D3-NMeFOSA	77.0		10 - 130				01/05/26 10:53	01/06/26 12:19	1

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	0.33	J J	1.8	0.26	ug/Kg	☆	01/05/26 10:53	01/06/26 14:01	1
4:2 FTS	ND		3.6	0.59	ug/Kg	☆	01/05/26 10:53	01/06/26 14:01	1
6:2 FTS	ND		3.6	0.49	ug/Kg	☆	01/05/26 10:53	01/06/26 14:01	1
8:2 FTS	0.40	J	3.6	0.40	ug/Kg	☆	01/05/26 10:53	01/06/26 14:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFDoA	37.7	*5-	40 - 130				01/05/26 10:53	01/06/26 14:01	1
13C2 PFTeDA	36.0		20 - 130				01/05/26 10:53	01/06/26 14:01	1
13C2 4:2 FTS	179	*5+	40 - 165				01/05/26 10:53	01/06/26 14:01	1
13C2 6:2 FTS	201		40 - 215				01/05/26 10:53	01/06/26 14:01	1
13C2 8:2 FTS	226		40 - 275				01/05/26 10:53	01/06/26 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA 1633)	95		0.10	0.10	%			12/16/25 14:12	1
Percent Solids (EPA 1633)	5.4		0.10	0.10	%			12/16/25 14:12	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EB-02-202512

Lab Sample ID: 320-128161-12

Date Collected: 12/08/25 14:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.6	0.34	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.24	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.31	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.41	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.21	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorotridecanoic acid (PFTTrDA)	ND		1.8	0.52	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorotetradecanoic acid (PFTeDA)	ND		1.8	0.73	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.49	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.19	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.22	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.16	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.25	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorononanesulfonic acid (PFNS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.48	ng/L		12/29/25 04:56	12/30/25 12:37	1
4:2 FTS	ND		3.6	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
6:2 FTS	ND		3.6	0.37	ng/L		12/29/25 04:56	12/30/25 12:37	1
8:2 FTS	ND		3.6	0.81	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.8	0.20	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		1.8	0.35	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.32	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.40	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	UJ	9.1	2.1	ng/L		12/29/25 04:56	12/30/25 12:37	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	9.1	2.2	ng/L		12/29/25 04:56	12/30/25 12:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		1.4	0.35	ng/L		12/29/25 04:56	12/30/25 12:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.8	0.17	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 12:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.8	0.65	ng/L		12/29/25 04:56	12/30/25 12:37	1
9CI-PF3ONS	ND		1.8	0.53	ng/L		12/29/25 04:56	12/30/25 12:37	1
11CI-PF3OUdS	ND		1.8	0.27	ng/L		12/29/25 04:56	12/30/25 12:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		1.8	0.23	ng/L		12/29/25 04:56	12/30/25 12:37	1

Eurofins Sacramento

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-1

Client Sample ID: EB-02-202512

Lab Sample ID: 320-128161-12

Date Collected: 12/08/25 14:30

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.6	0.65	ng/L		12/29/25 04:56	12/30/25 12:37	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		9.1	1.6	ng/L		12/29/25 04:56	12/30/25 12:37	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		9.1	1.1	ng/L		12/29/25 04:56	12/30/25 12:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	96.3		5 - 130				12/29/25 04:56	12/30/25 12:37	1
13C5 PFPeA	96.9		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C5 PFHxA	88.0		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C4 PFHpA	81.9		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C8 PFOA	98.1		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C9 PFNA	93.2		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C6 PFDA	102		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C7 PFUnA	108		30 - 130				12/29/25 04:56	12/30/25 12:37	1
13C2 PFDoA	101		10 - 130				12/29/25 04:56	12/30/25 12:37	1
13C2 PFTeDA	86.8		10 - 130				12/29/25 04:56	12/30/25 12:37	1
13C3 PFBS	104		40 - 135				12/29/25 04:56	12/30/25 12:37	1
13C3 PFHxS	92.8		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C8 PFOS	87.0		40 - 130				12/29/25 04:56	12/30/25 12:37	1
13C8 FOSA	79.6		40 - 130				12/29/25 04:56	12/30/25 12:37	1
D3-NMeFOSAA	89.1		40 - 170				12/29/25 04:56	12/30/25 12:37	1
D5-NEtFOSAA	110		25 - 135				12/29/25 04:56	12/30/25 12:37	1
13C2 4:2 FTS	122		40 - 200				12/29/25 04:56	12/30/25 12:37	1
13C2 6:2 FTS	109		40 - 200				12/29/25 04:56	12/30/25 12:37	1
13C2 8:2 FTS	117		40 - 300				12/29/25 04:56	12/30/25 12:37	1
13C3 HFPO-DA	77.7		40 - 130				12/29/25 04:56	12/30/25 12:37	1
D7-NMeFOSE	80.3		10 - 130				12/29/25 04:56	12/30/25 12:37	1
D9-NEtFOSE	70.6		10 - 130				12/29/25 04:56	12/30/25 12:37	1
D5-NEtFOSA	77.7		10 - 130				12/29/25 04:56	12/30/25 12:37	1
D3-NMeFOSA	77.2		10 - 130				12/29/25 04:56	12/30/25 12:37	1

Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.6	J	13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoropentanoic acid (PFPeA)	4.9	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorohexanoic acid (PFHxA)	12		5.0	1.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoroheptanoic acid (PFHpA)	1.4	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorooctanoic acid (PFOA)	5.9		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorononanoic acid (PFNA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorotetradecanoic acid (PFTeDA)	ND		5.0	1.8	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorobutanesulfonic acid (PFBS)	3.7	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorooctanesulfonic acid (PFOS)	6.0		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorononanesulfonic acid (PFNS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND	* UJ	5.0	2.4	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
4:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
6:2 FTS	ND		13	3.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
8:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	UJ	5.0	2.1	ng/L		12/17/25 19:48	12/23/25 06:54	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		10	2.5	ng/L		12/17/25 19:48	12/23/25 06:54	1
11CI-PF3OUdS	ND	*	5.0	1.7	ng/L		12/17/25 19:48	12/23/25 06:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.4	J	5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		12/17/25 19:48	12/23/25 06:54	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		5.0	1.3	ng/L		12/17/25 19:48	12/23/25 06:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 FOSA	51		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFBA	63		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C5 PFPeA	75		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFHxA	64		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFHpA	68		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFOA	64		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C5 PFNA	58		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFDA	50		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFUnA	41		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFDoA	28		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 PFTeDA	26		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C3 PFBS	66		25 - 150				12/17/25 19:48	12/23/25 06:54	1
18O2 PFHxS	64		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C4 PFOS	63		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D3-NMeFOSAA	47		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D5-NEtFOSAA	47		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 4:2 FTS	70		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 6:2 FTS	61		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C2 8:2 FTS	55		25 - 150				12/17/25 19:48	12/23/25 06:54	1
d-N-MeFOSA-M	31		25 - 150				12/17/25 19:48	12/23/25 06:54	1
d-N-EtFOSA-M	31		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D7-NMeFOSE	29		25 - 150				12/17/25 19:48	12/23/25 06:54	1
D9-NEtFOSE	24	*5-	25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C3 HFPO-DA	60		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C-6:2 FTCA	54		25 - 150				12/17/25 19:48	12/23/25 06:54	1
13C-8:2 FTCA	67		25 - 150				12/17/25 19:48	12/23/25 06:54	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23	B J+	13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoropentanoic acid (PFPeA)	15	*+ J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorohexanoic acid (PFHxA)	14	*+ J	5.0	1.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoroheptanoic acid (PFHpA)	2.3	J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorooctanoic acid (PFOA)	8.1	*+ J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorononanoic acid (PFNA)	ND	*+	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorodecanoic acid (PFDA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoroundecanoic acid (PFUnA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorododecanoic acid (PFDoA)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorotridecanoic acid (PFTTrDA)	ND	* *1	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorotetradecanoic acid (PFTeDA)	ND	* *1	5.0	1.8	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorobutanesulfonic acid (PFBS)	3.4	J	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorohexanesulfonic acid (PFHxS)	6.5		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorooctanesulfonic acid (PFOS)	4.9	J-B UJ	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorononanesulfonic acid (PFNS)	ND	*	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorodecanesulfonic acid (PFDS)	ND	*-+ UJ	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*-+ UJ	5.0	2.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluorooctanesulfonamide (PFOSA)	ND		5.0	2.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
4:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
6:2 FTS	ND		13	3.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
8:2 FTS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		5.0	2.2	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		10	3.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		5.0	2.1	ng/L		12/17/25 19:51	12/23/25 11:34	1
9CI-PF3ONS	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	*-+	10	2.5	ng/L		12/17/25 19:51	12/23/25 11:34	1
11CI-PF3OUdS	ND	*-+ UJ	5.0	1.7	ng/L		12/17/25 19:51	12/23/25 11:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.0	1.4	ng/L		12/17/25 19:51	12/23/25 11:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		5.0	1.6	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*-+	5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		5.0	1.3	ng/L		12/17/25 19:51	12/23/25 11:34	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
¹³ C8 FOSA	82		25 - 150	12/17/25 19:51	12/23/25 11:34	1
¹³ C4 PFBA	93		25 - 150	12/17/25 19:51	12/23/25 11:34	1
¹³ C5 PFPeA	87		25 - 150	12/17/25 19:51	12/23/25 11:34	1
¹³ C2 PFHxA	95		25 - 150	12/17/25 19:51	12/23/25 11:34	1
¹³ C4 PFHpA	88		25 - 150	12/17/25 19:51	12/23/25 11:34	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: EFF-G-202512

Lab Sample ID: 320-128161-7

Date Collected: 12/09/25 07:17

Matrix: Water

Date Received: 12/11/25 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	87		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C5 PFNA	83		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFDA	80		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFUnA	69		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFDoA	56		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 PFTeDA	40		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C3 PFBS	83		25 - 150	12/17/25 19:51	12/23/25 11:34	1
18O2 PFHxS	79		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C4 PFOS	93		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D3-NMeFOSAA	75		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D5-NEtFOSAA	79		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 4:2 FTS	0		0 - 10	12/17/25 19:51	12/23/25 11:34	1
13C2 6:2 FTS	77		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C2 8:2 FTS	73		25 - 150	12/17/25 19:51	12/23/25 11:34	1
d-N-MeFOSA-M	56		25 - 150	12/17/25 19:51	12/23/25 11:34	1
d-N-EtFOSA-M	49		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D7-NMeFOSE	46		25 - 150	12/17/25 19:51	12/23/25 11:34	1
D9-NEtFOSE	41		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C3 HFPO-DA	81		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C-6:2 FTCA	77		25 - 150	12/17/25 19:51	12/23/25 11:34	1
13C-8:2 FTCA	94		25 - 150	12/17/25 19:51	12/23/25 11:34	1

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.8	J	3.8	0.88	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoropentanoic acid (PFPeA)	4.7		3.8	0.79	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorohexanoic acid (PFHxA)	18		3.8	0.59	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoroheptanoic acid (PFHpA)	0.83	J	3.8	0.73	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorooctanoic acid (PFOA)	11		3.8	1.0	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorononanoic acid (PFNA)	1.3	J	3.8	0.42	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorodecanoic acid (PFDA)	4.3		3.8	0.92	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoroundecanoic acid (PFUnA)	ND		3.8	0.80	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorododecanoic acid (PFDoA)	1.3	J	3.8	0.57	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorotridecanoic acid (PFTeDA)	ND		3.8	0.40	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorotetradecanoic acid (PFTeDA)	ND		3.8	0.71	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorobutanesulfonic acid (PFBS)	1.5	J	3.8	0.73	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.71	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	J	3.8	0.56	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.94	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorooctanesulfonic acid (PFOS)	11		3.8	0.83	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.56	ug/Kg	✧	12/17/25 12:57	12/26/25 03:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	1.0	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*	3.8	0.90	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluorooctanesulfonamide (PFOSA)	0.89	J	3.8	0.63	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	11		3.8	0.44	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.6	J	3.8	0.92	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
4:2 FTS	ND		3.8	0.98	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
6:2 FTS	ND		3.8	0.52	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
8:2 FTS	1.1	J	3.8	0.67	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.94	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5.1		3.8	0.90	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.6	J	3.8	0.54	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
9CI-PF3ONS	ND		3.8	0.67	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.79	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
11CI-PF3OUdS	ND		3.8	0.59	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.75	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.79	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	27		3.8	0.73	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		3.8	0.79	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.77	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.87	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		3.8	0.61	ug/Kg	⚠	12/17/25 12:57	12/26/25 03:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	76		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFBA	88		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C5 PFPeA	97		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFHxA	96		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFHpA	105		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFOA	103		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C5 PFNA	93		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFDA	100		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFUnA	105		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFDoA	82		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 PFTeDA	38		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C3 PFBS	94		25 - 150	12/17/25 12:57	12/26/25 03:31	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C4 PFOS	110		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D3-NMeFOSAA	108		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D5-NEtFOSAA	125		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 4:2 FTS	131		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 6:2 FTS	124		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C2 8:2 FTS	146		25 - 150	12/17/25 12:57	12/26/25 03:31	1
d-N-MeFOSA-M	56		25 - 150	12/17/25 12:57	12/26/25 03:31	1
d-N-EtFOSA-M	60		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D7-NMeFOSE	58		25 - 150	12/17/25 12:57	12/26/25 03:31	1
D9-NEtFOSE	77		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C3 HFPO-DA	103		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C-6:2 FTCA	80		25 - 150	12/17/25 12:57	12/26/25 03:31	1
13C-8:2 FTCA	100		25 - 150	12/17/25 12:57	12/26/25 03:31	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	97	B	3.8	0.86	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoropentanoic acid (PFPeA)	52	*+ B J	3.8	0.77	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorohexanoic acid (PFHxA)	44	*+ J	3.8	0.58	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoroheptanoic acid (PFHpA)	19		3.8	0.71	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorooctanoic acid (PFOA)	39		3.8	1.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorononanoic acid (PFNA)	10		3.8	0.41	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorodecanoic acid (PFDA)	9.1		3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoroundecanoic acid (PFUnA)	3.8		3.8	0.79	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorododecanoic acid (PFDoA)	3.6	J	3.8	0.56	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorotridecanoic acid (PFTTrDA)	0.74	J	3.8	0.39	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorotetradecanoic acid (PFTTeDA)	1.1	J	3.8	0.69	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorobutanesulfonic acid (PFBS)	16		3.8	0.71	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.69	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	3.8	0.54	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.92	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorooctanesulfonic acid (PFOS)	10		3.8	0.81	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.54	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorodecanesulfonic acid (PFDS)	ND	*- UJ	3.8	0.98	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*- UJ	3.8	0.89	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
Perfluorooctanesulfonamide (PFOSA)	ND		3.8	0.62	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		3.8	0.43	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
4:2 FTS	ND		3.8	0.96	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1
6:2 FTS	ND		3.8	0.51	ug/Kg	✱	12/17/25 13:04	12/26/25 06:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	ND		3.8	0.66	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.89	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.92	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		3.8	0.89	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		3.8	0.53	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
9CI-PF3ONS	ND	*	3.8	0.66	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
11CI-PF3OUdS	ND	* UJ	3.8	0.58	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.73	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		3.8	0.71	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.75	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.85	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	3.8	0.45	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	ND		3.8	0.60	ug/Kg	☼	12/17/25 13:04	12/26/25 06:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	53		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFBA	96		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C5 PFPeA	95		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFHxA	101		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFHpA	99		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFOA	94		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C5 PFNA	82		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFDA	64		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFUnA	54		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFDoA	48		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 PFTeDA	55		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C3 PFBS	92		25 - 150	12/17/25 13:04	12/26/25 06:05	1
18O2 PFHxS	95		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C4 PFOS	80		25 - 150	12/17/25 13:04	12/26/25 06:05	1
D3-NMeFOSAA	62		25 - 150	12/17/25 13:04	12/26/25 06:05	1
D5-NEtFOSAA	64		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 06:05	1
13C2 6:2 FTS	99		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C2 8:2 FTS	75		25 - 150	12/17/25 13:04	12/26/25 06:05	1
d-N-MeFOSA-M	51		25 - 150	12/17/25 13:04	12/26/25 06:05	1
d-N-EtFOSA-M	53		25 - 150	12/17/25 13:04	12/26/25 06:05	1
D7-NMeFOSE	46		25 - 150	12/17/25 13:04	12/26/25 06:05	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-25-202512

Lab Sample ID: 320-128161-9

Date Collected: 12/08/25 14:15

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
D9-NEtFOSE	43		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C3 HFPO-DA	86		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C-6:2 FTCA	94		25 - 150	12/17/25 13:04	12/26/25 06:05	1
13C-8:2 FTCA	82		25 - 150	12/17/25 13:04	12/26/25 06:05	1

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.6		3.8	0.88	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoropentanoic acid (PFPeA)	12		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorohexanoic acid (PFHxA)	26		3.8	0.59	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoroheptanoic acid (PFHpA)	1.8 J		3.8	0.73	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorooctanoic acid (PFOA)	19		3.8	1.0	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorononanoic acid (PFNA)	1.6 J		3.8	0.42	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorodecanoic acid (PFDA)	7.6		3.8	0.92	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoroundecanoic acid (PFUnA)	ND		3.8	0.80	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorododecanoic acid (PFDoA)	2.5 J		3.8	0.57	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorotridecanoic acid (PFTTrDA)	ND		3.8	0.40	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorotetradecanoic acid (PFTTeDA)	0.81 J		3.8	0.71	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorobutanesulfonic acid (PFBS)	5.3		3.8	0.73	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.71	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorohexanesulfonic acid (PFHxS)	2.0 J		3.8	0.56	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.94	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorooctanesulfonic acid (PFOS)	11		3.8	0.83	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.56	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		3.8	1.0	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorododecanesulfonic acid (PFDoS)	ND *		3.8	0.90	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluorooctanesulfonamide (PFOSA)	1.1 J		3.8	0.63	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	15		3.8	0.44	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.6		3.8	0.92	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
4:2 FTS	ND		3.8	0.98	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
6:2 FTS	1.1 J		3.8	0.52	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
8:2 FTS	ND		3.8	0.67	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.94	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.8		3.8	0.90	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.9		3.8	0.54	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
9CI-PF3ONS	ND		3.8	0.67	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
11CI-PF3OUdS	ND		3.8	0.59	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.75	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	35		3.8	0.73	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	13		3.8	0.79	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.87	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		3.8	0.46	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	☼	12/17/25 12:57	12/26/25 03:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	73		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFBA	90		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C5 PFPeA	101		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFHxA	94		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFHpA	98		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFOA	98		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C5 PFNA	99		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFDA	99		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFUnA	98		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFDoA	77		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 PFTeDA	36		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C3 PFBS	95		25 - 150	12/17/25 12:57	12/26/25 03:45	1
18O2 PFHxS	91		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C4 PFOS	108		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D3-NMeFOSAA	85		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D5-NEtFOSAA	99		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 4:2 FTS	138		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 6:2 FTS	125		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C2 8:2 FTS	143		25 - 150	12/17/25 12:57	12/26/25 03:45	1
d-N-MeFOSA-M	54		25 - 150	12/17/25 12:57	12/26/25 03:45	1
d-N-EtFOSA-M	55		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D7-NMeFOSE	58		25 - 150	12/17/25 12:57	12/26/25 03:45	1
D9-NEtFOSE	74		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C3 HFPO-DA	81		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C-6:2 FTCA	74		25 - 150	12/17/25 12:57	12/26/25 03:45	1
13C-8:2 FTCA	88		25 - 150	12/17/25 12:57	12/26/25 03:45	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	130	B	3.8	0.88	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluoropentanoic acid (PFPeA)	79	*+ B J	3.8	0.79	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorohexanoic acid (PFHxA)	56	*+ J	3.8	0.59	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluoroheptanoic acid (PFHpA)	27		3.8	0.73	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorooctanoic acid (PFOA)	48		3.8	1.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorononanoic acid (PFNA)	15		3.8	0.42	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorodecanoic acid (PFDA)	13		3.8	0.92	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluoroundecanoic acid (PFUnA)	6.1		3.8	0.80	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorododecanoic acid (PFDoA)	5.4		3.8	0.57	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorotridecanoic acid (PFTrDA)	1.3	J	3.8	0.40	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorotetradecanoic acid (PFTeDA)	2.1	J	3.8	0.71	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorobutanesulfonic acid (PFBS)	17		3.8	0.73	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.8	0.71	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorohexanesulfonic acid (PFHxS)	2.0	J	3.8	0.56	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.8	0.94	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorooctanesulfonic acid (PFOS)	27		3.8	0.83	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorononanesulfonic acid (PFNS)	ND		3.8	0.56	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorodecanesulfonic acid (PFDS)	ND	* UJ	3.8	1.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND	* UJ	3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Perfluorooctanesulfonamide (PFOSA)	ND		3.8	0.63	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		3.8	0.44	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.8	0.92	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
4:2 FTS	ND		3.8	0.98	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
6:2 FTS	ND		3.8	0.52	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
8:2 FTS	ND		3.8	0.67	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		3.8	0.94	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		3.8	0.90	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		3.8	0.54	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
9CI-PF3ONS	ND	*	3.8	0.67	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		3.8	0.79	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
11CI-PF3OUdS	ND	* UJ	3.8	0.59	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.8	0.75	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		3.8	0.79	ug/Kg	✱	12/17/25 13:04	12/26/25 06:19	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-A-24-202512

Lab Sample ID: 320-128161-10

Date Collected: 12/08/25 14:56

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 26.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		3.8	0.73	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		3.8	0.79	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		3.8	0.77	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		3.8	0.87	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	✱	3.8	0.46	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		3.8	0.61	ug/Kg	☼	12/17/25 13:04	12/26/25 06:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	66		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFBA	98		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C5 PFPeA	94		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFHxA	97		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFHpA	97		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFOA	96		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C5 PFNA	82		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFDA	76		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFUnA	65		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFDoA	51		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 PFTeDA	56		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C3 PFBS	106		25 - 150	12/17/25 13:04	12/26/25 06:19	1
18O2 PFHxS	93		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C4 PFOS	101		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D3-NMeFOSAA	75		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D5-NEtFOSAA	77		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 06:19	1
13C2 6:2 FTS	97		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C2 8:2 FTS	88		25 - 150	12/17/25 13:04	12/26/25 06:19	1
d-N-MeFOSA-M	52		25 - 150	12/17/25 13:04	12/26/25 06:19	1
d-N-EtFOSA-M	54		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D7-NMeFOSE	48		25 - 150	12/17/25 13:04	12/26/25 06:19	1
D9-NEtFOSE	47		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C3 HFPO-DA	85		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C-6:2 FTCA	87		25 - 150	12/17/25 13:04	12/26/25 06:19	1
13C-8:2 FTCA	98		25 - 150	12/17/25 13:04	12/26/25 06:19	1

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		18	4.3	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluoropentanoic acid (PFPeA)	ND		18	3.8	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluorohexanoic acid (PFHxA)	ND		18	2.9	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluoroheptanoic acid (PFHpA)	ND		18	3.5	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1
Perfluorooctanoic acid (PFOA)	ND		18	4.9	ug/Kg	☼	12/17/25 12:57	12/26/25 03:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		18	2.0	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorodecanoic acid (PFDA)	ND		18	4.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluoroundecanoic acid (PFUnA)	ND		18	3.9	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorododecanoic acid (PFDoA)	ND		18	2.8	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		18	1.9	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		18	3.5	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.7	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.5	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorooctanesulfonic acid (PFOS)	17	J I J	18	4.0	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorononanesulfonic acid (PFNS)	ND		18	2.7	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		18	4.8	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND	*	18	4.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	3.1	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	7.7	J	18	2.1	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
4:2 FTS	ND		18	4.7	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
6:2 FTS	ND		18	2.5	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
8:2 FTS	ND		18	3.2	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.5	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.5	J	18	4.4	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.5	J	18	2.6	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
9CI-PF3ONS	ND		18	3.2	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.8	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
11CI-PF3OUdS	ND		18	2.9	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.6	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.8	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	110		18	3.5	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.3	J	18	3.8	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.7	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.2	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		18	2.2	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	3.0	ug/Kg	✧	12/17/25 12:57	12/26/25 03:59	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	90		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFBA	94		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C5 PFPeA	100		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFHxA	104		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFHpA	103		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFOA	104		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C5 PFNA	102		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFDA	107		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFUnA	109		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFDoA	87		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 PFTeDA	33		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C3 PFBS	97		25 - 150	12/17/25 12:57	12/26/25 03:59	1
18O2 PFHxS	97		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C4 PFOS	117		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D3-NMeFOSAA	120		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D5-NEtFOSAA	119		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 4:2 FTS	133		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 6:2 FTS	142		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C2 8:2 FTS	160	*5+	25 - 150	12/17/25 12:57	12/26/25 03:59	1
d-N-MeFOSA-M	67		25 - 150	12/17/25 12:57	12/26/25 03:59	1
d-N-EtFOSA-M	62		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D7-NMeFOSE	61		25 - 150	12/17/25 12:57	12/26/25 03:59	1
D9-NEtFOSE	79		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C3 HFPO-DA	86		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C-6:2 FTCA	83		25 - 150	12/17/25 12:57	12/26/25 03:59	1
13C-8:2 FTCA	103		25 - 150	12/17/25 12:57	12/26/25 03:59	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	160	B	18	4.3	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoropentanoic acid (PFPeA)	110	*+ B J	18	3.8	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorohexanoic acid (PFHxA)	45	*+ J	18	2.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoroheptanoic acid (PFHpA)	31		18	3.5	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorooctanoic acid (PFOA)	38		18	4.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorononanoic acid (PFNA)	17	J	18	2.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorodecanoic acid (PFDA)	9.3	J	18	4.4	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoroundecanoic acid (PFUnA)	6.1	J	18	3.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorododecanoic acid (PFDoA)	5.1	J	18	2.8	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorotridecanoic acid (PFTeDA)	2.1	J	18	1.9	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorotetradecanoic acid (PFTeDA)	ND		18	3.4	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorobutanesulfonic acid (PFBS)	6.8	J	18	3.5	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		18	3.4	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		18	2.7	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		18	4.5	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1
Perfluorooctanesulfonic acid (PFOS)	8.1	J	18	4.0	ug/Kg	✱	12/17/25 13:04	12/26/25 06:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanesulfonic acid (PFNS)	ND		18	2.7	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluorodecanesulfonic acid (PFDS)	ND	* UJ	18	4.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluorododecanesulfonic acid (PFDoS)	ND	* UJ	18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluorooctanesulfonamide (PFOSA)	ND		18	3.1	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	2.1	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
4:2 FTS	ND		18	4.7	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
6:2 FTS	ND		18	2.5	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
8:2 FTS	ND		18	3.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		18	4.5	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		18	4.4	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		18	2.6	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
9CI-PF3ONS	ND	*	18	3.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		18	3.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
11CI-PF3OUdS	ND	* UJ	18	2.9	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		18	3.6	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		18	3.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		18	3.5	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		18	3.8	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		18	3.7	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		18	4.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	*+	18	2.2	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		18	3.0	ug/Kg	☼	12/17/25 13:04	12/26/25 06:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	57		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFBA	100		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C5 PFPeA	91		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFHxA	98		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFHpA	100		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFOA	97		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C5 PFNA	85		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFDA	71		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFUnA	55		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFDoA	45		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 PFTeDA	58		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C3 PFBS	98		25 - 150	12/17/25 13:04	12/26/25 06:33	1

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Client Sample Results

Client: Madison Metropolitan Sewerage District
Project/Site: PFAS Sampling

Job ID: 320-128161-2

Client Sample ID: BIO-B-202512

Lab Sample ID: 320-128161-11

Date Collected: 12/08/25 13:49

Matrix: Solid

Date Received: 12/11/25 09:50

Percent Solids: 5.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C4 PFOS	94		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D3-NMeFOSAA	62		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D5-NEtFOSAA	63		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 4:2 FTS	0		0 - 10	12/17/25 13:04	12/26/25 06:33	1
13C2 6:2 FTS	103		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C2 8:2 FTS	79		25 - 150	12/17/25 13:04	12/26/25 06:33	1
d-N-MeFOSA-M	49		25 - 150	12/17/25 13:04	12/26/25 06:33	1
d-N-EtFOSA-M	48		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D7-NMeFOSE	44		25 - 150	12/17/25 13:04	12/26/25 06:33	1
D9-NEtFOSE	40		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C3 HFPO-DA	88		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C-6:2 FTCA	91		25 - 150	12/17/25 13:04	12/26/25 06:33	1
13C-8:2 FTCA	91		25 - 150	12/17/25 13:04	12/26/25 06:33	1