Immediate Response Action Status Report #13

71 Airport Road West Tisbury, Massachusetts RTN 4-0027571





#143-3953-22001 December 19, 2022



December 19, 2022

Ms. Jennifer Wharff Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup Southeast Regional Office 20 Riverside Drive Lakeville, MA 02347

Re: Immediate Response Action Status Report #13 71 Airport Road West Tisbury, Massachusetts RTN 4-0027571

Dear Ms. Wharff:

Tetra Tech, Inc. has prepared this Immediate Response Action (IRA) Status Report for the abovereferenced Disposal Site on behalf of the Martha's Vineyard Airport Commission (MVAC). This IRA addresses assessment and response activities related to the identification of a potential Imminent Hazard to human health from per- and polyfluoroalkyl substances (PFAS) in groundwater attributed to suspected releases from various sources including aqueous film-forming foam (AFFF). This IRA is being conducted in conformance with the Massachusetts Contingency Plan (MCP) under 310 CMR 40.0410, and at the direction of MassDEP.

Please contact the undersigned at (508) 786-2200 if you have any questions or require additional information.

Very truly yours,

Holly S. King Environmental Engineer

Ronald E. Myrick, Jr., P.E., L.S.P. Vice President

Ian S. Cannan, CHMM Project Manager

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1.0 INTRODUCTION

On behalf of the Martha's Vineyard Airport Commission (MVAC), Tetra Tech has prepared this Immediate Response Action (IRA) Status Report for the disposal site associated with Release Tracking Number (RTN) 4-27571 ("the Site"). This IRA Status Report was prepared in accordance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0425, and as required by the Massachusetts Department of Environmental Protection (MassDEP). This report is submitted to MassDEP via the electronic online filing system, eDEP, under transmittal form BWSC-105. This report is subject to the limitations and conditions included in Appendix A. The parties that are involved in the implementation of this IRA Plan are:

Person Conducting the IRA

Martha's Vineyard Airport Commission 71 Airport Road West Tisbury, MA 02575 (508) 693-7022

Licensed Site Professional

Ronald E. Myrick, Jr., P.E., L.S.P. Tetra Tech, Inc. 100 Nickerson Road Marlborough, MA 01752 (508) 786-2200

POET System Installation/Maintenance

Culligan Water Filtration of New England 11 Jan Sebastian Way Sandwich, MA 02563 (508) 969-4840

1.1 GENERAL DISPOSAL SITE INFORMATION

The Site is located at the Martha's Vineyard Airport (MVY), an airport owned by Dukes County and operated by MVAC. MVY is comprised of two separate parcels of land in West Tisbury and Edgartown, Massachusetts: a 410.28-acre parcel of land identified as 71 Airport Road in West Tisbury, Massachusetts and a separate 385.6-acre parcel of land identified as 9 Airport Road in Edgartown, Massachusetts. The Site also includes properties owned by other parties in the downgradient (southerly) direction relative to MVY. The general location of the Site is shown on a topographic map of the area on Figure 1. A plan of MVY and the surrounding area is provided as Figure 2.

The Site is generally located in a cleared area surrounded by scrub oak forest on the island of Martha's Vineyard off the south coast of Massachusetts. The Site includes paved runways and roads, several separate buildings related to airport operations, aircraft storage, airport maintenance and administration, associated parking areas, and a business park with numerous buildings for office space and commercial tenants. The MVY property is supplied with municipal water from the Town of Oak Bluffs, and the on-site wastewater treatment plant (WWTP) receives wastewater from the airport and business park.

The Site also includes residential developments to the south of MVY including suburban style single family homes with both seasonal and fulltime residents. The residential developments south of MVY have private wells and on-site sewage disposal (septic) systems.

Based on the developing scientific data regarding per- and polyfluoroalkyl substances (PFAS), and the likelihood of future MassDEP guidance and regulatory standards at the time, in 2018 MVAC initiated an assessment of suspected releases of aqueous film-forming foam (AFFF) associated with Federal Aviation Administration (FAA)-required testing of AFFF formulations, historic firefighting exercises (none

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documented over the past 20 years), one documented small aircraft gear-up landing where AFFF was applied to an aircraft and runway in 2006, and one response to a fire at a boat storage yard at the adjacent Airport Business Park in 2011. AFFF is comprised of PFAS compounds, and it was believed that these events may have released PFAS compounds into the environment in the past when the potential environmental impacts of PFAS were less understood, and such activities were not considered to be detrimental to groundwater.

Sampling of private wells located south of MVY on Waldrons Bottom Road and Vineyard Meadow Farms Road in November 2018 identified concentrations of PFAS above the then-applicable MassDEP Office of Research and Standards Guideline (ORSG) concentration of 70 parts per trillion (ppt) and at concentrations that necessitated reporting to MassDEP as a potential Imminent Hazard (IH) based on a Method 3 risk characterization using groundwater analytical data for a private well. Also, the release of PFAS to groundwater at the Site has resulted in the presence of certain PFAS compounds in private water supply wells which represents a Condition of Substantial Release Migration (SRM). The maximum extent of PFAS6 impacts to private wells is shown graphically in Figure 3 and the maximum PFAS6 concentrations in private wells during 2022 is shown in Figure 4.

On November 20, 2018, MassDEP was notified of the PFAS reportable condition, and RTN 4-0027571 was assigned to the PFAS release at MVY. IRA activities were initiated under oral approval of MassDEP, as further described in Section 1.2.

On November 20, 2019, a Phase I Initial Site Investigation report (Phase I Report) was submitted to MassDEP for the Site. The Phase I Report concluded that additional comprehensive response actions are necessary at the Site. The Site was classified as a Tier I Disposal Site under the MCP. Also, a Phase II Scope of Work was submitted to MassDEP concurrently with the Tier I Classification.

On December 27, 2019, MassDEP promulgated a new regulatory standard for PFAS along with other revisions to the MCP. The MCP Category GW-1 standard of 20 ppt for 6 target PFAS compounds applies to groundwater that is considered either a current or future source of drinking water. Prior IRA reports referred to the "5 target PFAS compounds"; however, with the establishment of the new MCP GW-1 standard, tables and references herein have been updated to include PFDA which was not included in the list of 5 PFAS compounds in the prior MassDEP ORSG of 70 ppt. The 6 target PFAS compounds are herein referred to as "PFAS6". Also, since an action level of 20 ppt had been established for exposure pathway elimination under the MassDEP-approved IRA Plan for RTN 4-27571, the new MCP GW-1 standard did not have a significant impact on the PFAS concentration thresholds for the project, and no additional private wells required treatment systems as a result of this change.

On November 21, 2022, a Phase II Comprehensive Site Assessment (Phase II Report) was submitted to MassDEP. The Phase II Report concluded that a condition of No Significant Risk <u>does not exist</u> for all activities and uses at the Site, and additional MCP response actions are necessary. Specifically, potential future risks to residential receptors from consumption of PFAS-impacted drinking water were identified. These risks are currently being addressed by the IRA, and there are no current significant risks to human health for residential receptors due to operation of point-of-entry treatment (POET) systems. Also, soils at the Area 1 Exposure Point (AFFF discharge area west of the WWTP, as shown in Figure 5), require additional response actions due to the potential for PFAS compounds to leach to GW-1 groundwater beneath the airport. A Phase III Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives is necessary to select a remedial action alternative for the Site pursuant to 310 CMR 40.0850. A Phase III Report is due to MassDEP by November 20, 2023. In the interim, IRA activities will continue to be performed.

1.2 SUMMARY OF INITIAL IRA ACTIVITIES

MVAC and Tetra Tech initiated IRA activities that had been orally-approved by MassDEP. These activities included providing bottled water to impacted residents, installing point-of-entry treatment (POET) systems, and performing an extensive private well sampling and public notification program within the potentially-impacted area. As outlined in the IRA Plan, the orally-approved IRA activities also included provisions for managing potential PFAS-impacted soils as part of a runway project. A written IRA Plan was then submitted to MassDEP on January 18, 2019, and MassDEP subsequently issued a Conditional Approval and Interim Deadline on February 7, 2019. IRA Status Reports were submitted to MassDEP monthly from February 2019 through July 2019. In July 2019, MassDEP approved a request to transition to semi-annual IRA Status Reports which have been submitted since December 19, 2019.

The December 19, 2019 IRA Status Report also included a Modification to the IRA Plan. The Modification to the IRA Plan requested MassDEP to review/approve treatment of AFFF wash water from AFFF testing activities that is contained within an underground storage tank at the airport. MassDEP Bureau of Waste Site Cleanup (BWSC) referred to the Underground Injection Control (UIC) Program for the management of this process wastewater, and a registration for treatment and discharge of the AFFF wash water was submitted to MassDEP on April 3, 2020. The UIC registration was subsequently approved on April 22, 2020. Also, the IRA Modification requested an extension of the timeframe for the storage of MCP Remediation Waste at the Site. Spent granular activated carbon (GAC) remediation waste will be accumulated longer than 120 days to facilitate an anticipated bulk shipment to an approved facility once the market for appropriate disposal of PFAS GAC waste has further matured.

1.3 PILOT-SCALE PLUMESTOP BARRIER

On November 2, 2022, a Modified IRA Plan was submitted to MassDEP which detailed the intent to install a pilot-scale treatment barrier just downgradient from AFFF testing area proximate to the WWTP at Area 1. The proposed barrier would be composed of colloidal carbon (PlumeStop[®] product by Regenesis) and installation would involve the injection of the product via direct push drilling techniques at the targeted depth. As detailed below, the PlumeStop barrier was installed during the week of December 5, 2022 and the as-built location of the PlumeStop barrier is shown on Figure 5. This treatment process is intended to transform the native sand and gravel into a purifying filter with the goal of mitigating the migration of PFAS in the target area to the downgradient area.

2.0 STATUS OF IRA ACTIVITIES

The following sections describe the status of assessment and remedial actions performed under the IRA pursuant to 310 CMR 40.0425(3)(a).

2.1 PRIVATE WELL ASSESSMENT AND MONITORING

The IRA includes identification and sampling of private wells proximate to MVY to assess the extent of PFAS impacts to groundwater. Laboratory analytical data have been reported for a total of 208 private wells at 206 properties at and downgradient from MVY. This total includes 204 residential wells at 202 properties and four commercial/industrial water supply wells. A total of 45 private wells that were sampled had reported concentrations of PFAS6 compounds above the MassDEP GW-1 standard (and MassDEP-approved action level for exposure pathway elimination) of 20 ppt. Concentrations of PFAS6 in private

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wells were below the laboratory reporting limit (typically between 1 and 2 ppt) in 112 of the 208 private wells sampled. The remaining locations had detectable concentrations of PFAS6 at levels below 20 ppt. Figure 3 provides a graphical depiction of the peak reported concentrations of PFAS6 at each of the private wells that have been sampled since monitoring began. Figure 4 provides a graphical depiction of the peak PFAS6 concentrations detected during 2022.

Private well sampling was performed in May/June, July, September, October and December of 2022, during the period of this IRA Status Report. Please note that some of the samples from the May/June 2022 sampling event were not reported in the June 2022 IRA Status Report and are presented herein. Also, data from the December 2022 sampling event have not yet been reported by the laboratory and are not included in this report.

The results of analysis of seven new private wells were reported during this period (Property IDs GP, GQ, GR, GS, GT, GU and GV). Also, an annual monitoring program is performed under this IRA to monitor PFAS6 concentrations over time. The locations included in the annual monitoring program include those that are occupied as residences and where PFAS6 compounds were identified at detectable concentrations but below the 20 ppt MCP GW-1 standard and those residential locations that are proximate to private wells where PFAS6 was detected above 20 ppt. A total of 64 residential wells are currently included in the annual monitoring program and are targeted for continued monitoring. The private well analytical data obtained during the period of this IRA Status Report are summarized in Table 1, where the PFAS6 data are compared to the current MCP Method 1 standards for groundwater category GW-1, and the PFAS6 concentrations are color coded to match Figures 3 and 4. The wells included in the annual sampling program were sampled during at least one of the 2022 sampling events completed through December 2022. Efforts have been made and will continue to coordinate sampling at locations that have not been sampled within the past year; however, access to homes has been limited since many of the homes are seasonal (summer only).

At the residences identified and sampled (or re-sampled) during this reporting period, samples were collected from a location (spigot or tap) after water was purged for approximately 10-15 minutes. Following purging a sample of the water was collected from a sampling point located as close as possible to where the well water enters the residence and prior to any existing treatment systems. This choice of location was intended to limit the potential for interference from potential PFAS-containing piping connections and sealants that may exist within the residences. In some cases, it was not feasible to enter the residence to collect the water samples, and in those instances, water samples were collected from an outside spigot that was not filtered or treated by existing treatment systems. The private well water samples were submitted to Alpha Analytical, Inc. of Westborough, Massachusetts (Alpha) for laboratory analysis of PFAS via Isotope Dilution. Laboratory analytical results have been reported for the May/June, July, September, October 2022 sampling events. The results from the December 2022 sampling event are pending laboratory analysis and will be presented in the next IRA Status Report (June 2023). The laboratory analytical data for this IRA Status Report are summarized in Table 1. Laboratory certificates of analysis are provided in Appendix B.

For the private wells that were sampled for the first time and data were reported during the period of this IRA Status Report (Property IDs GP, GQ, GR, GS, GT, and GU), PFAS6 was not detected above the laboratory reporting limit which was also below the MCP Method 1 GW-1 standard of 20 ppt. Therefore, no further MCP response actions were warranted at this time for these properties.

Of the 59 private wells (not including locations where POET systems exist) that were re-sampled, PFAS6 concentrations were found to have decreased or remained the same at 39 private wells and increased at

20 private wells. Also, PFAS6 concentrations increased to above the MCP Method 1 standard for groundwater category GW-1 of 20 ppt at Properties AT (increased to 22 ppt in June 2022 from 9.43 ppt in June 2021) and CS (increased to 76.3 ppt in June 2022 from <1.88 ppt in June 2021). The locations where PFAS6 concentrations in private well samples exceeded 20 ppt were offered bottled water in accordance with the IRA Plan while arrangements were made for installation of a POET system. Further information on POET installations is presented in Section 2.3.

Since a comprehensive site-wide sampling has not been performed recently, it is anticipated that a full study area sampling program to re-sample private wells within and near the limits of the Site will be performed in June 2023. Tetra Tech will attempt to contact all property owners within the study area to request sampling in spring 2023.

2.1.1 Additional Private Well Sampling Outreach Efforts

Efforts have continued to identify and obtain permission to sample the remaining private wells within the study area that have never been sampled for PFAS as part of this IRA. These outreach efforts have included mailing of letters, posting of notices on doors and going door to door to attempt to make contact with residents within the study area of the Site. Concurrent with the submittal of the Phase II Report, written notices were sent to the owners of nine residential properties that appeared to be developed by residential buildings or structures suggesting potential for habitation and were located within the defined limits of the Site, but where previous attempts at outreach for sampling were not successful. A response to one of these properties (Property GV) was received, and this property was sampled in December 2022. Efforts will continue to attempt to gain permission to sample the occupied residences on these parcels of land.

2.2 IH EVALUATION UPDATE

Tetra Tech has prepared an Imminent Hazard Evaluation (IHE) in conformance with the requirements of the MCP, 310 CMR 40.0950 to characterize the potential health risks associated with PFAS compounds detected in residential private well samples in the area downgradient from MVY. The prior IHE update was presented in the June 2020 IRA Status Report.

According to Appendix D of "MassDEP Private Wells PFAS Sampling Program Questions and Answers Regarding the Management of PFAS6 in Your Groundwater Under the Massachusetts Oil and Hazardous Material Release Prevent and Response Act" (December 2, 2020), MassDEP has established a drinking water Imminent Hazard (IH) concentration for PFAS6 of 90 ppt.

Based on a comparison of the exposure point concentrations (EPCs) calculated for private wells as part of the Phase II Report (included as Appendix C) the calculated EPCs exceed the MassDEP established drinking water IH concentration of 90 ppt at 12 individual private wells. Also, recent sampling of untreated water at Property AC has exceeded the MassDEP IH concentration of 90 ppt in June 2021 and June 2022. Therefore, a potential IH exists at the following 13 properties due to potential exposure to PFAS6 in drinking water:

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Property ID	PFAS6 EPC ¹	POET Installed
Property F	1,700	Yes
Property J	1,427	Yes
Property Y	421	Yes
Property I	395	Yes
Property DA	276	Yes
Property B	273	Yes
Property L	225	Yes
Property BJ	201	Yes
Property G	188	Yes
Property BO	188	Yes
Property AC	156	Yes
Property AY	138	Yes
Property CL	97	Yes

It is noted that the potential IH to human health at the 13 affected private wells is being mitigated via POET systems at each of the residences. The PFAS exposure at properties where the PFAS6 concentration is below 90 ppt do not present an IH to human health, based on our current understanding of the conditions at the Site. However, drinking water at each of the private wells where the total PFAS6 concentration exceeds the MCP Method 1 GW-1 standard of 20 ppt is being mitigated via POET systems and/or have been offered bottled water pending POET system installation.

Tetra Tech will continue to monitor PFAS6 concentrations at private wells, regulatory changes, and updates to PFAS exposure profiles that may warrant an update to the IHE for the Site. Such updates to the IHE will be presented in future IRA submittals.

2.3 STATUS OF EXPOSURE PATHWAY ELIMINATION/MITIGATION MEASURES

Immediately upon identification of a potential IH to human health due to PFAS6 in drinking water and notification of MassDEP of the initial potential IH, arrangements were made for the delivery of bottled water to the affected residences. The occupants of affected residences where a potential IH to human health may exist were verbally notified of the results of the analysis with a recommendation to cease

¹ PFAS6 EPCs based on the EPCs presented in the December 2022 Phase II Report except for Property AC where PFAS6 concentrations in the last two samples increased to above 90 ppt and the maximum concentration is reported as the EPC.

consumption of water from their private wells. Subsequently, a written letter was provided to the affected residents summarizing the results of sampling and laboratory analysis with a recommendation to cease consuming water from the private well and use bottled water for consumption.

As an initial measure to eliminate the Critical Exposure Pathway (CEP), bottled water was offered and POET systems were subsequently installed at residences with private wells where the PFAS6 compounds were detected at concentrations exceeding or approaching (but below) the then applicable 70 ppt MassDEP ORSG, which was identified as above a presumed background of 20 ppt. It is difficult to discern whether the detection of PFAS in water from private wells downgradient from MVY is attributable to AFFF releases at the Site and/or from other anthropocentric background sources such as historic atmospheric deposition, septic system discharges and/or discharges of wastewater from a WWTP. An initial review of the feasibility of mitigating the CEP for those locations where PFAS6 are detected but at concentrations below an IH was presented in the March 2019 IRA Status Report. Response actions for RTN 4-0027571 were implemented under an IRA Plan to mitigate human exposure to PFAS6 that present a potential IH to human health, and those locations where an IH is not identified but where PFAS6 concentrations exceed the MCP Method 1 GW-1 standard of 20 ppt in drinking water at the Site. It is anticipated that this feasibility evaluation will be re-assessed as part of future IRA and/or MCP response actions, as appropriate.

A total of 50 POET systems were installed at 45 individual properties where the maximum PFAS6 concentration in private wells have been documented to exceed or approach the targeted action level of 20 ppt (which is also the current MCP GW-1 standard). A summary of the treatment system installations is provided in Table 3. As noted on Table 3, two separate POET systems were required at five properties due to the presence of multiple residential structures on a property that were connected to the private well via separate water lines. At this time, bottled water is no longer provided to locations where prior treatment system performance sampling has indicated that the treatment systems were meeting treatment design goals and functioning properly.

The POET systems are comprised of 12" x 42" upflow type polyethylene vessels with 55 pounds of GAC, a cartridge filter (DGD-5005-20 sediment filter), and a flow totalizer. The POET systems installed at locations where concentrations of PFAS6 exceeded 70 ppt included two GAC units connected in series. The POET systems installed at locations where the concentrations of the sum of the PFAS6 was less than 70 ppt include one GAC unit. The POET system summary in Table 3 describes the number of GAC units installed at each property.

2.3.1 Treatment System Operation, Maintenance and Monitoring

During the period of this IRA Status Report, performance samples were collected according to the schedule established in the IRA Plan during May/June, July, September, October and December 2022. Although samples were collected in December 2022, the data have not yet been reported by the laboratory and are not included in this report. It is also noted that some of the samples from the June 2022 sampling event were not reported in the June 2022 IRA Status Report and are presented herein. Performance sampling is subject to obtaining access from property owners where POET systems have been installed. Therefore, if access is not possible or provided by property owners, POET performance sampling may be delayed to the next scheduled sampling event.

Samples were typically collected after water was purged for approximately 10-15 minutes through a sink fixture. Following purging a sample of the water was collected from a sampling port installed on the POET system prior to treatment (influent or INF). For locations where two GAC units were installed, a sample was collected at a sample port after the first GAC unit (midpoint or MID). If it is feasible, treated water

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samples after the second GAC unit (effluent or EFF) are typically collected from either a sink fixture or, if not accessible at the time of sampling, at a sample port installed after the second GAC unit. For single GAC units, one effluent (or EFF) sample was collected.

The water samples were submitted to Alpha Analytical, Inc. of Westborough, Massachusetts (Alpha) for laboratory analysis of PFAS. The treated water samples were analyzed for PFAS via EPA Method 537. The influent samples were analyzed via isotope dilution to include additional PFAS compounds to assist with source and migration assessment activities. The laboratory analytical data for POET performance sampling performed during the period of this IRA Status Report are summarized in Table 3 as the PFAS6 only. The full suite of PFAS compounds analyzed for the influent samples are presented in Table 1. Laboratory certificates of analysis for POET samples are provided in Appendix D.

The results of POET system performance sampling received to date indicate a consistent PFAS reduction to below the laboratory reporting limit after the last GAC unit at each of the locations (effluent sample). The POET systems have generally had few maintenance needs and have largely operated trouble free and without shutdown. The following maintenance activities were documented during the period of this IRA Status Report:

- Many of the homes in the downgradient area that have POET systems are used for seasonal purposes (occupied from spring to fall) and are closed up and winterized before cold weather. As detailed in previous IRA Status Reports, at some of these seasonal residences it was found that bypass piping valves were improperly positioned by others when the homes were opened up in the spring. Upon discovery of the incorrect valve settings, Tetra Tech and/or Culligan adjusted the valves to their correct positions, and the water was tested with the valves in the correct position. In some of these cases it was necessary to re-mobilize and sample POETs with incorrect valve settings after the June 2022 sampling event. During the period of this IRA Status Report, the following locations were identified with incomplete treatment due to improper valve configuration in June 2022, and the POETs were subsequently re-sampled and found to be working properly:
 - o Property AL
 - o Property FG
- Property AY reported low water pressure on June 24, 2022. Upon further assessment sediment buildup had clogged the filter screen in the first GAC unit. The system was cleaned and when it was put back on-line, the water pressure returned to normal.
- Breakthrough of PFAS6 was identified in the June 2022 sample from Property ZZ. The spent GAC was replaced, and the POET was re-sampled on August 4, 2022. The results of re-sampling indicated that PFAS6 were reduced to below the MCP GW-1 standard of 20 ppt and below laboratory detection limits indicating that the POET was meeting performance objectives.
- The concentrations of PFAS6 at the midpoint samples from Property L in June 2022 and September 2022 were found to exceed 20 ppt. The spent GAC was replaced on October 27, 2022. The POET at this location was re-sampled on December 7, 2022; however, data have not yet been reported by the laboratory and will be presented in the next IRA Status Report.
- New POET systems were installed at Properties AT and CS during the period of this IRA Status Report. The results of the initial performance sampling and laboratory analysis identified that PFOS was detected in the midpoint sample in both of these systems at concentrations of 45.4 ppt at Property AT and 23.7 ppt at Property CS. PFOS was not detected in the untreated (influent)

samples from either private well. The nature of the PFOS detected in these two newly installed POET systems is being evaluated, and re-sampling will be performed to further assess this condition. Effluent samples from these POET systems indicated that performance objectives were achieved as the PFAS6 were not detected above laboratory detection limits.

- Based on an apparent increasing trend in PFAS6 concentrations at Property AC, the sampling frequency will be increased to semi-annual.
- Based on monitoring results for Properties Y, L and AL, the 55-pounds of GAC in the first unit recovered approximately 0.1 to 0.2 grams of PFAS6 prior to breakthrough. Properties B, C, F, G, I, J, BJ and DA are approaching this quantity of PFAS6 removal, and monitoring will continue to assess the need for GAC replacement. The other POET systems have treated and recovered substantially less PFAS6 mass, indicating that the GAC at these other POET system locations likely has adequate additional capacity for PFAS6 adsorption. However, many factors can affect GAC performance including the presence of other PFAS or other compounds that may be adsorbed by the GAC. Also, breakthrough of the influent GAC unit has still not occurred at Property J which has received the highest PFAS6 loading of 0.4 grams as of September 2022 based on influent concentrations and flow rate.
 - At the following POET systems, the concentrations of PFAS6 were detected in either the treated water (EFF) or midpoint sample at concentrations above the laboratory detection limit, but below the MCP GW-1 standard of 20 ppt. This suggests that the GAC is beginning to have a reduced removal efficiency. PFAS6 concentrations will continue to be monitored, and GAC replaced if concentrations approach or exceed 20 ppt.
 - Property G
 - Property AL
 - Property BJ-1
 - Property AO
 - Property EK

2.4 IRA ACTIVITIES TO REDUCE PFAS INFILTRATION FROM SOIL TO GROUNDWATER

Soil assessment activities were performed during the period of this IRA Status Report in March 2022, as described below.

2.4.1 Soil Assessment Findings from Phase II Report

As part of prior assessments, and as presented in the Phase II Report, a total of 29 soil samples were collected from MVY to assess PFAS impacts from past discharges of AFFF at certain locations. Overall PFAS6 were detected in 19 of the 29 samples analyzed at MVY with concentrations ranging from 0.69 ng/g to 126 ng/g and an average of 10.9 ng/g. The following describes the findings of soil assessment activities at MVY. The soil sampling locations that are relevant to this IRA are shown on Figure 6. Soil analytical data are summarized in Table 4. Laboratory certificates of analysis were provided in the Phase II Report.

- In general, PFAS were not detected, or were detected at low concentrations likely consistent with background at the following locations:
 - Soil samples collected from the runway near AFFF discharge Area 6 on Figure 2

- TT-4 (near the stormwater outfall from the airport) which may have received runoff from former AFFF discharge Areas 4 and 5
- The unpaved area southeast of the ARFF building (ARFF-SOIL-0-0.5')
- The unpaved area northwest of the Hadley hanger (HADLEY SOIL-0-6")
- At AFFF discharge Area 2 (near TT-2), the shallow soil sample had a PFAS6 concentration of 8.08 ng/g. A deeper sample was collected from the soils at or near the groundwater table at 30 to 32 feet bgs and detected a lower concentration of PFAS6 of 2.58 ng/g.
- The highest concentrations and greatest frequency of detections of PFAS were detected within an area of known AFFF testing discharges where AFFF solutions were discharged to the ground surface during past FAA-required testing activities. This location, identified as Area 1, is located west of the WWTP as shown on Figure 6.
 - The highest detected PFAS6 concentration of 126 ng/g was identified in the shallow soil sample (0 to 6 inches bgs) collected at sample location AFFF-SA-4. This location was collected from an area of highly organic topsoil primarily comprised of pine needle leaf litter.
 - The average PFAS6 concentration in this area was 21.1 ng/g which is higher than the MVY average of 10.9 ng/g. The detected PFAS6 in soils at this area include PFOA (up to 34.7 ng/g), PFDA (up to 34.1 ng/g) and PFHpA (up to 21.3 ppt). Also, non-PFAS6 compounds were detected frequently including PFHxA (up to 17.5 ng/g) and PFNA (up to 36.2 ng/g).
 - At monitoring well TT-1, three soil samples were collected to assess the vertical extent of PFAS including the 0 to 1 foot, 1 to 2 foot and 26-to-28-foot bgs depth intervals. The highest concentration of PFAS6 was 4.56 ng/g and was detected in the sample from 1 to 2 feet bgs.
 - At monitoring well TT-13, two soil samples were collected to assess the vertical extent of PFAS including a shallow soil sample (0 to 6 inches bgs) and a sample from proximate to the capillary fringe at 29 feet bgs. PFAS6 were detected at a concentration of 5.95 ng/g in the shallow soils and 0.876 ng/g at 29 feet bgs. Analysis of the sample from TT-13 that was collected at 29 feet bgs reported total organic carbon at a concentration of 0.038%. These soils were comprised mostly of sand (83.8%) with some silt/clay (7%) and gravel (9.2%).
 - The soils at Area 1 were found to have PFAS that may leach to groundwater at concentrations higher than background conditions. Analysis of PFAS via synthetic precipitation leaching procedure (SPLP) was performed at two locations at Area 1 (WWTP-AFFF #2 and AFFF-SA-8) and PFAS6 were detected at concentrations of 724 ppt and 574 ppt, respectively. Also, non-PFAS6 compounds, most notably 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) and 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) were detected at concentrations higher than PFAS6 in the leachate samples.

Area 1 is currently unpaved, and precipitation may result in leaching of PFAS from soil to groundwater in this area. These data were presented in the Phase II Report.

2.4.2 IRA Response Actions for Soil

Based on the findings from the above soil sampling, the Phase II Report concluded that:

- 1. A condition of No Significant Risk <u>does not exist</u> for exposure to soil under current and future conditions at the Area 1 Exposure Point, Area 2 Exposure Point, or Hadley Hangar Exposure Point due to the potential for PFAS compounds to leach to GW-1 groundwater beneath the airport.
- 2. Soil EPCs on the airport property are below the direct contact exposure-based concentrations promulgated in 310 CMR 40.0985(6). The direct contact exposure-based standards are protective of risk to current airport workers, construction and utility workers, visitors, and trespassers at the airport.

Additional response actions for soil remediation will be evaluated under Phase III of the MCP; however, in the interim the installation of the PlumeStop barrier is intended to mitigate, at least in part, the potential impacts from leaching of PFAS from Area 1 soils. This action is intended to mitigate potential impacts from leaching of these PFAS-impacted soils at the Site while more comprehensive response actions are further assessed and developed.

Based on current information, it is unlikely that the soils at Area 2 and the Hadley Hanger are a significant source of PFAS leaching to groundwater. However, additional assessment will be completed to further assess these areas.

2.5 AFFF TESTING DISCHARGE ELIMINATION

The FAA periodically required AFFF formulation testing to be performed to ensure that AFFF will perform as needed during an emergency. Beginning in November 2018, as a conservative measure to mitigate further releases of AFFF to the subsurface, FAA-required tests of AFFF have been and will continue to be contained, and residual AFFF solutions recovered for proper disposal. This will be accomplished by disposal of liquids at an off-site approved facility or either use of closed loop testing systems or via discharge of testing solutions to a containment area at MVY. AFFF testing events that may necessitate discharge of AFFF solutions will be performed within the deicing containment area. However, it is unlikely that such discharge events will be required for FAA testing as documented in the recent FAA Cert Alert No. 21-05 (October 4, 2021), which indicates that the "FAA currently does not require the discharge of firefighting foam at Part 139 Airports except during an actual emergency involving a fuel fire." MVY has instituted other approved methods to demonstrate their preparedness to respond to emergency events in accordance with FAA requirements.

However, if a testing discharge event is required, such testing events will be performed within the deicing containment area which is a sloped and paved apron area at the southeast portion of the tarmac at MVY, as shown on Figure 2. A valve-operated piping system connects the containment area to an underground containment tank (to contain residues during deicing and now AFFF testing) or a subsurface infiltration area (for normal stormwater discharges). Until non-discharge methods were approved, in recent years AFFF testing was performed within the paved and depressed area, and the control valves were set such that residues were contained and collected into the underground containment, as applicable. The design drawings for the deicing containment area were provided in the IRA Plan.

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To facilitate management of these accumulated AFFF solutions, a permit application was submitted to MassDEP via the Underground Injection Control (UIC) program. On April 2, 2020, a BRP WS 06 permit application was submitted via eDEP under Transaction #1172893. On April 22, 2020, MassDEP provided an email confirming that they had reviewed the permit application and supporting documentation and issued an approval to operate in accordance with the UIC program. A copy of the email from MassDEP was provided in the June 2020 IRA Status Report.

AFFF testing was performed in fall 2018 and spring 2019 within the deicing apron area, and the control valve was configured such that AFFF residues were contained and collected into the underground containment tank during the test. Approximately 7,000 gallons of AFFF solution and flush water have been contained within the underground tank. As described in prior IRA Status Reports, the treatment and discharge of AFFF solutions under the UIC program has been suspended while alternatives for treatment and/or disposal are further evaluated. A simple bioreactor was set up in the tank to treat the biodegradable constituents of the AFFF during the summer and fall of 2022. The effectiveness of this approach is being evaluated. If the biodegradable constituents are reduced, it is anticipated that GAC will be used to remove the non-biodegradable PFAS prior to discharge under the UIC program. The results of these efforts to treat collected AFFF solutions at MVY will be presented in future IRA Status Reports.

2.6 FIELD SAMPLING QUALITY ASSURANCE AND QUALITY CONTROL

During implementation of the IRA, quality assurance/quality control (QA/QC) sampling was performed. The following QA/QC sampling was performed from June 2022 through September 2022. Additional QA/QC sampling was performed during the December 2022 sampling event; however, results have not yet been reported by the laboratory. QA/QC data are summarized in Table 5. Laboratory certificates of analysis were included in the Phase II report.

- During each sampling event, one field blank sample was collected during each sampling activity. A total of two field blanks were collected in June 2022 (POET sampling and groundwater sampling). Also, in September 2022, three field blanks were collected (POET sampling, groundwater sampling, and soil sampling). The field blanks were submitted to Alpha Analytical and analyzed for PFAS via EPA Method 537. The laboratory analysis of field blanks in June and September 2022 did not detect PFAS about the laboratory detection limits. This indicates that cross-contamination from conditions at the Site and during transit to the laboratory did not adversely affect the data.
- During groundwater sampling, an equipment blank was collected in June and September 2022 to assess the effectiveness of field decontamination methods. The equipment blank samples were analyzed for PFAS at Alpha Analytical. PFAS6 were not detected in either of the equipment blank samples. However, in the September 2022 equipment blank, 6:2FTS was detected at a concentration of 33.6 ppt. This suggests that potential carry-over of 6:2FTS during sampling either from decontamination and/or equipment used during sampling (high-density polyethylene tubing or sampling pump). Due to the low detection of 6:2 FTS and since PFAS6 were not detected, this finding does not significantly impact the findings of these data.
- Trip blank samples were submitted with each of sample coolers transported to Alpha Analytical to assess sample integrity during temporary storage and transport. Three trip blank samples were analyzed in September 2022. The analysis of the trip blank samples did not report detectable concentrations of PFAS6; however, 6:2FTS was detected at a concentration of 1.99 ppt in one of

the trip blank samples. This indicates that cross-contamination from conditions at the Site and/or during transit to the laboratory did not affect the PFAS6 data. However, potential laboratory or cross-contamination from 6:2FTS is noted. Since PFAS6 were not detected, this finding does not significantly impact the findings of these data.

Two field blind duplicate samples were collected during sampling in June 2022, one for a sample from a private well (Property FG) and a second from a groundwater monitoring well sample (TT-11). The relative percent difference between the duplicate and the primary samples indicated values ranging from 2.1% to 8.7%. These values are well below acceptable laboratory duplicate QC limits for RPD of 30%.

3.0 SIGNIFICANT NEW SITE INFORMATION

The following new Site information has been documented since submittal of the Phase II Report.

3.1 MONITORING WELL INSTALLATIONS

Monitoring wells TT-18 through TT-23 were installed between October 25-26, 2022, by New England Geotech using a truck mounted Geoprobe 7822DT direct push drill rig. These monitoring wells were installed near Area 1 to further refine the extent of PFAS impacts in this area in preparation of the PlumeStop barrier design.

Additional monitoring wells were installed by New England Geotech using a truck mounted Geoprobe 7822DT direct push drill rig on December 7 and 8, 2022. One monitoring well was installed at Area 1 within the PlumeStop barrier (TT-25) and just downgradient of the barrier a shallow and deep well couplet was installed (TT-26S/D). Additional upgradient monitoring wells were installed north of Area 1 (TT-28 and TT-29). An existing well (MW-9) was identified west of Area 1, and a new monitoring well (TT-27) was installed west of MW-9 to further refine the extent of PFAS impacts in this area of MVY. Lastly, MW-30 was installed east of the MVY terminal building to address a potential data gap.

The locations of the groundwater monitoring wells proximate to Area 1 are shown on Figure 5. Soil boring logs and groundwater monitoring well construction diagrams are included in Appendix E.

3.1.1 Groundwater Gauging and Elevation Survey

On December 9, 2022, Tetra Tech surveyed the new monitoring wells and incorporated the measured elevations into the existing monitoring well survey data for the Site. Select monitoring wells in the vicinity of the PlumeStop barrier were gauged using an electronic water level meter. Survey and groundwater gauging data are summarized in Table 6. These groundwater elevation data were used to generate and updated potentiometric surface map of this area which is included as Figure 5. We note a very small groundwater gradient in the proximity around Area 1, and very minor measurement differences could dramatically impact the appearance of the potentiometric surface map. Based on the current potentiometric surface map, a southerly direction of groundwater flow is still evident proximate to Area 1; however, the discharge from the WWTP may be inducing a westerly influence on groundwater flow direction approaching the WWTP discharge/infiltration area.

3.1.2 Groundwater Sampling and Laboratory Analysis

On October 26 and 27, 2022, Tetra Tech collected groundwater samples from monitoring wells T-18 through TT-24. The groundwater monitoring wells were purged and sampled using a Proactive stainless-steel Hurricane Pro pump via dedicated high-density polyethylene (HDPE) tubing set at the approximate midpoint of the well screen. Groundwater was purged at a low flow rate until temperature, pH, specific conductance, dissolved oxygen concentration and oxidation-reduction potential had stabilized, or until at least 3 well volumes had been purged at a low flow rate. Groundwater samples were collected and submitted for analysis of PFAS via LCMS with isotope dilution and/or EPA Method 537 at Alpha Analytical. Groundwater analytical data from monitoring wells are summarized in Table 7. Laboratory certificates of analysis are included in Appendix F. The following summarizes the findings of laboratory analysis of these groundwater samples proximate to Area 1:

- Groundwater monitoring well TT-18 was installed within Area 1 and upgradient from TT-13. PFAS6 was detected at a concentration of 181 ppt including primarily PFHpA (120 ppt) and PFOA (52.1 ppt).
 - Non-PFAS6 compounds were also detected at monitoring well TT-18, primarily including 6:2FTS (3,470 ppt), PFPeA (402 ppt), PFHxA (228 ppt) and PFBA (110 ppt).
- Cross-gradient from Area 1 PFAS6 was detected at monitoring wells TT-19 (282 ppt) and TT-24 (330 ppt).
 - Non-PFAS6 compounds were detected at higher concentrations compared to PFAS6 at TT-19 including: 6:2FTS (3,870 ppt), PFPeA (701 ppt) and PFHxA (350 ppt).
 - At TT-24 the primary non-PFAS6 compounds detected at concentrations higher than PFAS6 included: 6:2FTS (5,040 ppt), PFPeA (894 ppt), and PFHxA (437 ppt).
- Higher concentrations of PFAS6 were detected downgradient of Area 1 at monitoring wells TT-20 (1,635 ppt) and TT-21 (1,552 ppt). Similar to other wells in this area the highest PFAS6 included PFOA and PFHpA.
 - Certain non-PFAS6 compounds were detected at concentrations that were higher than the detected PFAS6 including:
 - At TT-20: 6:2FTS (53,700 ppt), PFPeA (4,060 ppt) and PFHxA (2,140 ppt)
 - At TT-21: 6:2FTS (10,100 ppt), PFPeA (6,450 ppt), PFHxA (3,560 ppt) and PFBA (1,790 ppt).
- West of Area 1, monitoring well TT-23 was installed to refine the extent of PFAS6 impacts to groundwater. The results of the October 2022 groundwater sampling event reported PFAS6 at a concentration of 309 ppt. Based on the inferred groundwater flow direction this suggests that PFAS6 impacts to TT-23 likely source from the north of Area 1. Monitoring wells TT-28, TT-29, MW-9 and TT-27 were sampled in December, as described below, to further refine PFAS6 impacts to groundwater in this area.
 - 6:2FTS was detected in the groundwater sample from TT-23 at a concentration of 348 ppt, which is higher than the detected PFAS6 concentration of 309 ppt. Also, PFPeA was detected at 289 ppt which is higher than the detected concentration of PFHpA (246 ppt) and PFOA (54.9 ppt).

- West and downgradient from Area 1, groundwater sampling at monitoring well TT-22 reported PFAS6 at a concentration of 82.5 ppt, which is significantly less than the concentrations at TT-21 and TT-24. This monitoring well likely demonstrates the westerly limits of groundwater impacts sourcing from Area 1.
 - Higher concentrations of non-PFAS6 compounds were reported at TT-22 including: PFPeA (148 ppt) and PFHxA (101 ppt).

On December 8 and 9, 2022, Tetra Tech collected groundwater samples from monitoring wells TT-13, TT-18, TT-25, TT-26S, TT-26D, TT-27, TT-28, TT-29, TT-30 and MW-9 using the same protocol as described above. Groundwater samples were collected and submitted for analysis of PFAS via LCMS with isotope dilution and/or EPA Method 537 at Alpha Analytical. These data have not yet been reported by the laboratory and will be summarized in the next IRA Status Report.

3.2 PLUMESTOP BARRIER INSTALLATION

During the week of December 5 to 9, 2022, the PlumeStop barrier was installed just downgradient from Area 1. The PlumeStop barrier was installed by Regenesis, and further details of the installation and confirmation sampling will be provided in the June 2023 IRA Status Report. The approximate location of the PlumeStop barrier is shown on Figure 5.

Quarterly sampling of the PlumeStop barrier will begin in March 2022 and will be documented in future IRA Status Reports.

4.0 MANAGEMENT OF REMEDIATION WASTE

Spent and/or fouled GAC has been generated during change-out of POET systems including: Property C (October 2019), Property Y (June 2020), Property AY (April 2021), Property AL (July 2021), Property CL (November 2021), Property ZZ (August 2022), and Property L (October 2022). A total of approximately 330 pounds of spent/fouled GAC from POET systems is currently being stored on-site in the wastewater treatment facility storage area pending coordination of disposal. Additional GAC drums resulting from treatment of AFFF solutions under the UIC are also being stored on-site in the wastewater treatment facility storage area.

As described in the IRA Modification, since only small amounts of GAC remediation waste are anticipated to be generated as result of POET system maintenance. GAC remediation waste will be accumulated longer than 120 days to facilitate an anticipated bulk shipment to an approved facility once the market for appropriate disposal of PFAS GAC waste has further matured.

5.0 CONTINGENCY PLAN FOR MODIFIED IRA PLAN

On November 17, 2022, MassDEP issued a Conditional Approval for the modification to the IRA Plan. Specifically, MassDEP included the following condition with an Interim Deadline of December 20, 2022:

1. Submit a contingency plan should there be a sudden increase of PFAS above the baseline concentrations that could indicate that the colloidal carbon is no longer adsorbing PFAS and may be releasing it. A failure of the colloidal barrier will be suspected if the data from the monitoring wells downgradient of the barrier indicate a significant increase in PFAS concentrations.

- a. The contingency plan should, at a minimum, identify the areas where residential, private wells will be monitored; and
- b. The steps that will be taken should an increase of PFAS mass be observed in the downgradient private well raw water samples, including, but not limited to, increased residential treatment system monitoring (if applicable) to evaluate if breakthrough is occurring more quickly than originally anticipated or the provision of bottled water and/or installation of a point-of-entry treatment system.

It is anticipated that the PlumeStop barrier will be effective for mitigating the migration of PFAS in the target pilot area for several decades and possibly longer. The following presents the contingency plan to address the MassDEP condition if the groundwater monitoring described in the Modified IRA Plan indicates an increase in PFAS above baseline concentrations.

- Monitoring wells are positioned within the PlumeStop barrier and at downgradient locations within 100 feet of the barrier. Based on Flux-tracer data at monitoring well TT-13, groundwater in this area is estimated to migrate at a rate of approximately 36 to 90 feet/year. Monitoring wells are installed downgradient of the PlumeStop barrier at locations where it is anticipated that PFAS would migrate within a few months to one year. The monitoring wells are shown on Figure 5.
 - a. The initial monitoring plan presented in the Modified IRA Plan includes a minimum of three quarterly sampling events.
 - b. At a minimum, monitoring wells TT-25, TT-26S and TT-20 will be included in this initial quarterly monitoring program. After one year of quarterly monitoring, the frequency of sampling of these monitoring wells will be reduced to annually, unless significant increases in PFAS6 concentrations are identified, as further described below.
- 2. To assess the magnitude of an increase in PFAS6 concentrations that would be considered significant, we have reviewed existing groundwater analytical data in the vicinity of the PlumeStop barrier. Monitoring well TT-13 is located just upgradient from the PlumeStop barrier and monitoring wells TT-14 and M-4 are located downgradient from this area and have been sampled for PFAS at least three times. The following summarizes the general statistics for these samples:

Well ID	Number of Samples	Minimum PFAS6 (ppt)	Maximum PFAS6 (ppt)	Standard Deviation	Coefficient of Variance
TT-13	3	2,134	3,555	721.1	24.7%
TT-14	3	47	287	135.5	66.6%
M-4	5	588	1,546	421.4	41.5%

a. Based on the above data, the concentrations of PFAS6 in groundwater sample(s) from monitoring wells TT-25, TT-26S and TT-20 will be considered to have significantly increased if the reported PFAS6 concentration is 40% greater than the maximum PFAS6 concentration detected in the sample(s) collected prior to installation of the PlumeStop barrier.

- 3. If a significant increase in PFAS6, as defined above, is identified downgradient of the PlumeStop barrier at monitoring wells TT-26S and/or TT-20, the quarterly sampling of groundwater at monitoring wells located downgradient from the PlumeStop barrier will continue or resume to further assess the increased concentrations.
- 4. If the reported PFAS6 concentrations at TT-26S and/or TT-20 over four or more consecutive quarterly sampling rounds indicates a statistically significant increasing trend with a significance level of 0.05, additional actions will be taken, including further evaluating the PFAS6 migration rate in groundwater and reviewing potential downgradient receptors. Based on available information at this time, the following describes the general progression of the monitoring approach; however, this approach may be adjusted based on newer information on PFAS migration and/or downgradient receptors in the future.
 - a. Monitoring well TT-14 is located approximately 300 feet downgradient from the PlumeStop barrier and, based on the estimated PFAS6 groundwater migration rate at TT-13, it is estimated that PFAS from the PlumeStop barrier area would take approximately three to eight years to reach TT-14. If the concentrations at TT-26S and/or TT-20 indicate an increasing trend over time, monitoring well TT-14 would be added to the quarterly monitoring program no later than 30 months after an increase in PFAS6 is first identified.
 - b. A series of monitoring wells (TT-09, M-4, M-10 and RIZ-12) are located parallel to Edgartown-West Tisbury Road approximately 370-450 feet downgradient from the PlumeStop barrier. Based on the estimated PFAS groundwater migration rate at TT-13, it is estimated that PFAS from the PlumeStop barrier area would take approximately four to 12 years to reach these monitoring wells. If the PFAS6 concentrations at TT-14 indicate an increasing trend over time, monitoring wells TT-09, M-4, M-10 and RIZ-12 will be added to the quarterly monitoring program no later than 36 months after an increase in PFAS6 is first identified at TT-14.
 - c. Approximately 530 feet further downgradient from the PlumeStop barrier and 210 feet downgradient from the monitoring well grouping along Edgartown-West Tisbury Road, monitoring well M-11 is located just upgradient of the residential developments at Waldrons Bottom Road. Based on the estimated PFAS migration rate from M-4 (67 feet/year) monitoring of M-11 would start no later than 36 months after an increase if PFAS6 is first identified in TT-09, M-4, M-10 and/or RIZ-12.
- 5. If a statistically significant increasing trend in PFAS6 concentrations is detected at TT-26S or TT-20 which is found to be persistent and threatens to migrate to downgradient receptor areas over time, additional PlumeStop would be injected downgradient of the current barrier to add additional adsorptive capacity to the barrier and mitigate further migration.
- 6. The nearest private well (Property CF) is located approximately 580 feet downgradient (south) of the PlumeStop barrier. Based on the estimated PFAS groundwater migration rate at monitoring well M-4 of 67 feet/year, as presented in the Phase II Report, it is estimated that PFAS6 from M-4 or other monitoring wells along Edgartown-West Tisbury Road would take approximately four years to migrate to Property CF (or other private wells in the vicinity including Property U, Property F or Property E) after increasing concentrations are detected in one of the monitoring wells along Edgartown-West Tisbury Road. Property F has a POET and is presently monitored quarterly. Properties E, CF and U have POET systems which are currently monitored annually.

Therefore, if PFAS6 concentrations are found to demonstrate a statistically significant increasing trend at one or more of the monitoring wells at MVY that are located parallel to Edgartown-West Tisbury Road (TT-09, M-4, M-10 and RIZ-12) or at M-11, the monitoring frequency at Property CF, Property U and Property E will be increased to quarterly no later than 36 months after an increase in PFAS6 is identified.

- 7. Additional private wells are located further downgradient from the PlumeStop barrier, as shown on Figure 2. Each of the residential properties with private wells that are located within 1,300 feet of the PlumeStop barrier have POET systems to treat PFAS impacted water. Many of the POET systems on these properties are monitored quarterly, as indicated in Table 3. If concentrations of PFAS6 are found to demonstrate a statistically significant increasing trend at Property CF, Property U, Property F or Property E or one or more of the private wells that are sampled quarterly, the frequency of monitoring at the nearby private wells that are adjacent to the affected location will be increased to quarterly.
 - a. If the PFAS6 concentrations are detected in any one sample at a location where a POET system has not been installed, then bottled water will be provided until a new POET can be installed, which is consistent with the current IRA Plan.
 - b. If the PFAS6 concentrations demonstrate a statistically significant increasing trend at a private well and exceeds 70 ppt, a 2-GAC POET system (via a second GAC vessel) will be installed if one was not already installed.

6.0 CONCLUSIONS AND LSP OPINION

This IRA is being undertaken in response to the identification of a potential IH to human health due to detection of one or more of the PFAS6 compounds in water from certain private residential wells downgradient from MVY. Based on the previously documented revised IHE, a current total of 13 private wells are identified with potential IH conditions. Bottled water was offered while the installation of POET systems to eliminate and/or mitigate the potential CEP were completed for the identified affected residences where the concentrations of the PFAS6 was above 20 ppt in private wells. Performance sampling of the POET systems to date indicates generally consistent reduction of PFAS6 to below laboratory detection limits and the MCP GW-1 standard. This indicates that the GAC treatment systems are effective at reducing the PFAS6 compounds to below levels that may result in a potential IH and to levels well below the MCP GW-1 standard of 20 ppt, are included in an annual monitoring program to track concentration trends over time and assess the need for additional POET systems. Additional assessment and monitoring activities were completed during the period of this IRA Status Report and will continue. These assessment and monitoring activities will be documented in future IRA status reports.

It is our opinion that the IRA activities conducted at the Site satisfy the General Provisions for IRAs under 310 CMR 40.0411 and are suited to the Scope and Type of IRAs under 40.0414. This IRA Status Report was prepared under the supervision of the LSP for RTN 4-0027571 and is subject to the limitations and conditions in Appendix A. IRA activities will continue until IRA objectives have been achieved and/or additional Comprehensive Response Actions are implemented. This report is submitted to MassDEP under transmittal form BWSC-105.

			Compound Name	Perfluorin Acids by I	N-Ethyl Perfluorooctanesulfon amidoacetic Acid (NEtFOSAA)	N-Methyl Perfluorooctanesulfon amidoacetic Acid (NMeFOSAA)	Perfluorobutanesulfon ic Acid (PFBS)	Perfluorodecanoic Acid (PFDA)	Perfluorododecanoic Acid (PFDoA)	Perfluoroheptanoic Acid (PFHpA)	Perfluorohexanesulfo nic Acid (PFHxS)	Perfluorohexanoic Acid (PFHxA)	Perfluorononanoic Acid (PFNA)	Perfluorooctanesulfon ic Acid (PFOS)	Perfluorooctanoic Acid (PFOA)	Perfluorotetradecanoi c Acid (PFTA)	Perfluorotridecanoic Acid (PFTrDA)	Perfluoroundecanoic Acid (PFUnA)	PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA, and PFDA)
			CAS No.		2991-50-6	2355-31-9	375-73-5	335-76-2	307-55-1	375-85-9	355-46-4	307-24-4	375-95-1	1763-23-1	335-67-1	376-06-7	72629-94-8	2058-94-8	
Sample ID		Lab Sample ID		MCP Method 1 GW-1 Standard				20		20	20		20	20	20				20
Property AC-INF	6/3/2022	L2230832-02	1.87		ND	ND	ND	ND	ND	86.80	ND	96.20	ND	ND	68.70	ND	ND	ND	155.50
Property AD	6/1/2022	L2230786-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property AG	6/3/2022	L2230844-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property AH	5/31/2022	L2230762-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property AJ	6/7/2022	L2230754-01	2.00		ND	ND	ND	ND	ND	4.93	ND	3.73	ND	ND	ND	ND	ND	ND	4.93
Property AL-INF	6/8/2022	L2230741-03	1.83		ND		ND	ND	ND	22.40	3.89	29.60	ND	5.90	12.20	ND	ND	ND	44.39
Property AL-INF	9/23/2022 7/21/2022	L2252849-01 L2239303-01	1.73 2.00		ND ND	ND ND	ND ND	ND ND	ND ND	38.50 ND	8.23	56.20 ND	1.85	8.61 ND	19.20 ND	ND ND	ND ND	ND ND	76.39 ND
Property AM Property AO-INF	5/31/2022	L2239303-01 L2230773-02	1.82		ND	ND	ND	ND	ND	12.70	ND ND	11.10	ND ND	ND	ND	ND	ND	ND	12.70
Property AR	6/6/2022	L2230773-02	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property AS-INF	6/13/2022	L2232865-02	1.81		ND	ND	ND	ND	ND	26.30	ND	74.30	ND	ND	9.89	ND	ND	ND	36.19
Property AT	6/3/2022	L2230853-01	2.00		ND	ND	ND	ND	ND	22.00	ND	19.70	ND	ND	ND	ND	ND	ND	22.00
Property AU-INF	6/14/2022	L2232871-02	1.82		ND	ND	ND	ND	ND	18.70	ND	19.30	ND	ND	17.80	ND	ND	ND	36.50
Property AV	6/6/2022	L2230886-01	2.00		ND	ND	ND	ND	ND	ND	ND	5.40	ND	ND	ND	ND	ND	ND	ND
Property AW-INF	6/8/2022	L2230733-02	1.82		ND	ND	4.17	ND	ND	5.08	6.09	14.70	ND	ND	2.81	ND	ND	ND	13.98
Property AW-INF	9/19/2022	L2252883-01	1.82		ND	ND	3.47	ND	ND	8.39	6.51	22.50	ND	2.41	3.24	ND	ND	ND	20.55
Property AX-INF	6/1/2022	L2230783-03	1.79		ND	ND	ND	ND	ND	40.00	ND	46.30	ND	ND	18.70	ND	ND	ND	58.70
Property AX-INF	9/19/2022	L2252880-01	1.89		ND	ND	ND	ND	ND	35.00	ND	41.50	ND	ND	18.90	ND	ND	ND	53.90
Property AY-INF	6/3/2022	L2230837-03	1.90		ND	ND	ND	ND	ND	ND	24.70	3.62	ND	86.70	2.08	ND	ND	ND	113.48
Property AY-INF	9/21/2022	L2252864-01	2.10		ND	ND	ND	ND	ND	ND	24.10	3.87	ND	87.10	ND	ND	ND	ND	111.20
Property B-INF	6/3/2022	L2230823-03	1.78		ND	ND	ND	ND	ND	96.60	ND	199.00	3.22	5.87	56.90	ND	ND	ND	162.59
Property B-INF	9/19/2022	L2252878-01	1.75		ND	ND	ND	ND	ND	28.00	ND	59.80	2.63	ND	14.00	ND	ND	ND	44.63
Property BA	6/9/2022	L2230727-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property BC	6/1/2022	L2230802-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property BD	6/1/2022	L2230777-01	2.00		ND	ND	2.45	ND	ND	ND	ND	ND	ND	2.83	5.01	ND	ND	ND	7.84
Property BE-INF	6/13/2022	L2232866-02	1.89		ND	ND	ND	ND	ND	7.46	ND	6.27	ND	ND	2.31	ND	ND	ND	9.77
Property BG	6/1/2022	L2230779-01 L2230842-01	2.00		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property BH Property BI	6/3/2022 6/3/2022	L2230842-01 L2230855-01	2.00 2.00		ND ND	ND ND	ND ND	ND ND	ND ND	4.93 ND	ND ND	7.45 ND	ND ND	ND ND	4.21 ND	ND ND	ND ND	ND ND	9.14 ND
Property BJ-1-INF		L2232833-03	1.83		ND	ND	ND	ND	ND	129.00	ND	98.40	22.80	ND	64.30	ND	ND	ND	216.10
Property BJ-INF	9/19/2022	L2252877-01	1.86		ND	ND	ND	ND	ND	56.80	ND	49.40	9.29	ND	44.20	ND	ND	ND	110.29
Property BN	6/2/2022	L2230811-01	2.00		ND	ND	2.32	ND	ND	ND	ND	2.82	ND	ND	6.04	ND	ND	ND	6.04
Property BO-1-INF		L2232828-03	1.91		ND	ND	ND	ND	ND	65.00	ND	47.40	ND	ND	51.60	ND	ND	ND	116.60
Property BO-INF	9/19/2022	L2252874-02	1.86		ND	ND	ND	ND	ND	54.20	ND	38.00	ND	ND	32.50	ND	ND	ND	86.70
Property BP	6/6/2022	L2230858-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	7.69	ND	ND	ND	ND	7.69
Property BP	8/4/2022	L2242161-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	3.88	ND	ND	ND	ND	3.88
Property BQ	9/19/2022	L2252872-01	1.91		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property BS-INF	5/31/2022	L2230768-02	1.83		ND	ND	ND	ND	ND	9.84	ND	6.69	ND	ND	9.36	ND	ND	ND	19.20
Property BZ-INF	6/7/2022	L2230750-02	1.83		ND	ND	ND	ND	ND	25.20	ND	99.00	1.85	ND	11.90	ND	ND	ND	38.95
Property C-INF	6/1/2022	L2230780-03	1.82		ND	ND	ND	ND	ND	16.40	ND	17.40	ND	ND	11.80	ND	ND	ND	28.20
Property C-INF	9/21/2022	L2252861-01	1.85		ND	ND	ND	ND	ND	29.80	ND	24.80	ND	ND	19.60	ND	ND	ND	49.40
Property CB-INF	6/13/2022	L2232845-02	1.77		ND	ND	ND	ND	ND	4.00	ND	15.80	ND	ND	ND	ND	ND	ND	4.00
Property CC	6/1/2022	L2230778-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property CE	6/7/2022	L2230728-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property CF-INF	6/2/2022	L2230820-02	1.79							13.10		25.40	ND	1.88 ND	6.43		ND	ND	21.41
Property CG	6/8/2022	L2230732-01	2.00	I	ND	ND	ND	ND	ND	ND	ND	8.28	ND	ND	ND	ND	ND	ND	ND

			Compound Name	Perfluorin Acids by E	N-Ethyl Perfluorooctanesulfon amidoacetic Acid (NEtFOSAA)	N-Methyl Perfluorooctanesulfon amidoacetic Acid (NMeFOSAA)	Perfluorobutanesulfon ic Acid (PFBS)	Perfluorodecanoic Acid (PFDA)	Perfluorododecanoic Acid (PFDoA)	Perfluoroheptanoic Acid (PFHpA)	Perfluorohexanesulfo nic Acid (PFHxS)	Perfluorohexanoic Acid (PFHxA)	Perfluorononanoic Acid (PFNA)	Perfluorooctanesulfon ic Acid (PFOS)	Perfluorooctanoic Acid (PFOA)	Perfluorotetradecanoi c Acid (PFTA)	Perfluorotridecanoic Acid (PFTrDA)	Perfluoroundecanoic Acid (PFUnA)	PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA, and PFDA)
			CAS No.		2991-50-6	2355-31-9	375-73-5	335-76-2	307-55-1	375-85-9	355-46-4	307-24-4	375-95-1	1763-23-1	335-67-1	376-06-7	72629-94-8	2058-94-8	
Sample ID	Sampling Date	Lab Sample ID	Laboratory Analytical Method Detection Limit	MCP Method 1 GW-1 Standard				20		20	20		20	20	20				20
Property CH	5/31/2022	L2230765-01	2.00		ND	ND	ND	6.35	3.34	ND	ND	ND	ND	ND	3.92	ND	ND	ND	10.27
Property CJ	6/7/2022	L2230752-01	2.00		ND	ND	ND	ND	ND	2.12	ND	7.08	ND	ND	ND	ND	ND	ND	2.12
Property CK	6/8/2022	L2230736-01	2.00		ND	ND	ND	ND	ND	2.98	ND	13.80	ND	ND	ND	ND	ND	ND	2.98
Property CL-INF	6/8/2022	L2230743-03	1.76		ND	ND	ND	8.29	ND	41.10	ND	52.50	9.19	5.28	22.20	ND	ND	ND	86.06
Property CL-INF	9/23/2022	L2252848-01	1.82		ND	ND	ND	7.60	ND	47.00	ND	56.10	11.00	5.27	25.90	ND	ND	ND	96.77
Property CM	6/7/2022	L2230755-01	2.00		ND	ND	ND	ND		2.86	ND	13.80	ND	ND	ND	ND	ND	ND	2.86
Property CN Property CO	6/8/2022 6/8/2022	L2230747-01 L2230740-01	2.00 2.00		ND ND	ND ND	ND ND	ND ND	ND ND	ND 4.18	ND	ND 5.95	ND	ND ND	ND 5.91	ND ND	ND ND	ND ND	ND 10.09
Property CO Property CQ	6/3/2022	L2230740-01 L2230848-01	2.00		ND ND	ND ND	ND	ND ND	ND	4.18 ND	ND ND	5.95 2.20	ND ND	ND ND	5.91 ND	ND ND	ND	ND	ND
Property CS	6/8/2022	L2230746-01	2.00		ND	ND	ND	ND	ND	2.01	ND	2.20 5.01	ND	74.30	ND	ND	ND	ND	76.31
Property CS-INF	9/22/2022	L2252855-01	1.79		ND	ND	ND	ND	ND	ND	ND	2.50	ND	ND	2.11	ND	ND	ND	2.11
Property CU	6/6/2022	L2230760-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property CX	5/31/2022	L2230770-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.03	ND	ND	ND	2.03
Property CZ	6/1/2022	L2230776-02	1.85		ND	ND	ND	ND	ND	ND	ND	ND	ND	2.82	2.38	ND	ND	ND	5.20
Property DA-INF	6/3/2022	L2230840-01	2.00		ND	ND	2.50	ND	ND	ND	47.20	6.00	ND	207.00	2.66	ND	ND	ND	256.86
Property DA-INF	9/20/2022	L2252870-01	1.77		ND	ND	2.74	ND	ND	ND	40.60	4.92	ND	154.00	2.48	ND	ND	ND	197.08
Property DD	6/3/2022	L2230851-01	2.00		ND	ND	ND	ND	ND	5.19	ND	5.11	ND	ND	ND	ND	ND	ND	5.19
Property DE	6/9/2022	L2230730-01	2.00		ND	ND	ND	ND	ND	3.54	ND	4.73	ND	ND	ND	ND	ND	ND	3.54
Property DF	6/6/2022	L2230875-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property DG-INF	5/31/2022	L2230764-02	1.82		ND	ND	ND	ND	ND	45.20	ND	24.50	ND	ND	31.20	ND	ND	ND	76.40
Property DJ	6/3/2022	L2230836-01	2.00		ND	ND	ND	ND	ND	4.38	ND	4.82	ND	ND	2.21	ND	ND	ND	6.59
Property DK	6/3/2022	L2230835-01	2.00		ND	ND	ND	ND	ND	ND	2.28	ND	ND	ND	ND	ND	ND	ND	2.28
Property DL	6/16/2022	L2232843-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property DO	6/13/2022	L2232846-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property DQ	6/1/2022	L2230799-01	2.00		ND	ND	5.20	ND	ND	ND	ND	ND	ND	ND	2.24 7 92	ND	ND	ND	2.24
Property E-INF	6/3/2022	L2230830-02 L2230748-01	1.95		ND	ND	ND	ND	ND	20.80	ND	25.10	ND	ND	1.02	ND	ND	ND	28.72
Property EA Property ED-INF	6/8/2022 6/4/2022	L2230746-01 L2230857-02	2.00 1.80		ND ND	ND ND	2.20 2.45	ND ND	ND ND	ND 23.50	ND 8.76	ND 47.60	ND ND	ND ND	ND 9.51	ND ND	ND ND	ND ND	ND 41.77
Property EG	6/2/2022	L2230857-02	2.00		ND	ND	2.45 ND	ND	ND	23.50 ND	8.76 ND	47.00 ND	ND	ND	2.96	ND	ND	ND	2.96
Property EK-INF	6/2/2022	L2230809-02	1.76		ND	ND	3.46	ND	ND	ND	ND	2.33	ND	3.77	4.87	ND	ND	ND	8.64
Property EM-2-INF		L2211297-02	1.87		ND	ND	ND	ND	ND	20.60	ND	19.30	ND	ND	15.60	ND	ND	ND	36.20
Property EM-2-INF		L2230861-03	1.89		ND	ND	ND	ND	ND	14.40	ND	14.80	ND	ND	12.40	ND	ND	ND	26.80
Property ER	6/13/2022	L2232869-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property ET	6/10/2022	L2232860-01	2.00		ND	ND	ND	ND	ND	4.61	ND	8.01	ND	ND	ND	ND	ND	ND	4.61
Property EU	6/6/2022	L2230860-01	2.00		ND	ND	ND	ND	ND	ND	3.47	ND	ND	ND	ND	ND	ND	ND	3.47
Property EU	7/21/2022	L2239302-01	2.00		ND	ND	ND	ND	ND	ND	2.84	ND	ND	ND	ND	ND	ND	ND	2.84
Property EV	6/15/2022	L2232838-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.22	ND	ND	ND	2.22
Property EW	6/15/2022	L2232844-01	2.00		ND	ND	ND	ND	ND	ND	2.90	3.92	ND	2.05	4.56	ND	ND	ND	9.51
Property EY-INF	6/15/2022	L2232840-02	1.87		ND	ND	ND	ND	ND	41.60	ND	108.00	ND	ND	27.40	ND	ND	ND	69.00
Property F-1-INF	6/10/2022	L2232863-01	1.79		ND	ND	2.88	ND	ND	127.00	107.00	132.00	ND	684.00	95.70	ND	ND	ND	1013.70
Property F-INF	9/21/2022	L2252863-01	1.85		ND	ND	2.64	ND	ND	120.00	77.60	128.00	ND	673.00	87.60	ND	ND	ND	958.20
Property FC	5/31/2022	L2230771-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	3.97	3.47	ND	ND	ND	7.44
Property FD	6/8/2022	L2230735-01	2.00		ND	ND	ND	ND	ND	10.10	ND	35.30	ND	ND	4.12	ND	ND	ND	14.22
Property FE	5/31/2022	L2230767-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property FF-INF	6/9/2022	L2230883-02	1.85		ND	ND	ND	ND	ND	9.53	ND	25.70	ND	ND	3.17	ND	ND	ND	12.70
Property FG-INF	6/9/2022	L2230724-02	2.01	I	ND	ND	ND	ND	ND	13.80	ND	14.00	ND	ND	ND	ND	ND	ND	13.80

			Compound Name	Perfluorin Acids by F	N-Ethyl Perfluorooctanesulfon amidoacetic Acid (NEtFOSAA)	N-Methyl Perfluorooctanesulfon amidoacetic Acid (NMeFOSAA)	Perfluorobutanesulfon ic Acid (PFBS)	Perfluorodecanoic Acid (PFDA)	Perfluorododecanoic Acid (PFDoA)	Perfluoroheptanoic Acid (PFHpA)	Perfluorohexanesulfo inic Acid (PFHxS)	Perfluorohexanoic Acid (PFHxA)	Perfluorononanoic Acid (PFNA)	Perfluorooctanesulfon ic Acid (PFOS)	Perfluorooctanoic Acid (PFOA)	Perfluorotetradecanoi c Acid (PFTA)	Perfluorotridecanoic Acid (PFTrDA)	Perfluoroundecanoic Acid (PFUnA)	PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA, and PFDA)
			CAS No. Laboratory		2991-50-6	2355-31-9	375-73-5	335-76-2	307-55-1	375-85-9	355-46-4	307-24-4	375-95-1	1763-23-1	335-67-1	376-06-7	72629-94-8	2058-94-8	
Sample ID	Sampling Date	Lab Sample ID	Analytical Method	MCP Method 1 GW-1				20		20	20		20	20	20				20
			Detection Limit	Standard															
Property FG-INF	8/4/2022	L2242166-02	1.80		ND	ND	ND	ND	ND	33.80	ND	28.60	ND	ND	3.65	ND	ND	ND	37.45
Property FJ	6/15/2022	L2232839-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property FK-INF	5/31/2022	L2230766-02	1.84		ND	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND
Property FO-INF Property FS	8/4/2022 5/31/2022	L2242167-02 L2230761-01	1.95 2.00		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 2.42	ND 2.45	ND ND	ND ND	ND ND	ND 4.87
Property FT	6/7/2022	L2230761-01 L2230749-01	2.00		ND	ND	ND	ND	ND	ND	ND	2.01	ND	Z.4Z ND	2.45 ND	ND	ND	ND	4.67 ND
Property FX-INF	6/3/2022	L2230749-01 L2230850-02	1.88		ND	ND	ND	ND	ND	33.00	ND	48.20	ND	ND	2.16	ND	ND	ND	35.16
Property FZ	8/4/2022	L2242159-01	2.00		ND	ND	2.79	ND	ND	ND	ND	40.20 ND	ND	ND	ND	ND	ND	ND	ND
Property G-INF	5/31/2022	L2230763-03	1.82		ND	ND	ND	ND	ND	32.30	42.40	46.70	ND	ND	22.80	ND	ND	ND	97.50
Property G-INF	9/23/2022	L2252838-01	1.84		ND	ND	ND	ND	ND	43.00	48.50	59.20	ND	ND	23.00	ND	ND	ND	114.50
Property GD	6/8/2022	L2230739-01	2.00		ND	ND	ND	ND	ND	ND	ND	4.67	ND	ND	ND	ND	ND	ND	ND
Property GF	6/3/2022	L2230852-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property GH	6/9/2022	L2230729-01	2.00		ND	ND	5.88	ND	ND	ND	ND	2.07	ND	ND	2.46	ND	ND	ND	2.46
Property GJ	6/2/2022	L2230804-01	2.00		ND	ND	ND	ND	ND	ND	2.34	ND	ND	ND	ND	ND	ND	ND	2.34
Property GL	8/4/2022	L2242158-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property GO-1-INF	8/4/2022	L2242164-03 L2230803-01	1.74		1.82	ND	ND			35.20		83.40	2.86	2.76	23.80		ND		64.62
Property GP Property GQ	6/1/2022 6/1/2022	L2230803-01 L2230803-02	2.00 2.00		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Property GR	6/15/2022	L2230803-02	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property GS	6/2/2022	L2230818-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property GT	8/4/2022	L2242154-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property GU	8/4/2022	L2242157-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property H-INF	6/1/2022	L2230787-02	1.89		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property I-INF	6/2/2022	L2230821-03	1.84		ND	ND	ND	ND	ND	222.00	ND	165.00	4.46	ND	113.00	ND	ND	ND	339.46
Property I-INF	9/21/2022	L2252858-01	1.78		ND	ND	ND	ND	ND	94.80	ND	74.40	4.61	ND	111.00	ND	ND	ND	210.41
Property J-1-INF	6/6/2022 9/21/2022	L2230871-03	1.80 1.89			ND ND	5.38 ND			49.60	258.00	82.30 92.70	ND ND	971.00 426.00	52.20 83.80	ND ND		ND ND	1330.80
Property J-INF Property L-INF	6/3/2022	L2252862-01 L2230827-03	1.89		ND ND	ND ND	ND ND	ND 2.68	ND ND	99.40 101.00	65.70 3.79	92.70 340.00	4.90	426.00 42.70	83.80 54.50	ND	ND ND	ND ND	674.90 209.57
Property L-INF	9/19/2022	L2252881-01	1.90		ND	ND	ND	2.00 ND	ND	67.80	4.08	241.00	4.90 3.90	42.70	45.50	ND	ND	ND	166.28
Property N	6/1/2022	L2230782-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property O	6/9/2022	L2230788-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property P-INF	6/7/2022	L2230759-02	1.80		ND	ND	3.08	ND	ND	13.00	7.07	27.10	ND	ND	6.31	ND	ND	ND	26.38
Property Q	6/1/2022	L2230797-01	2.00		ND	ND	3.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property U-INF	6/7/2022	L2230751-02	1.85		ND	ND	ND	ND	ND	ND	ND	2.56	ND	ND	ND	ND	ND	ND	ND
Property W	6/2/2022	L2230805-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property X-INF	6/7/2022	L2230756-02	1.86			ND	3.18	ND		11.00	15.70	17.60		ND 71.00	5.72				32.42
Property Y-INF Property Y-INF	6/2/2022 9/20/2022	L2230814-03 L2252868-01	1.87 1.87		ND ND	ND ND	3.31 2.26	ND ND	ND ND	81.80 54.80	336.00 297.00	126.00 96.90	ND ND	71.00 29.80	24.70 20.50	ND ND	ND ND	ND ND	513.50 402.10
Property Z-INF	6/2/2022	L2230816-02	1.92		ND	ND	2.20 ND	ND	ND	7.05	14.20	90.90 12.30	ND	3.88	3.84	ND	ND	ND	28.97

			Compound Nam	Perfluorin Acids by I	N-Ethyl Perfluorooctanesulfon amidoacetic Acid (NEtFOSAA)	N-Methyl Perfluorooctanesulfon amidoacetic Acid (NMeFOSAA)	Perfluorobutanesulfon ic Acid (PFBS)	Perfluorodecanoic Acid (PFDA)	Perfluorododecanoic Acid (PFDoA)	Perfluoroheptanoic Acid (PFHpA)	Perfluorohexanesulfo nic Acid (PFHxS)	Perfluorohexanoic Acid (PFHxA)	Perfluorononanoic Acid (PFNA)	Perfluorooctanesulfon ic Acid (PFOS)	Perfluorooctanoic Acid (PFOA)	Perfluorotetradecanoi c Acid (PFTA)	Perfluorotridecanoic Acid (PFTrDA)	Perfluoroundecanoic Acid (PFUnA)	PFAS6 (PFOA, PFOS, PFNA, PFHXS, PFHpA, and PFDA)
			CAS No) .	2991-50-6	2355-31-9	375-73-5	335-76-2	307-55-1	375-85-9	355-46-4	307-24-4	375-95-1	1763-23-1	335-67-1	376-06-7	72629-94-8	2058-94-8	
Sample ID	Sampling Date	Lab Sample ID	Laboratory Analytical Method	MCP Method 1 GW-1 Standard				20		20	20		20	20	20				20
Property ZY-INF	5/31/2022	L2230772-02	Detection Limit		ND	ND	ND	ND	ND	10.10	ND	25.30	ND	ND	2.74	ND	ND	ND	12.84
Property ZZ-INF	6/8/2022	L2230737-02	1.86		ND	ND	ND	ND	ND	9.32	7.39	20.80	ND	1.91	5.69	ND	ND	ND	24.31
Property ZZ-INF	8/4/2022	L2242163-02	1.91		ND	ND	ND	ND	ND	8.05	6.61	17.80	ND	ND	5.44	ND	ND	ND	20.10

Notes:

Units are in ng/L (parts per trillion)

ND indicates compound not detected above laboratory analytical method detection limit.

NA indicates that the sample was not analyzed for that compound.

Bold indicates compound detected above MCP Method 1 GW-1 standard

PFAS6 > 20 ppt and < 70 ppt

PFAS6 > 70 ppt and < 110 ppt

PFAS6 > 110 ppt

			Compound Name	Isotope Dilution Compounds	Perfluorobutanoic Acid (PFBA)	Perfluoropentanoic Acid (PFPeA)	1H, 1H, 2H, 2H- Perfluorohexanesulfo nic Acid (4:2FTS)	Perfluoropentanesulfo nic Acid (PFPeS)	Perfluoroheptanesulfo nic Acid (PFHpS)	1H, 1H, 2H, 2H- Perfluorodecanesulfo nic Acid (8:2FTS)	Perfluorononanesulfo nic Acid (PFNS)	Perfluorodecanesulfo nic Acid (PFDS)	
			CAS No.		375-22-4	2706-90-3	757124-72-4	2706-91-4	375-92-8	39108-34-4	68259-12-1	335-77-3	7
			Laboratory										
O a marke ID			Analytical										
Sample ID	Sampling Date	Lab Sample ID	Method										
			Detection Limit										
Property AC-INF	6/3/2022	L2230832-02	1.87		82.20	234.00	ND	ND	ND	ND	ND	ND	
Property AD	6/1/2022	L2230786-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property AG	6/3/2022	L2230844-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property AH	5/31/2022	L2230762-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property AJ	6/7/2022	L2230754-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property AL-INF	6/8/2022	L2230741-03	1.83		21.60	51.30	ND	ND	ND	ND	ND	ND	
Property AL-INF	9/23/2022	L2252849-01	1.73		43.80	106.00	ND	ND	ND	ND	ND	ND	
Property AM	7/21/2022	L2239303-01	2.00		43.80 NA	NA	NA	NA	NA	NA	NA	NA	
Property AO-INF	5/31/2022	L2239303-01	1.82		4.42	14.20	ND	ND	ND	ND	ND	ND	
Property AR	6/6/2022	L2230873-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property AS-INF	6/13/2022	L2232865-02	1.81		43.50	136.00	ND	ND	ND	ND	ND	ND	
Property AT	6/3/2022	L2230853-01	2.00		43.50 NA	NA	NA	NA	NA	NA	NA	NA	
	6/14/2022	L2230835-01	1.82		12.20	28.40	ND	ND	ND	ND	ND	ND	
Property AU-INF													
Property AV	6/6/2022	L2230886-01	2.00		NA	NA	NA	NA 1.00	NA	NA	NA	NA	
Property AW-INF	6/8/2022	L2230733-02	1.82		5.94	19.20	ND	1.96	ND	ND	ND	ND	
Property AW-INF	9/19/2022	L2252883-01	1.82		9.87	31.70	ND	ND	ND	ND	ND	ND	
Property AX-INF	6/1/2022	L2230783-03	1.79		24.00	69.20	ND	ND	ND	ND	ND	ND	
Property AX-INF	9/19/2022	L2252880-01	1.89		22.70	64.20	ND	ND	ND	ND	ND	ND	
Property AY-INF	6/3/2022	L2230837-03	1.90		ND	ND	ND	ND	ND	ND	ND	ND	
Property AY-INF	9/21/2022	L2252864-01	2.10		ND	ND	ND	ND	ND	ND	ND	ND	
Property B-INF	6/3/2022	L2230823-03	1.78		88.10	353.00	ND	ND	ND	17.00	ND	ND	
Property B-INF	9/19/2022	L2252878-01	1.75		32.10	107.00	ND	ND	ND	8.69	ND	ND	
Property BA	6/9/2022	L2230727-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BC	6/1/2022	L2230802-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BD	6/1/2022	L2230777-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BE-INF	6/13/2022	L2232866-02	1.89		2.78	8.68	ND	ND	ND	ND	ND	ND	
Property BG	6/1/2022	L2230779-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BH	6/3/2022	L2230842-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BI	6/3/2022	L2230855-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BJ-1-INF	6/16/2022	L2232833-03	1.83		40.30	110.00	ND	ND	ND	ND	ND	ND	
Property BJ-INF	9/19/2022	L2252877-01	1.86		29.30	74.40	ND	ND	ND	3.71	ND	ND	
Property BN	6/2/2022	L2230811-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BO-1-INF		L2232828-03	1.91		21.10	72.40	ND	ND	ND	ND	ND	ND	
Property BO-INF	9/19/2022	L2252874-02	1.86		16.70	57.00	ND	ND	ND	ND	ND	ND	
Property BP	6/6/2022	L2230858-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	
Property BP	8/4/2022	L2242161-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property BQ	9/19/2022	L2252872-01	1.91		ND	ND	ND	ND	ND	ND	ND	ND	
Property BS-INF	5/31/2022	L2230768-02	1.83		4.20	9.31	ND	ND	ND	ND	ND	ND	
Property BZ-INF	6/7/2022	L2230750-02	1.83		34.60	143.00	ND	ND	ND	ND	ND	ND	
Property C-INF	6/1/2022	L2230780-03	1.82		10.60	25.00	ND	ND	ND	ND	ND	ND	
Property C-INF	9/21/2022	L2252861-01	1.85		13.40	33.80	ND	ND	ND	ND	ND	ND	
Property CB-INF	6/13/2022	L2232845-02	1.77		9.18	34.50	ND	ND	ND	ND	ND	ND	
Property CC	6/1/2022	L2230778-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CE	6/7/2022	L2230728-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
	6/2/2022	L2230820-02	1.79		17.40	43.20	ND	ND	ND	ND	ND	ND	
Property CF-INF	0/2/2022												

Perfluorooctanesulfon 9-16 amide (FOSA)	1H, 1H, 2H, 2H- 6-6 Perfluorooctanesulfon c-Lc Acid (6:2FTS) ic Acid (6:2FTS)
ND NA NA NA NA ND ND ND ND ND ND ND ND ND ND ND ND ND	ND NA NA NA NA NA NA 87.20 128.00 NA ND NA ND NA ND NA ND 47.50 49.50 ND ND 47.50 49.50 ND ND 4620.00 172.00 NA ND 4620.00 172.00 NA NA NA NA NA NA NA NA NA NA NA NA NA

			Compound Name	lsotope Dilution Compounds	Perfluorobutanoic Acid (PFBA)	Perfluoropentanoic Acid (PFPeA)	1H,1H,2H,2H- Perfluorohexanesulfo nic Acid (4:2FTS)	Perfluoropentanesulfo nic Acid (PFPeS)	Perfluoroheptanesulfo nic Acid (PFHpS)	1H,1H,2H,2H- Perfluorodecanesulfo nic Acid (8:2FTS)	Perfluorononanesulfo nic Acid (PFNS)	Perfluorodecanesulfo nic Acid (PFDS)	
			CAS No.		375-22-4	2706-90-3	757124-72-4	2706-91-4	375-92-8	39108-34-4	68259-12-1	335-77-3	7
Sample ID	Sampling Date	Lab Sample ID	Laboratory Analytical Method Detection Limit										
Property CH	5/31/2022	L2230765-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CJ	6/7/2022	L2230752-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CK	6/8/2022	L2230736-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CL-INF	6/8/2022	L2230743-03	1.76		35.60	100.00	ND	ND	ND	40.20	ND	ND	
Property CL-INF	9/23/2022	L2252848-01	1.82		41.60	114.00	ND	ND	ND	36.80	ND	ND	
Property CM	6/7/2022	L2230755-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CN	6/8/2022	L2230747-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CO	6/8/2022	L2230740-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CQ	6/3/2022	L2230848-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CS	6/8/2022	L2230746-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CS-INF	9/22/2022	L2252855-01	1.79		2.09	4.37	ND	ND	ND	ND	ND	ND	
Property CU	6/6/2022	L2230760-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CX	5/31/2022	L2230770-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property CZ	6/1/2022	L2230776-02	1.85		ND	ND	ND	ND	ND	ND	ND	ND	
Property DA-INF	6/3/2022	L2230840-01	2.00		ND	ND	ND	3.92	2.06	ND	ND	ND	
Property DA-INF	9/20/2022	L2252870-01	1.77		ND	ND	ND	3.64	ND	ND	ND	ND	
Property DD	6/3/2022	L2230851-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DE	6/9/2022	L2230730-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DF	6/6/2022	L2230875-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DG-INF	5/31/2022	L2230764-02	1.82		14.50	34.90	ND	ND	ND	ND	ND	ND	
Property DJ	6/3/2022	L2230836-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DK	6/3/2022	L2230835-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DL	6/16/2022	L2232843-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DO	6/13/2022	L2232846-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property DQ	6/1/2022	L2230799-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property E-INF	6/3/2022	L2230830-02	1.95		15.70	37.40	ND	ND	ND	ND	ND	ND	
Property EA	6/8/2022	L2230748-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property ED-INF	6/4/2022	L2230857-02	1.80		22.60	76.50	ND	2.33	ND	ND	ND	ND	
Property EG	6/2/2022	L2230812-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property EK-INF	6/2/2022	L2230809-02	1.76		ND	ND	ND	ND	ND	ND	ND	ND	
Property EM-2-INF		L2211297-02	1.87		12.20	29.60	ND	ND	ND	ND	ND	ND	
Property EM-2-INF		L2230861-03	1.89		9.71	21.80	ND	ND	ND	ND	ND	ND	
Property ER	6/13/2022	L2232869-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property ET	6/10/2022	L2232860-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property EU	6/6/2022	L2230860-01	2.00		ND	ND	ND	ND	ND	ND	ND	ND	
Property EU	7/21/2022	L2239302-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property EV	6/15/2022	L2232838-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property EW	6/15/2022	L2232844-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property EY-INF	6/15/2022	L2232840-02	1.87		53.30	208.00	ND	ND	ND	ND	ND	ND	
Property F-1-INF	6/10/2022	L2232863-01	1.79		78.30	186.00	ND	12.70	16.10	ND	ND	ND	
Property F-INF	9/21/2022	L2252863-01	1.85		78.10	184.00	ND	11.60	9.13	ND	ND	ND	
Property FC	5/31/2022	L2230771-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property FD	6/8/2022	L2230735-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property FE	5/31/2022	L2230767-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property FF-INF Property FG-INF	6/9/2022 6/9/2022	L2230883-02 L2230724-02	1.85		13.00	45.00	ND	ND	ND	ND	ND	ND	

Perfluorooctanesulfon amide (FOSA) 9-16-82	2120 1H, 1H, 2H, 2H- 6-6 Ferfluorooctanesulfon c Acid (6:2FTS)
NA NA NA NA NA NA NA NA NA NA NA NA NA N	NA NA NA NA 101.00 102.00 NA NA NA NA NA NA NA NA NA NA NA NA NA

			Compound Name	Isotope Dilution Compounds	Perfluorobutanoic Acid (PFBA)	Perfluoropentanoic Acid (PFPeA)	1H,1H,2H,2H- Perfluorohexanesulfo nic Acid (4:2FTS)	Perfluoropentanesulfo nic Acid (PFPeS)	Perfluoroheptanesulfo nic Acid (PFHpS)	1H,1H,2H,2H- Perfluorodecanesulfo nic Acid (8:2FTS)	Perfluorononanesulfo nic Acid (PFNS)	Perfluorodecanesulfo nic Acid (PFDS)	
			CAS No.		375-22-4	2706-90-3	757124-72-4	2706-91-4	375-92-8	39108-34-4	68259-12-1	335-77-3	7
Sample ID	Sampling Date	Lab Sample ID	Laboratory Analytical Method Detection Limit										
Property FG-INF	8/4/2022	L2242166-02	1.80		14.80	41.40	ND	ND	ND	ND	ND	ND	
Property FJ	6/15/2022	L2232839-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property FK-INF	5/31/2022	L2230766-02	1.84		ND	ND	ND	ND	ND	ND	ND	ND	
Property FO-INF	8/4/2022	L2242167-02	1.95		ND	ND	ND	ND	ND	ND	ND	ND	
Property FS	5/31/2022	L2230761-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property FT	6/7/2022	L2230749-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property FX-INF	6/3/2022	L2230850-02	1.88		28.60	71.90	ND	ND	ND	ND	ND	ND	
Property FZ	8/4/2022	L2242159-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property G-INF	5/31/2022	L2230763-03	1.82		24.70	78.60	ND	ND	ND	ND	ND	ND	
Property G-INF	9/23/2022	L2252838-01	1.84		30.20	97.70	ND	ND	ND	ND	ND	ND	
Property GD	6/8/2022	L2230739-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GF	6/3/2022	L2230852-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GH	6/9/2022	L2230729-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GJ	6/2/2022	L2230804-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GL	8/4/2022	L2242158-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GO-1-INF		L2242164-03	1.74		55.40	182.00	ND	ND	ND	ND	ND	ND	
Property GP	6/1/2022	L2230803-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GQ	6/1/2022	L2230803-02	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property GR	6/15/2022 6/2/2022	L2232842-01 L2230818-01	2.00		NA	NA	NA	NA NA	NA	NA	NA NA	NA	
Property GS	8/4/2022	L2230818-01 L2242154-01	2.00 2.00		NA NA	NA	NA		NA	NA		NA	
Property GT Property GU	8/4/2022	L2242154-01 L2242157-01	2.00		NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
Property H-INF	6/1/2022	L2230787-01	1.89		ND	ND	ND	ND	ND	ND	ND	ND	
Property I-INF	6/2/2022	L2230821-03	1.84		61.50	232.00	ND	ND	ND	1.96	ND	ND	
Property I-INF	9/21/2022	L2252858-01	1.78		33.30	118.00	ND	ND	ND	2.14	ND	ND	
Property J-1-INF	6/6/2022	L2230871-03	1.80		29.60	70.50	ND	21.70	39.60	ND	ND	ND	
Property J-INF	9/21/2022	L2252862-01	1.89		59.40	140.00	ND	6.92	8.13	ND	ND	ND	
Property L-INF	6/3/2022	L2230827-03	1.90		132.00	457.00	ND	ND	ND	ND	ND	ND	
Property L-INF	9/19/2022	L2252881-01	1.74		99.20	319.00	ND	ND	ND	ND	ND	ND	
Property N	6/1/2022	L2230782-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property O	6/9/2022	L2230788-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property P-INF	6/7/2022	L2230759-02	1.80		9.20	35.30	ND	2.75	ND	ND	ND	ND	
Property Q	6/1/2022	L2230797-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property U-INF	6/7/2022	L2230751-02	1.85		2.37	3.79	ND	ND	ND	ND	ND	ND	
Property W	6/2/2022	L2230805-01	2.00		NA	NA	NA	NA	NA	NA	NA	NA	
Property X-INF	6/7/2022	L2230756-02	1.86		16.00	32.10	ND	ND	ND	ND	ND	ND	
Property Y-INF	6/2/2022	L2230814-03	1.87		52.70	167.00	ND	12.10	8.76	ND	ND	ND	
Property Y-INF	9/20/2022	L2252868-01	1.87		42.10	135.00	ND	6.83	2.73	ND	ND	ND	
Property Z-INF	6/2/2022	L2230816-02	1.92		7.54	18.60	ND	ND	ND	ND	ND	ND	

fon	fon
Perfluorooctanesulfon amide (FOSA)	1H,1H,2H,2H- Perfluorooctanesulfon ic Acid (6:2FTS)
	- "ine
s A S A	2F ⁻ 2H
0 L	2H, (6::
le (ion is
Perfluorooctar amide (FOSA)	1H,1H,2H,2H- Perfluorooctanes ic Acid (6:2FTS)
754-91-6	27619-97-2
ND	ND
NA	NA
ND	ND
ND	ND
NA	NA
NA	NA
ND	129.00
NA	NA
ND	ND
ND	5.96
NA	NA
ND	184.00
NA	NA
ND	ND
ND	443.00
ND	500.00
ND	50.30
ND	192.00
ND	381.00
ND	221.00
NA	NA
NA	NA
ND	3.45
NA	NA
ND	ND
NA	NA
ND	ND
ND	287.00
ND	284.00
ND	2.83

			Compound Name	lsotope Dilution Compounds	Perfluorobutanoic Acid (PFBA)	Perfluoropentanoic Acid (PFPeA)	1H, 1H, 2H, 2H- Perfluorohexanesulfo nic Acid (4:2FTS)	Perfluoropentanesulfo nic Acid (PFPeS)	Perfluoroheptanesulfo nic Acid (PFHpS)	1H,1H,2H,2H- Perfluorodecanesulfo nic Acid (8:2FTS)	Perfluorononanesulfo nic Acid (PFNS)	Perfluorodecanesulfo nic Acid (PFDS)	Perfluorooctanesulfon amide (FOSA)	1H,1H,2H,2H- Perfluorooctanesulfon ic Acid (6:2FTS)
			CAS No.		375-22-4	2706-90-3	757124-72-4	2706-91-4	375-92-8	39108-34-4	68259-12-1	335-77-3	754-91-6	27619-97-2
			Laboratory											
Sample ID	Sampling Data	Lab Sample ID	Analytical											
Sample ID	Sampling Date		Method											
			Detection Limit											
Property ZY-INF	5/31/2022	L2230772-02	1.88		10.20	36.10	ND	ND	ND	ND	ND	ND	ND	5.01
Property ZZ-INF	6/8/2022	L2230737-02	1.86		11.30	36.80	ND	ND	ND	ND	ND	ND	ND	ND
Property ZZ-INF	8/4/2022	L2242163-02	1.91		10.70	33.50	ND	ND	ND	ND	ND	ND	ND	1.93

Notes:

Units are in ng/L (parts per trillion)

ND indicates compound not detected above laboratory analytical method detection limit.

NA indicates that the sample was not analyzed for that compound.

Bold indicates compound detected above MCP Method 1 GW-1 standard

PFAS6 > 20 ppt and < 70 ppt

PFAS6 > 70 ppt and < 110 ppt

PFAS6 > 110 ppt

Table 2 - Private Well Annual Monitoring Summary

	ell Annual Monitoring Summary						
Property ID	Date of Last Sample	Peak PFAS6	Sampled in 2022				
Property AD	6/1/2022	ND	Yes				
Property AG	6/3/2022	ND	Yes				
Property AH	5/31/2022	ND	Yes				
Property AJ	6/7/2022	4.93	Yes				
Property AN	12/15/2021	18.18	No				
Property AT	10/24/2022	22.00	Yes				
Property AV	6/6/2022	11.57	Yes				
Property BA	6/9/2022	3.07	Yes				
Property BC	6/1/2022	ND	Yes				
Property BD	6/1/2022	10.14	Yes				
Property BG	6/1/2022	ND	Yes				
Property BH	6/3/2022	14.21	Yes				
Property BI	6/3/2022	1.95	Yes				
Property BN	6/2/2022	14.36	Yes				
Property BP	6/6/2022	7.69	Yes				
Property BR	12/7/2022	ND	Yes				
Property CC	6/1/2022	1.84	Yes				
Property CE	6/7/2022	ND	Yes				
Property CG	6/8/2022	2.48	Yes				
Property CH	5/31/2022	10.27	Yes				
Property CJ	6/7/2022	2.64	Yes				
Property CK	6/8/2022	8.80	Yes				
Property CM	6/7/2022	3.54	Yes				
Property CN	6/8/2022	1.81	Yes				
		10.09	Yes				
Property CO	6/8/2022	13.14					
Property CQ	6/3/2022	76.31	Yes				
Property CS	9/22/2022		Yes				
Property CX	5/31/2022	5.35	Yes				
Property CZ	6/1/2022	5.48	Yes				
Property DD	6/3/2022	9.78	Yes				
Property DE	6/9/2022	3.54	Yes				
Property DF	6/6/2022	ND	Yes				
Property DJ	6/3/2022	6.59	Yes				
Property DK	6/3/2022	2.28	Yes				
Property DO	6/13/2022	4.96	Yes				
Property DQ	6/1/2022	10.21	Yes				
Property EA	6/8/2022	4.77	Yes				
Property EF	9/9/2020	13.20	No				
Property EG	6/2/2022	3.43	Yes				
Property ER	6/13/2022	4.72	Yes				
Property ET	6/10/2022	4.61	Yes				
Property EU	7/21/2022	3.47	Yes				
Property EV	6/15/2022	4.04	Yes				
Property EW	6/15/2022	9.51	Yes				
Property FC	5/31/2022	7.44	Yes				
Property FD	6/8/2022	14.22	Yes				
Property FE	5/31/2022	ND	Yes				
Property FJ	6/15/2022	ND	Yes				
Property FS	5/31/2022	4.87	Yes				
Property FT	6/7/2022	2.06	Yes				
Property FY	6/18/2019	ND	No				
Property FZ	8/4/2022	ND	Yes				
Property GD	6/8/2022	2.98	Yes				

Table 2 - Private Well Annual Monitoring Summary

Property ID	Date of Last Sample	Peak PFAS6	Sampled in 2022
Property GF	6/3/2022	ND	Yes
Property GH	6/9/2022	4.72	Yes
Property GI	12/8/2022	6.62	Yes
Property GJ	6/2/2022	2.92	Yes
Property GK	9/9/2020	ND	No
Property N	6/1/2022	ND	Yes
Property O	12/7/2022	3.16	Yes
Property Q	6/1/2022	ND	Yes
Property S	9/8/2020	3.95	No
Property W	6/2/2022	2.14	Yes
Property ZY	5/31/2022	18.91	Yes

Notes:

1. Max PFAS6 indicates the maximum of the 6 PFAS compounds identified in the MCP Method 1 GW-1 standard that are detected in any of the samples collected from the location.

2. PFAS6 units are in nc Units are in ng/L (parts per trillion)

3. ND indicates PFAS6 was not detected

Table 3 - POET System Performance Summary

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume	
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)	
				12/27/2018	1,181	33.6	<2.02	initial sample	0	
				1/16/2019	923	<1.97	<1.91	445	445	
				4/29/2019	69.3	<1.84	<1.77	516	961	
				9/9/2019	471	<1.94	<1.94	34,657	35,618	
				12/12/2019	91.2	<1.80	<2.01	1,867	37,486	
				3/17/2020	84.9	<1.89	<1.95	1,426	38,911	
				6/1/2020	104	<1.93	<2.03	3,319	42,230	
Property B	2	2-GAC System	Quarterly	9/9/2020	197	<2.00	<1.99	14,421	56,651	
		-		12/14/2020	60.4	<1.78	<1.88	4,744	61,395	
				3/24/2021	48.5	<1.86	<1.83	3,502	64,897	
				6/9/2021	337	<1.91	<1.82	30,419	95,315	
				9/9/2021	268	<2.00	<2.00	116,302	211,618	
				12/14/2021	640	<2.00	<2.00	55,005	266,622	
				3/17/2022	242	<2.00	<2.00	961	268,676	
				6/3/2022	163	<2.00	<2.00	51,487	320,163	
				9/19/2022	44.6	<2.00	<2.00	155,597	475,760	
				3/13/2019	1,762	<1.92	<1.91	96	96	
				6/4/2019	1,270	<1.82	<1.92	5,457	5,553	
				9/12/2019	873	<1.79	<1.89	11,783	17,336	
				12/12/2019	1,010	<1.94	<2.11	6,454	23,789	
				3/16/2020	1,445	<1.93	<2.16	6,182	29,971	
Property J-1	3	2-GAC System	Quarterly	6/3/2020	932	<1.99	<2.13	5,636	35,607	
				9/10/2020	639	<2.04	<2.02	8,636	44,242	
				12/15/2020	991	<1.83	<1.82	6,973	51,216	
				3/24/2021	1,166	<1.83	<1.94	6,558	57,773	
				6/10/2021	1,036	<1.87	<2.00	4,155	61,928	
				9/9/2021	1,490	<2.00		5,472	67,400	
				12/14/2021	2,200	<2.00	<2.00	7,025	74,425	
				3/3/2022	1,501	<2.00	<2.00	4,762	79,187	
				6/6/2022	1,331	<2.00	<2.00	7,035	86,222	
				9/21/2022	675	<1.82	<1.92	9,219	95,440	

		System	Sample Frequency		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре		Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
			-	3/13/2019	1,762	<1.91	<1.83	264	264
				6/4/2019	1,270	2.54	<1.96	9,949	10,213
				9/12/2019	873	<1.86	<1.82	15,689	25,902
				12/12/2019	1,010	<1.86	<1.92	11,140	37,042
				3/16/2020	1,445	<1.90	<2.00	8,683	45,725
Property J-2	3	2-GAC System	Quarterly	6/3/2020	932	<1.88	<1.94	8,341	54,066
		-		9/10/2020	639	<2.26	<2.22	15,027	69,093
				12/15/2020	991	<1.85	<1.78	9,994	79,087
				3/24/2021	1,166	<1.86	<1.81	8,023	87,110
				6/10/2021	1,036	<1.88	<1.90	8,454	95,564
				9/9/2021	1,490	<2.00		9,877	105,440
				12/14/2021	2,200	<2.00	<2.00	10,050	115,491
				3/3/2022	1,501	<2.00	<2.00	6,259	121,749
				6/6/2022	1,331	<2.00	<2.00	8,632	130,382
				9/21/2022	675	<1.82	<1.78	12,980	143,362
				3/13/2019	957	<1.89	<1.83	90	90
				6/3/2019	575	<1.92	<1.86	5,041	5,131
				9/13/2019	910	<1.85	<1.86	9,248	14,379
				12/12/2019	528	<1.86	<1.82	6,022	20,401
				3/19/2020	161	<2.02	<1.97	5,390	25,791
				6/4/2020	342	<1.90	<1.89	5,645	31,436
Property I	4	2-GAC System	Quarterly	9/10/2020	444	<1.83	<2.03	10,333	41,769
				12/15/2020	797	<1.87	<1.88	7,113	48,882
				3/25/2021	635	<1.84	<1.77	6,373	55,256
				6/7/2021	514	<1.85	<1.71	6,375	61,630
				12/14/2021	629	<2.00	<2.00	13,834	75,464
				3/2/2022	400	<2.00	<2.00	3,586	79,050
				6/2/2022	339	<2.00	<2.00	5,844	84,895
				9/21/2022	210	<1.85	<1.76	9,489	94,383
				3/28/2019	1,110	<1.93	<1.86	86	86
				6/4/2019	1,178	<1.95	<1.89	1,960	2,046
				9/12/2019	803	<1.86	<1.86	2,953	4,999
				12/12/2019	1,745	<1.92	<1.80	1,977	6,976
				3/16/2020	2,157	<2.16	<1.87	2,013	8,989
Property F-1	5	2-GAC System	Quarterly	6/2/2020	1,042	<1.91	<1.82	1,480	10,468
				9/10/2020	1,676	<2.00	<2.01	3,308	13,776
				12/14/2020	3,359	<1.83	<1.83	570	14,346
				3/24/2021	3,306	<1.86	<1.83	267	14,613
				6/7/2021	2,325	<1.83	<1.87	4,134	18,747
				9/8/2021	2,374	<2.00		14,853	33,600
				12/14/2021	2,455	<2.00	<2.00	17,319	50,919
				6/10/2022	1,014	<2.00	<2.00	29,858	80,777
				9/21/2022	958	<1.78	<1.77	11,976	92,753

		System	Sample Frequency		Sum of	6 Target PFA	\S (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре		Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
				6/20/2019	1,076	<1.79	<1.82	213	213
				9/12/2019	803	<1.82	<1.84	56	269
				12/12/2019	1,745	<1.73	<1.88	32	301
				6/2/2020	1,042	<1.97	<1.98	131	432
Property F-2	5	2-GAC System	Quarterly	9/10/2020	1,676	<2.00	<1.96	77	509
				12/14/2020	3,359	<1.81	<1.88	57	566
				3/24/2021	3,306	<1.81	<1.89	48	614
				6/7/2021	2,325	<1.84	<1.76	42	656
				9/8/2021	2,374	<2.00		89	744
				12/14/2021	2,455	<2.00	<2.00	96	840
				6/10/2022	1,014	<2.00	<2.00	220	1,061
				6/4/2019	490	<1.95	<1.86	15,390	15,390
				9/9/2019	585	<1.88	<1.98	37,799	53,189
				12/12/2019	428	<1.90	<1.74	13,635	66,824
				3/16/2020	426	<2.02	<1.99	21,635	88,459
				6/3/2020	852	22.7	<1.77	13,300	101,758
				9/9/2020	471	<1.86	<1.97	17,649	119,407
Property Y	6	2-GAC System	Quarterly	12/14/2020	790	<1.79	<1.80	16,444	135,851
				3/25/2021	601	<1.80	<1.77	13,505	149,356
				6/11/2021	911	3.26	<1.86	12,694	162,050
				9/9/2021	455	<2.00		20,706	182,756
				12/14/2021	312	<2.00	<2.00	9,546	192,301
				6/2/2022	514	<2.00	<2.00	15,142	207,443
				9/20/2022	402	<2.00	<2.00	21,092	228,535
				4/29/2019	265	<1.90	<1.89	41	41
				6/19/2019	219	<1.86	<1.93	1,507	1,548
				9/12/2019	280	<2.09	<1.97	7,869	9,417
				12/12/2019	357	<1.96	<1.85	1,041	10,459
				3/17/2020	184	<2.07	<2.14	776	11,235
Property AY	7	2-GAC System	Quarterly	6/1/2020	265	<1.97	<1.85	9	11,244
				9/9/2020	177	<2.17	<2.24	14,373	25,617
				6/9/2021	170	<1.94	<1.83	15,057	40,674
				9/8/2021	156	<2.00		29,906	70,580
				6/3/2022	113	<2.00	<2.00	4,662	75,242
				9/21/2022	111	<2.00	<2.00	27,988	103,229
				3/14/2019	154	<1.94	<1.88	170	170
				9/12/2019	162	<1.82	<1.85	10,142	10,312
				3/18/2020	117	<2.08	<2.02	8,309	18,621
Property CL	8	2-GAC System	Semi-Annual	10/22/2020	197	<1.95	<1.86	18,651	37,272
				6/9/2021	122	<1.84	<1.83	861	38,133
				9/8/2021	118	<2.00		4,747	42,880
				6/8/2022	86	<2.00	<2.00	13,302	56,182
				9/23/2022	97	<2.00	<2.00	8,724	64,905

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
				6/5/2019	86.9	<1.90	<1.80	3,611	3,611
				9/13/2019	95.8	<1.82	<1.92	11,539	15,150
				3/19/2020	136	<2.01	<1.77	16,073	31,223
Property AX	9	2-GAC System	Semi-Annual	9/10/2020	45.6	<1.99	<1.74	25,796	57,019
				6/11/2021	43.8	<1.88	<1.89	108,361	165,380
				9/8/2021	45.0	<2.00		11,704	177,084
				6/1/2022	58.7	<2.00	<2.00	16,990	194,074
				9/19/2022	53.9	<2.00	<2.00	23,182	217,256
				3/14/2019	230	<1.92	<1.94	initial sample	0
				4/30/2019	141	<1.85	<1.85	9,015	9,015
				9/9/2019	151	<1.77	<1.78	22,077	31,092
Property BJ-1	10	2-GAC System	Semi-Annual	3/18/2020	183	<1.92	<1.95	35,819	66,911
				9/9/2020	138	<1.95	<2.00	36,076	102,987
				6/10/2021	221	<1.85	<1.87	57,303	160,290
				9/9/2021	255	<2.00		20,635	180,924
				6/16/2022	216	<2.00	<2.00	45,843	226,767
				9/19/2022	110	7.81	<2.00	11,431	238,198
				3/14/2019	230		<1.78	1,239	1,239
				4/30/2019	141		<1.92	10	1,249
				9/9/2019	151		<1.79	691	1,940
				3/18/2020	183		<2.11	15,728	17,668
Property BJ-2	10	1-GAC System	Semi-Annual	9/9/2020	138		<1.84	9,876	27,544
				6/10/2021	221		<1.84	15,586	43,130
				9/9/2021	255		<2.00	4,670	47,800
				6/16/2022	216		<2.00	16,254	64,054
				9/19/2022	110		<2.00	6,325	70,378
				3/28/2019	41.3	<1.89	<1.86	524	524
				9/9/2019	136	10.3	<1.92	34,666	35,190
				12/12/2019	178	8.32	<2.07	21,660	56,851
Property C	11	2-GAC System	Semi-Annual	3/16/2020	113	12.7	<2.00	23,483	80,333
				9/10/2020	71.9	<2.30	<2.08	51,084	131,418
				6/10/2021	90.3	<1.89	<1.87	102,809	234,226
				9/8/2021	83.5	<2.00		34,174	268,400
				6/1/2022	28.2	<2.00	<2.00	67,528	335,928
				9/21/2022	49.4	<2.00	<2.00	10,037	345,965

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
				4/29/2019	285	<1.83	<1.90	194	194
				9/10/2019	286	<1.96	<1.85	14,406	14,600
				6/5/2020	381	<1.82	<1.84	error with meter	error with meter
Property BO-1	12	2-GAC System	Semi-Annual	9/9/2020	383	<1.90	<1.89	error with meter	error with meter
				6/7/2021	211	<1.86	<1.88	10,178	24,778
				9/8/2021	196	<2.00		22,583	47,361
				6/16/2022	117	<2.00	<2.00	8,443	55,804
				9/19/2022	87	<2.00	<2.00	22,943	78,746
				4/29/2019	265	<1.86	<1.90	40	40
				9/10/2019	286	<1.86	<1.84	4,198	4,237
				6/5/2020	381	<2.04	<2.03	1,045	5,283
Property BO-2	12	2-GAC System	Semi-Annual	9/9/2020	383	<2.24	<1.90	10,692	15,974
				6/7/2021	211	<1.93	<1.92	956	16,930
				9/8/2021	196	<2.00		6,015	22,945
				6/16/2022	117	<2.00	<2.00	2,842	25,786
				9/19/2022	87	<2.00	<2.00	3,531	29,317
				3/13/2019	164	<1.84	<1.95	188	188
				9/12/2019	195	<1.80	<1.78	24,001	24,189
				3/16/2020	206	<1.96	<2.04	5,259	29,447
				9/8/2020	244	<1.84	<1.89	39,172	68,620
Property L	13	2-GAC System	Semi-Annual	6/8/2021	287	324	303	11,820	80,440
				6/29/2021	272	NM	<1.82	1,991	82,430
				9/9/2021	252	NM	<2.00	18,563	100,993
				6/3/2022	210	204	<2.00	22,254	123,248
				9/19/2022	166	191	<2.00	25,877	149,125
				4/29/2019	373	<1.78	<1.83	294	294
				9/9/2019	350	<1.94	<1.82	64,205	64,499
				9/8/2020	258	<1.81	<1.90	5,301	69,799
Property DA	14	2-GAC System	Semi-Annual	12/14/2020	611	<1.85	<1.82	15,212	85,011
		-		6/9/2021	337	<1.88	<1.86	7,922	92,933
				9/9/2021	312	<2.00		19,833	112,766
				6/3/2022	257	<2.00	<2.00	8,329	121,095
				9/20/2022	197	<2.00	<2.00	not measured	not measured
				6/20/2019	140	<1.88	<1.86	153	153
				6/1/2020	185	<2.02	<1.82	43,013	43,166
Property G	15	2-GAC System	Semi-Annual	12/15/2020	364	<1.89	<1.89	42,725	85,890
				6/9/2021	177	<1.89	<1.85	6,263	92,153
				5/31/2022	98	<2.00	<2.00	31,257	123,409
				9/23/2022	115	3.00	<2.00	27,242	150,652

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
				6/4/2019	158		<1.85	3,110	3,110
				6/2/2020	68.8		<1.91	34,791	37,901
Property AS	16	1-GAC System	Semi-Annual	10/22/2020	85.0		<1.85	21,582	59,482
				6/8/2021	61.1		<1.86	15,083	74,565
				6/13/2022	36.2		<2.00	25,764	100,329
				3/14/2019	36.5		<2.23	576	576
Property AC	17	1-GAC System	Semi-Annual	6/3/2020	37.1		<2.08	8,015	8,591
				6/11/2021	95.4		<1.98	6,688	15,279
				6/3/2022	156		<2.00	6,401	21,681
				9/11/2020	72.6		5.77	161	161
				10/22/2020	27.3		3.05	4,017	4,178
				12/14/2020	20.4		<1.86	not measured	not measured
Property AW	NA	1-GAC System	Semi-Annual	6/7/2021	19.3		<1.94	16,251	20,429
		-		9/9/2021	18.4		<2.00	8,595	29,024
				6/8/2022	14.0		<2.00	13,755	42,780
				9/19/2022	20.6		<2.00	12,709	55,489
				4/30/2019	106		<1.82	8,586	8,739
				3/17/2020	75.9		<1.89	131,792	140,531
				9/10/2020	79.2		<1.98	116,962	257,493
Property AL	NA	2-GAC System	Semi-Annual	6/10/2021	78.5		94.9	72,229	329,722
				6/29/2021	80.5		20.4	19,360	349,082
				10/19/2021	85.4		<2.00	3,643	395,207
				6/8/2022	44.4	<2.00	12.2	20,431	415,638
				9/23/2022	76.4	8.31	<2.00	20,269	456,176
				3/28/2019	46.6		<1.84	86	86
Property CF	NA	1-GAC System	Annual	3/18/2020	26.0		<2.01	33,703	33,789
				6/10/2021	27.1		<1.84	49,803	83,592
				6/2/2022	21.4		<2.00	68,243	151,835
				3/14/2019	<2.18		<1.75	463	463
Property AU	NA	1-GAC System	Annual	3/17/2020	26.6		<1.87	116,331	116,794
				6/11/2021	47.7		<1.83	161,516	278,310
				6/14/2022	36.5		<2.00	109,563	387,873
				3/15/2019	9.26		<1.90	263	263
Property U	NA	1-GAC System	Annual	3/16/2020	<1.90		<1.90	33,824	34,087
				6/8/2021	<1.84		<1.86	45,408	79,496
				6/7/2022	<1.85		<2.00	39,616	119,112
				3/14/2019	18.3		<1.93	155	155
Property BZ	NA	1-GAC System	Annual	6/3/2020	11.1		<1.86	37,769	37,924
				6/11/2021	30.7		<1.81	45,123	83,047
				6/7/2022	39.0		<2.00	39,617	122,664

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume	
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)	
				3/14/2019	77.6		<1.92	33	188	
Property Z	NA	1-GAC System	Annual	3/16/2020	56.6		<2.01	7,387	7,575	
		-		6/11/2021	41.2		<1.92	12,415	19,990	
				6/2/2022	29.0		<2.00	9,577	29,567	
				7/11/2019	32.0		<1.75	128	128	
Property BS	NA	1-GAC System	Annual	3/18/2020	46.8		<1.95	1,590	1,718	
				6/9/2021	28.9		<1.85	8,753	10,471	
				5/31/2022	19.2		<2.00	4,944	15,414	
				4/30/2019	107		<1.98	1,443	1442.5	
Property E	NA	1-GAC System	Annual	3/18/2020	32.5		<1.97	18,902	20,344	
		-		6/9/2021	50.7		<1.83	25,003	45,347	
				6/3/2022	29.7		<2.00	53,411	98,758	
				6/3/2019	34.8		<1.82	394	394	
Property P	NA	1-GAC System	Annual	3/16/2020	38.8		<1.96	27,605	27,999	
				6/7/2021	27.9		<1.90	30,378	58,377	
				6/7/2022	26.4		<2.00	15,596	73,973	
				4/30/2019	66.8		<1.97	269	269	
Property X	NA	1-GAC System	Annual	3/17/2020	34.4		<2.20	12,468	12,737	
		-		6/9/2021	29.9		<2.08	13,693	26,429	
				6/7/2022	32.4		<2.00	13,764	40,193	
				6/17/2019	10.6		<1.87	2,360	2,360	
Property BE	NA	1-GAC System	Annual	3/17/2020	18.1		<1.92	14,107	16,467	
				6/8/2021	11.8		<1.89	25,234	41,701	
				6/13/2022	9.8		<2.00	16,722	58,423	
				4/29/2019	37.1		<1.78	138	138	
Property DG	NA	1-GAC System	Annual	3/17/2020	15.0		<2.01	840	978	
-				6/7/2021	21.0		<1.87	19,364	20,342	
				5/31/2022	76.4		<2.00	17,304	37,646	
					-	-				

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
				4/29/2019	20.0		<1.89	3,596	3,596
Property H	NA	1-GAC System	Annual	3/17/2020	2.20		<2.00	39,318	42,913
				6/9/2021	<1.93		<1.88	61,660	104,573
				6/1/2022	<1.89			41,167	145,740
				6/19/2019	19.4		<1.85	253	253
Property EM-1	NA	1-GAC System	Annual	3/18/2020	17.4		<1.92	21,081	21,334
		_		6/9/2021	35.1		<1.88	5,951	27,285
				6/6/2022	26.8		<2.00	22,074	49,359
Property EM-2	NA	1-GAC System	Annual	3/2/2022	36.2		<2.00	87	87
				6/6/2022	26.8		<2.00	6,847	7,021
				7/18/2019	36.1		<1.86	initial sample	0
Property ED	NA	1-GAC System	Annual	7/16/2020	42.2		<1.90	13,010	13,010
		-		6/9/2021	60.8		<1.94	6,148	19,158
				6/4/2022	41.8		<2.00	13,183	32,341
				6/20/2019	37.7		<1.91	257	257
				6/4/2020	28.5		<1.85	22,994	23,251
Property EY	NA	1-GAC System	Annual	6/7/2021	11.6		74	49,479	72,730
				6/29/2021	57.8		<1.82	167	72,897
				6/15/2022	69.0		<2.00	48,527	121,424
				6/20/2019	34.4		<1.83	252	252
				6/1/2020	9.30		<1.74	21,630	21,882
Property FF	NA	1-GAC System	Annual	6/9/2021	15.8		11	19,360	41,242
-		-		6/29/2021	10.0		<1.88	697	41,939
				6/8/2022	12.7		<2.00	19,119	61,058
				6/20/2019	42.1		<1.86	205	205
				7/16/2020	71.8		<2.07	14,692	14,897
Property FG	NA	1-GAC System	Annual	6/11/2021	15.8		<1.82	17,158	32,054
				6/9/2022	13.8		17.0	system bypass	system bypass
				8/4/2022	37.5		<2.0	5,916	37,971

		System	Sample		Sum of	6 Target PFA	AS (ng/L)	Volume Treated ¹	Cumulative Volume
Property ID	IRA RMR #	Туре	Frequency	Date	Influent	Midpoint	Effluent	(gallons)	Treated (gallons)
				9/13/2019	10.0		<1.81	14,831	14,831
Property FK	NA	1-GAC System	Annual	10/19/2021	22.9		<2.00	14,847	52,190
-		-		5/31/2022	<1.84		<2.00	3,192	55,381
Property FO	NA	1-GAC System	Annual	6/20/2019	13.5		<1.97	152	152
				8/4/2022	<1.95		<2.00	6,647	6,799
				3/16/2020	59.5		<2.02	initial sample	0
Property FX	NA	1-GAC System	Annual	6/8/2021	40.0		28.1	24,318	24,318
				6/29/2021	28.5		<1.73	170	24,488
				6/3/2022	35.2		<2.00	22,251	46,739
				7/17/2020	12.9		3.78	699	699
Property AO	NA	1-GAC System	Annual	3/24/2021	7.60		5.83	76,467	77,166
				6/9/2021	14.4		<1.86	18,068	95,234
				5/31/2022	12.7		2.74	92,855	188,089
	NA	1-GAC System	Annual	7/17/2020	57.1		<2.00	309	309
Property EK				6/9/2021	16.4		<1.91	28,864	29,172
				6/2/2022	8.64		5.62	51,689	80,861
				6/3/2020	21.3		<1.92	no meter	no meter
Property ZZ	NA	1-GAC System	Annual	6/10/2021	24.1		<1.84	no meter	no meter
				6/8/2022	24.3		2.22	no meter	no meter
				8/4/2022	20.1		<2.00	no meter	no meter
	NA	1-GAC System	Annual	10/23/2020	26.0		<1.80	423	423
Property CB				6/10/2021	4.01		<1.89	37,288	37,711
				6/13/2022	4.00		<2.00	83,348	121,059
Property GO-1	NA	2-GAC System	Annual	8/4/2022	64.6	<2.00	<2.00	initial sample	0
Property CS	NA	2-GAC System	Annual	9/22/2022	2.11	23.7	<2.00	initial sample	0
Property AT	NA	2-GAC System	Annual	10/24/2022	9.07	45.4	<2.00	initial sample	0

Notes:

1. < indicates PFAS6 not detected above laboratory detection limits.

2. Volume treated measured at treatment system flow meter and indicates the volume of water treated since the previous sampling event.

CLIENT SAMPLE ID						TT-1 (1-2')	TT-4 (1-2')	Boatyard Soil Sample (0-2')	Runway Soil-AFFF Area	Runway Soils- General	TT-1A-0-1
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	1-2	1-2	0-2	stockpile	stockpile	0-1
SAMPLING DATE			Standard	Standard	Standard	3/12/2018	3/12/2018	3/13/2019	3/14/2019	3/14/2019	9/11/2019
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L1809219-02	L1809219-01	L1910438-08	L1910260-01	L1910260-02	L1942017-03
Perfluorinated Alkyl Acids by EPA 537											
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorodecanoic Acid (PFDA)	335-76-2	ng/g	0.3	300	300	4.56	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorododecanoic Acid (PFDoA)	307-55-1	ng/g	NA	NA	NA	<1.07	1.69	<1.07	<1.08	<0.889	<4.96
Perfluoroheptanoic Acid (PFHpA)	375-85-9	ng/g	0.5	300	300	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ng/g	0.3	300	300	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorohexanoic Acid (PFHxA)	307-24-4	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorononanoic Acid (PFNA)	375-95-1	ng/g	0.32	300	300	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	ng/g	2	300	300	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorooctanoic Acid (PFOA)	335-67-1	ng/g	0.72	300	300	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ng/g	NA	NA	NA	<1.07	<1.68	<1.07	<1.08	<0.889	<4.96
PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA and PFDA)		ng/g	NA	NA	NA	4.56	<1.68	<1.07	<1.08	<0.889	<4.96
Isotope Dilution Compounds											
Perfluorobutanoic Acid (PFBA)	375-22-4	ng/g	NA	NA	NA						
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ng/g	NA	NA	NA						<4.96
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	ng/g	NA	NA	NA						
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	ng/g	NA	NA	NA						
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ng/g	NA	NA	NA						
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	ng/g	NA	NA	NA						28.4
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	ng/g	NA	NA	NA						
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ng/g	NA	NA	NA						
Perfluorooctanesulfonamide (FOSA)	754-91-6	ng/g	NA	NA	NA						
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	ng/g	NA	NA	NA						22.7

CLIENT SAMPLE ID						TT-1 (1-2')	TT-4 (1-2')	Boatyard Soil Sample (0-2')	Runway Soil-AFFF Area	Runway Soils- General	TT-1A-0-1
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	1-2	1-2	0-2	stockpile	stockpile	0-1
SAMPLING DATE			Standard	Standard	Standard	3/12/2018	3/12/2018	3/13/2019	3/14/2019	3/14/2019	9/11/2019
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L1809219-02	L1809219-01	L1910438-08	L1910260-01	L1910260-02	L1942017-03
Total Organic Carbon											
Total Organic Carbon		%	NA	NA	NA						
Grain Size Analysis											
Cobbles		%	NA	NA	NA						
% Coarse Gravel		%	NA	NA	NA						
% Fine Gravel		%	NA	NA	NA						
% Total Gravel		%	NA	NA	NA						
% Coarse Sand		%	NA	NA	NA						
% Medium Sand		%	NA	NA	NA						
% Fine Sand		%	NA	NA	NA						
% Total Sand		%	NA	NA	NA						
% Total Fines		%	NA	NA	NA						
General Chemistry											
Solids, Total		%	NA	NA	NA						
Moisture		%	NA	NA	NA						
Specific Gravity		NA	NA	NA	NA						
Density of Soil											
Bulk Density		lbs/ft3	NA	NA	NA						
Moisture Content		%	NA	NA	NA						
Dry Density		lbs/ft3	NA	NA	NA						

Notes:

< indicates compound not detected above laboratory analytical method detection limits

Blank indicates compound was not reported by the analytical method

ND indicates total PFAS6 concentration not detected

NA indicates no applicable standard or unit has been established

CLIENT SAMPLE ID						TT-1A-26-28	TT-2A-0-1	TT-2A-30-32	WWTP-CLARIFIER (0-0.5)	WWTP-AFFF #1 (0 0.5)	- WWTP-AFFF #2 (0 0.5)
						11-14-20-20	11-2A-0-1	11-2A-30-32	(0-0.3)	0.0)	0.5)
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	26-28	0-1	30-32	0-0.5'	0-0.5'	0-0.5'
SAMPLING DATE			Standard	Standard	Standard	9/11/2019	9/11/2019	9/11/2019	3/15/2022	3/15/2022	3/15/2022
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L1942017-04	L1942017-01	L1942017-02	L2213637-01	L2213637-02	L2213637-03
Perfluorinated Alkyl Acids by EPA 537											
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ng/g	NA	NA	NA	<0.935	<1.04	<1.00	<0.549	<0.499	0.782
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ng/g	NA	NA	NA	<0.935	<1.04	<1.00	<0.549	<0.499	1.04
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	ng/g	NA	NA	NA	<0.935	<1.04	<1.00	<0.549	<0.249	<0.254
Perfluorodecanoic Acid (PFDA)	335-76-2	ng/g	0.3	300	300	<0.935	3.16	<1.00	0.596	<0.249	13.7
Perfluorododecanoic Acid (PFDoA)	307-55-1	ng/g	NA	NA	NA	<0.935	<1.04	<1.00	<0.549	<0.499	7.38
Perfluoroheptanoic Acid (PFHpA)	375-85-9	ng/g	0.5	300	300	<0.935	1.69	1.08	<0.549	<0.249	1.36
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ng/g	0.3	300	300	<0.935	<1.04	<1.00	<0.549	<0.249	<0.254
Perfluorohexanoic Acid (PFHxA)	307-24-4	ng/g	NA	NA	NA	<0.935	1.41	<1.00	<0.549	<0.499	2.02
Perfluorononanoic Acid (PFNA)	375-95-1	ng/g	0.32	300	300	<0.935	1.56	<1.00	0.338	<0.249	6.47
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	ng/g	2	300	300	<0.935	<1.04	<1.00	3.74	<0.249	0.694
Perfluorooctanoic Acid (PFOA)	335-67-1	ng/g	0.72	300	300	1.26	1.67	1.50	0.561	<0.249	3.52
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ng/g	NA	NA	NA	<0.935	<1.04	<1.00	<0.549	<0.499	2.66
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ng/g	NA	NA	NA	<0.935	1.52	<1.00	<0.549	<0.499	2.44
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ng/g	NA	NA	NA	<0.935	1.77	<1.00	<0.549	<0.499	5.19
PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA and PFDA)		ng/g	NA	NA	NA	1.26	8.08	2.58	5.24	ND	25.74
Isotope Dilution Compounds											
Perfluorobutanoic Acid (PFBA)	375-22-4	ng/g	NA	NA	NA				<0.549	<0.499	0.898
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ng/g	NA	NA	NA	<0.935	2.17	<1.00	<0.549	<0.499	2.830
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	ng/g	NA	NA	NA				<0.549	<0.997	<1.02
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	ng/g	NA	NA	NA				<0.549	<0.997	<1.02
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ng/g	NA	NA	NA				<0.549	<0.499	<0.508
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	ng/g	NA	NA	NA	4.52	2.10	<1.00	<0.549	<0.499	<0.508
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	ng/g	NA	NA	NA				<0.549	<0.997	<1.02
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ng/g	NA	NA	NA				<0.549	<0.499	0.962
Perfluorooctanesulfonamide (FOSA)	754-91-6	ng/g	NA	NA	NA				<0.549	<0.499	<0.500
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	ng/g	NA	NA	NA	49.5	2.82	15.1	2.00	1.62	28.3

CLIENT SAMPLE ID						TT-1A-26-28	TT-2A-0-1	TT-2A-30-32
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	26-28	0-1	30-32
SAMPLING DATE			Standard	Standard	Standard	9/11/2019	9/11/2019	9/11/2019
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L1942017-04	L1942017-01	L1942017-02
Total Organic Carbon								
Total Organic Carbon		%	NA	NA	NA			
Grain Size Analysis								
Cobbles		%	NA	NA	NA			
% Coarse Gravel		%	NA	NA	NA			
% Fine Gravel		%	NA	NA	NA			
% Total Gravel		%	NA	NA	NA			
% Coarse Sand		%	NA	NA	NA			
% Medium Sand		%	NA	NA	NA			
% Fine Sand		%	NA	NA	NA			
% Total Sand		%	NA	NA	NA			
% Total Fines		%	NA	NA	NA			
General Chemistry								
Solids, Total		%	NA	NA	NA			
Moisture		%	NA	NA	NA			
Specific Gravity		NA	NA	NA	NA			
Density of Soil								
Bulk Density		lbs/ft3	NA	NA	NA			
Moisture Content		%	NA	NA	NA			
Dry Density		lbs/ft3	NA	NA	NA			

Notes:

< indicates compound not detected above laboratory analytical method detection limits

Blank indicates compound was not reported by the analytical method

ND indicates total PFAS6 concentration not detected

NA indicates no applicable standard or unit has been established

32	WWTP-CLARIFIER (0-0.5)	WWTP-AFFF #1 (0 0.5)	- WWTP-AFFF #2 (0- 0.5)
	0-0.5'	0-0.5'	0-0.5'
9	3/15/2022	3/15/2022	3/15/2022
02	L2213637-01	L2213637-02	L2213637-03
	87.8	92.2	87.3

								WWTP-AFFF #2 (0-	HADLEY SOIL 0-		
CLIENT SAMPLE ID						TT-13 (29')	TT-13 (0-0.5)	0.5')	6"	AFFF-SA-1	AFFF-SA-2
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	29'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'
SAMPLING DATE			Standard	Standard	Standard	3/15/2022	3/15/2022	7/21/2022	9/20/2022	9/21/2022	9/21/2022
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L2214450-02	L2214450-03	L2239307-01	L2252841-01	L2252841-02	L2252841-03
Perfluorinated Alkyl Acids by EPA 537											
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ng/g	NA	NA	NA	<0.497	<0.554	<1.18	<1.35	<1.82	<1.51
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ng/g	NA	NA	NA	<0.497	<0.554	<1.18	<1.35	<1.82	<1.51
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	ng/g	NA	NA	NA	<0.249	<0.277	<0.592	<0.676	< 0.913	<0.753
Perfluorodecanoic Acid (PFDA)	335-76-2	ng/g	0.3	300	300	<0.249	3.19	16.6	1.74	<0.913	7.83
Perfluorododecanoic Acid (PFDoA)	307-55-1	ng/g	NA	NA	NA	<0.497	<0.554	13.7	<1.35	<1.82	7.02
Perfluoroheptanoic Acid (PFHpA)	375-85-9	ng/g	0.5	300	300	<0.249	<0.277	5.25	<0.676	<0.913	4.66
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ng/g	0.3	300	300	<0.249	<0.277	<0.592	<0.676	<0.913	<0.753
Perfluorohexanoic Acid (PFHxA)	307-24-4	ng/g	NA	NA	NA	<0.497	<0.554	8.75	<1.35	<1.82	7.44
Perfluorononanoic Acid (PFNA)	375-95-1	ng/g	0.32	300	300	<0.249	1.49	6.43	<0.676	<0.913	3.26
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	ng/g	2	300	300	0.254	<0.277	0.656	<0.676	<0.913	<0.753
Perfluorooctanoic Acid (PFOA)	335-67-1	ng/g	0.72	300	300	0.622	1.27	9.16	<0.676	<0.913	4.73
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ng/g	NA	NA	NA	<0.497	<0.554	4.6	<1.35	<1.82	5.08
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ng/g	NA	NA	NA	<0.497	<0.554	3.28	<1.35	<1.82	2.41
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ng/g	NA	NA	NA	<0.497	2.69	9.15	1.80	<1.82	4.39
PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA and PFDA)		ng/g	NA	NA	NA	0.876	5.95	38.1	1.74	ND	20.5
Isotope Dilution Compounds											
Perfluorobutanoic Acid (PFBA)	375-22-4	ng/g	NA	NA	NA	<0.497	<0.554	2.77	<1.35	<1.82	2.39
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ng/g	NA	NA	NA	0.955	0.62	12.5	<1.35	<1.82	10.6
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	ng/g	NA	NA	NA	<0.995	<1.11	<2.37	<2.70	<3.65	<3.01
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	ng/g	NA	NA	NA	<0.995	<1.11	<2.37	<2.70	<3.65	<3.01
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ng/g	NA	NA	NA	<0.497	<0.554	<1.18	<1.35	<1.82	<1.51
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	ng/g	NA	NA	NA	3.19	24.8	69.1	<1.35	<1.82	32.5
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	ng/g	NA	NA	NA	<0.995	<1.11	<2.37	<2.70	<3.65	<3.01
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ng/g	NA	NA	NA	<0.497	<0.554	<1.18	<1.35	<1.82	<1.51
Perfluorooctanesulfonamide (FOSA)	754-91-6	ng/g	NA	NA	NA	<0.497	<0.554	<1.18	<1.35	<1.82	<1.51
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	ng/g	NA	NA	NA	102	5.11	75.7	<1.35	<1.82	48

CLIENT SAMPLE ID						TT-13 (29')	TT-13 (0-0.5)	WWTP-AFFF #2 (0 0.5')
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	29'	0-0.5'	0-0.5'
SAMPLING DATE			Standard	Standard	Standard	3/15/2022	3/15/2022	7/21/2022
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L2214450-02	L2214450-03	L2239307-01
Total Organic Carbon								
Total Organic Carbon		%	NA	NA	NA	0.038		
Grain Size Analysis								
Cobbles		%	NA	NA	NA	<0.100		
% Coarse Gravel		%	NA	NA	NA	3.50		
% Fine Gravel		%	NA	NA	NA	5.70		
% Total Gravel		%	NA	NA	NA	9.20		
% Coarse Sand		%	NA	NA	NA	7.80		
% Medium Sand		%	NA	NA	NA	53.6		
% Fine Sand		%	NA	NA	NA	22.4		
% Total Sand		%	NA	NA	NA	83.8		
% Total Fines		%	NA	NA	NA	7.00		
General Chemistry								
Solids, Total		%	NA	NA	NA	93.5	83.0	71.3
Moisture		%	NA	NA	NA	6.50		
Specific Gravity		NA	NA	NA	NA	2.87		
Density of Soil								
Bulk Density		lbs/ft3	NA	NA	NA	106.8		
Moisture Content		%	NA	NA	NA	6.93		
Dry Density		lbs/ft3	NA	NA	NA	99.9		

Notes:

< indicates compound not detected above laboratory analytical method detection limits

Blank indicates compound was not reported by the analytical method

ND indicates total PFAS6 concentration not detected

NA indicates no applicable standard or unit has been established

#2 (0-	HADLEY SOIL 0- 6"	AFFF-SA-1	AFFF-SA-2
	0-0.5'	0-0.5'	0-0.5'
2	9/20/2022	9/21/2022	9/21/2022
01	L2252841-01	L2252841-02	L2252841-03
	97.9	96.1	84.0

CLIENT SAMPLE ID						AFFF-SA-3	AFFF-SA-4	AFFF-SA-5	AFFF-SA-6	AFFF-SA-7	AFFF-SA-8
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'
SAMPLING DATE			Standard	Standard	Standard	9/21/2022	9/21/2022	9/21/2022	9/21/2022	9/21/2022	9/21/2022
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L2252841-04	L2252841-05	L2252841-06	L2252841-07	L2252841-08	L2252841-09
Perfluorinated Alkyl Acids by EPA 537											
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ng/g	NA	NA	NA	<1.85	<2.17	<1.48	<1.82	<1.61	<1.43
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ng/g	NA	NA	NA	<1.85	<2.17	<1.48	<1.82	<1.61	<1.43
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	ng/g	NA	NA	NA	<0.924	<1.08	<0.740	<0.910	<0.806	<0.716
Perfluorodecanoic Acid (PFDA)	335-76-2	ng/g	0.3	300	300	1.89	34.1	<0.740	<0.910	11.7	6.9
Perfluorododecanoic Acid (PFDoA)	307-55-1	ng/g	NA	NA	NA	<1.85	15	<1.48	<1.82	6.27	12.8
Perfluoroheptanoic Acid (PFHpA)	375-85-9	ng/g	0.5	300	300	1.48	21.3	<0.740	<0.910	5.7	3.6
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ng/g	0.3	300	300	<0.924	<1.08	<0.740	<0.910	<0.806	<0.716
Perfluorohexanoic Acid (PFHxA)	307-24-4	ng/g	NA	NA	NA	2.60	17.5	<1.48	<1.82	9.79	8.29
Perfluorononanoic Acid (PFNA)	375-95-1	ng/g	0.32	300	300	1.42	36.2	<0.740	<0.910	2.06	2.45
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	ng/g	2	300	300	<0.924	<1.08	<0.740	<0.910	<0.806	<0.716
Perfluorooctanoic Acid (PFOA)	335-67-1	ng/g	0.72	300	300	1.74	34.7	<0.740	<0.910	6.75	4.2
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ng/g	NA	NA	NA	<1.85	4.73	<1.48	<1.82	2.21	9.17
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ng/g	NA	NA	NA	<1.85	4.48	<1.48	<1.82	<1.61	4.73
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ng/g	NA	NA	NA	2.87	16.3	<1.48	<1.82	6.29	6.57
PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA and PFDA)		ng/g	NA	NA	NA	6.5	126.3	ND	ND	26.2	17.2
Isotope Dilution Compounds											
Perfluorobutanoic Acid (PFBA)	375-22-4	ng/g	NA	NA	NA	3.30	22.8	<1.48	<1.82	3.9	3.09
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ng/g	NA	NA	NA	5.63	46.5	<1.48	<1.82	12.4	11.1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	ng/g	NA	NA	NA	<3.70	<4.34	<2.96	<3.64	<3.22	<2.86
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	ng/g	NA	NA	NA	<3.70	<4.34	<2.96	<3.64	<3.22	<2.86
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ng/g	NA	NA	NA	<1.85	<2.17	<1.48	<1.82	<1.61	<1.43
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	ng/g	NA	NA	NA	<1.85	543	<1.48	<1.82	29.2	158
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	ng/g	NA	NA	NA	<3.70	<4.34	<2.96	<3.64	<3.22	<2.86
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ng/g	NA	NA	NA	<1.85	<2.17	<1.48	<1.82	<1.61	<1.43
Perfluorooctanesulfonamide (FOSA)	754-91-6	ng/g	NA	NA	NA	<1.85	<2.17	<1.48	<1.82	<1.61	<1.43
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	ng/g	NA	NA	NA	<1.85	114	<1.48	<1.82	41.3	100

CLIENT SAMPLE ID						AFFF-SA-3	AFFF-SA-4	AFFF-SA-5
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	0-0.5'	0-0.5'	0-0.5'
SAMPLING DATE			Standard	Standard	Standard	9/21/2022	9/21/2022	9/21/2022
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L2252841-04	L2252841-05	L2252841-06
Total Organic Carbon								
Total Organic Carbon		%	NA	NA	NA			
Grain Size Analysis								
Cobbles		%	NA	NA	NA			
% Coarse Gravel		%	NA	NA	NA			
% Fine Gravel		%	NA	NA	NA			
% Total Gravel		%	NA	NA	NA			
% Coarse Sand		%	NA	NA	NA			
% Medium Sand		%	NA	NA	NA			
% Fine Sand		%	NA	NA	NA			
% Total Sand		%	NA	NA	NA			
% Total Fines		%	NA	NA	NA			
General Chemistry								
Solids, Total		%	NA	NA	NA	94.1	81.6	93.8
Moisture		%	NA	NA	NA			
Specific Gravity		NA	NA	NA	NA			
Density of Soil								
Bulk Density		lbs/ft3	NA	NA	NA			
Moisture Content		%	NA	NA	NA			
Dry Density		lbs/ft3	NA	NA	NA			

Notes:

< indicates compound not detected above laboratory analytical method detection limits

Blank indicates compound was not reported by the analytical method

ND indicates total PFAS6 concentration not detected

NA indicates no applicable standard or unit has been established

	AFFF-SA-6	AFFF-SA-7	AFFF-SA-8
	0-0.5'	0-0.5'	0-0.5'
	9/21/2022	9/21/2022	9/21/2022
6	L2252841-07	L2252841-08	L2252841-09
	93.9	91.9	95.0

CLIENT SAMPLE ID						AFFF-SA-9	AFFF-SA-10	ARFF-SOIL-0-0.5'	AFFF-5A-8 (1-2)	AFFF-5A-11 (0-0.5
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	0-0.5'	0-0.5'	0-0.5'	1-2'	0-0.5'
SAMPLING DATE			Standard	Standard	Standard	9/21/2022	9/21/2022	9/21/2022	10/27/2022	10/27/2022
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L2252841-10	L2252841-13	L2252841-14	L2260477-01	L2260477-02
Perfluorinated Alkyl Acids by EPA 537										
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ng/g	NA	NA	NA	<1.40	<1.46	<1.90	<0.990	<1.07
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ng/g	NA	NA	NA	<1.40	<1.46	<1.90	<0.990	<1.07
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	ng/g	NA	NA	NA	<0.702	<0.731	<0.950	<0.495	<0.536
Perfluorodecanoic Acid (PFDA)	335-76-2	ng/g	0.3	300	300	5.1	2.33	<0.950	1.89	<0.536
Perfluorododecanoic Acid (PFDoA)	307-55-1	ng/g	NA	NA	NA	2.07	7.79	<1.90	4.00	<1.07
Perfluoroheptanoic Acid (PFHpA)	375-85-9	ng/g	0.5	300	300	1.09	<0.731	<0.950	<0.495	<0.536
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ng/g	0.3	300	300	<0.702	<0.731	<0.950	<0.495	<0.536
Perfluorohexanoic Acid (PFHxA)	307-24-4	ng/g	NA	NA	NA	1.62	1.64	<1.90	<0.990	<1.07
Perfluorononanoic Acid (PFNA)	375-95-1	ng/g	0.32	300	300	0.809	<0.731	<0.950	<0.495	<0.536
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	ng/g	2	300	300	<0.702	<0.731	<0.950	<0.495	<0.536
Perfluorooctanoic Acid (PFOA)	335-67-1	ng/g	0.72	300	300	2.03	<0.731	<0.950	<0.495	< 0.536
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ng/g	NA	NA	NA	<1.40	5.1	<1.90	<0.990	<1.07
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ng/g	NA	NA	NA	<1.40	2.29	<1.90	<0.990	<1.07
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ng/g	NA	NA	NA	5.97	<1.46	<1.90	2.20	<1.07
PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA and PFDA)		ng/g	NA	NA	NA	9.0	2.3	ND	1.9	ND
Isotope Dilution Compounds										
Perfluorobutanoic Acid (PFBA)	375-22-4	ng/g	NA	NA	NA	<1.40	<1.46	<1.90	<0.990	<1.07
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ng/g	NA	NA	NA	2.46	2.64	<1.90	1.08	<1.07
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	ng/g	NA	NA	NA	<2.81	<2.92	<3.80	<1.98	<2.14
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	ng/g	NA	NA	NA	<2.81	<2.92	<3.80	<1.98	<2.14
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ng/g	NA	NA	NA	<1.40	<1.46	<1.90	<0.990	<1.07
H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	ng/g	NA	NA	NA	4.07	33.3	<1.90	54.7	<1.07
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	ng/g	NA	NA	NA	<2.81	<2.92	<3.80	<1.98	<2.14
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ng/g	NA	NA	NA	<1.40	<1.46	<1.90	<0.990	<1.07
Perfluorooctanesulfonamide (FOSA)	754-91-6	ng/g	NA	NA	NA	<1.40	<1.46	<1.90	<0.990	<1.07
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	ng/g	NA	NA	NA	4.14	61.4	<1.90	6.43	<1.07

CLIENT SAMPLE ID						AFFF-SA-9	AFFF-SA-10	ARFF-SOIL-0-0.5'	AFFF-5A-8 (1-2)	AFFF-5A-11 (0-0.5)	
Sample Depth (feet)			MCP Method 1	MCP Method 1	MCP Method 1	0-0.5'	0-0.5'	0-0.5'	1-2'	0-0.5'	
SAMPLING DATE			Standard	Standard	Standard	9/21/2022	9/21/2022	9/21/2022	10/27/2022	10/27/2022	
LAB SAMPLE ID	CAS No.	Units	S-1/GW-1	S-1/GW-2	S-1/GW-3	L2252841-10	L2252841-13	L2252841-14	L2260477-01	L2260477-02	
Tatal Organia Carban											
Total Organic Carbon		%	NA	NA	NA						
Total Organic Carbon		%	NA	NA	NA						
Grain Size Analysis											
Cobbles		%	NA	NA	NA						
% Coarse Gravel		%	NA	NA	NA						
% Fine Gravel		%	NA	NA	NA						
% Total Gravel		%	NA	NA	NA						
% Coarse Sand		%	NA	NA	NA						
% Medium Sand		%	NA	NA	NA						
% Fine Sand		%	NA	NA	NA						
% Total Sand		%	NA	NA	NA						
% Total Fines		%	NA	NA	NA						
General Chemistry											
Solids, Total		%	NA	NA	NA	95.6	96.3	93.2			
Moisture		%	NA	NA	NA						
Specific Gravity		NA	NA	NA	NA						
Density of Soil											
Bulk Density		lbs/ft3	NA	NA	NA						
Moisture Content		%	NA	NA	NA						
Dry Density		lbs/ft3	NA	NA	NA						

Notes:

< indicates compound not detected above laboratory analytical method detection limits

Blank indicates compound was not reported by the analytical method

ND indicates total PFAS6 concentration not detected

NA indicates no applicable standard or unit has been established

Table 5 - Quality Control Analytical Data

Location: Sample Name: Laboratory: Laboratory I.D.: Laboratory Analytical Detection Limit: Sample Date: Consultant:	MVY FIELD BLANK-1 Alpha L2230878-01 2.00 ng/L 6/9/2022 Tetra Tech	MVY FIELD BLANK-2 Alpha L2232847-06 1.87 ng/L 6/15/2022 Tetra Tech	MVY FIELD BLANK Alpha L2252884-05 1.82 ng/L 9/19/2022 Tetra Tech	MVY FIELD BLANK Alpha L2252841-12 1.78 ng/L 9/21/2022 Tetra Tech	MVY FIELD BLANK- POET Alpha L2252848-05 2.00 ng/L 9/23/2022 Tetra Tech	MVY EQUIPMENT BLANK Alpha L2232847-07 1.82 ng/L 6/15/2022 Tetra Tech	MVY EQUIPMENT BLANK Alpha L2252884-04 1.87 ng/L 9/19/2022 Tetra Tech	MVY TRIP BLANK Alpha L2252884-03 1.80 ng/L 9/13/2022 Tetra Tech	MVY TRIP BLANK Alpha L2252841-11 1.73 ng/L 9/13/2022 Tetra Tech	MVY TRIP BLANK Alpha L2252874-01 1.80 ng/L 9/13/2022 Tetra Tech
Perfluorinated Alkyl Acids by EPA 537										
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND ND	ND	ND ND
Perfluorobutanesulfonic Acid (PFBS) Perfluorodecanoic Acid (PFDA)	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Perfluorododecanoic Acid (PFDA) Perfluorododecanoic Acid (PFDA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorohexanoic Acid (PFHxA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorononanoic Acid (PFNA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorooctanoic Acid (PFOA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isotope Dilution Compounds										
Perfluorobutanoic Acid (PFBA)			ND	ND			ND	ND	ND	ND
Perfluoropentanoic Acid (PFPeA)			ND	ND			ND	ND	ND	ND
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			ND	ND			ND	ND	ND	ND
Perfluoropentanesulfonic Acid (PFPeS)			ND	ND			ND	ND	ND	ND
Perfluoroheptanesulfonic Acid (PFHpS)			ND	ND			ND	ND	ND	ND
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) Perfluorononanesulfonic Acid (PFNS)			ND ND	ND ND			ND ND	ND ND	ND ND	ND ND
Perfluorodecanesulfonic Acid (PFDS)			ND	ND ND			ND ND	ND	ND ND	ND ND
Perfluorooctanesulfonamide (FOSA)			ND	ND			ND	ND	ND	ND
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)			ND	ND			33.6	ND	1.99	ND

Notes:

Units are in ng/L (parts per trillion)

ND indicates compound not detected above the laboratory analytical method detection limit

Blank indicates compound was not reported by the analytical method RPD indicates relative percent difference

NC indicates RPD not calculated since compounds were not detected.

Table 5 - Quality Control Analytical Data

Location:	MVY	MVY		MVY	MVY	
Sample Name:	DUP-1	PROPERTY FG- INF	RPD	DUP-2	TT-11	RPD
Laboratory:	Alpha	Alpha		Alpha	Alpha	
Laboratory I.D.:	L2230878-02	L2230724-02		L2232847-05	L2232847-02	
Laboratory Analytical Detection Limit:	1.95 ng/L	2.01 ng/L		1.82 ng/L	1.91 ng/L	
Sample Date:	6/9/2022	6/9/2022		6/15/2022	6/15/2022	
•	Tetra Tech	Tetra Tech		Tetra Tech	Tetra Tech	
Consultant:	Tetra Tech	Tetra Tech		Tetra Tech	Tetra Tech	
Perfluorinated Alkyl Acids by EPA 537						
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	NC	ND	ND	NC
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	NC	ND	ND	NC
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	NC	ND	ND	NC
Perfluorodecanoic Acid (PFDA)	ND	ND	NC	ND	ND	NC
Perfluorododecanoic Acid (PFDoA)	ND	ND	NC	ND	ND	NC
Perfluoroheptanoic Acid (PFHpA)	14.7	13.8	-6.1%	ND	ND	NC
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	NC	ND	ND	NC
Perfluorohexanoic Acid (PFHxA)	14.3	14.0	-2.1%	ND	ND	NC
Perfluorononanoic Acid (PFNA)	ND	ND	NC	ND	ND	NC
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	NC	ND	ND	NC
Perfluorooctanoic Acid (PFOA)	ND	ND	NC	ND	ND	NC
Perfluorotetradecanoic Acid (PFTA)	ND	ND	NC	ND	ND	NC
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	NC	ND	ND	NC
Perfluoroundecanoic Acid (PFUnA)	ND	ND	NC	ND	ND	NC
Isotope Dilution Compounds						
Perfluorobutanoic Acid (PFBA)	7.78	7.34	-5.8%	ND	ND	NC
Perfluoropentanoic Acid (PFPeA)	21.5	19.7	-8.7%	ND	ND	NC
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	NC	ND	ND	NC
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	NC	ND	ND	NC
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	NC	ND	ND	NC
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	NC	ND	ND	NC
Perfluorononanesulfonic Acid (PFNS)	ND	ND	NC	ND	ND	NC
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	NC	ND	ND	NC
Perfluorooctanesulfonamide (FOSA)	ND	ND	NC	ND	ND	NC
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	NC	3.94	3.69	-6.6%

Notes:

Units are in ng/L (parts per trillion)

ND indicates compound not detected above the laboratory analytical method detection limit

Blank indicates compound was not reported by the analytical method RPD indicates relative percent difference

NC indicates RPD not calculated since compounds were not detected.

	PVC Casing		Groundwater		Groundwater
	Elevation	Depth to Water	Elevevation	Depth to Water	Elevevation
	(feet MSL)	(feet)	(feet MSL)	(feet)	(feet MSL)
Well ID	Date	10/27/2022	10/27/2022	12/9/2022	12/9/2022
TT-1	44.11	30.30	13.81	30.58	13.53
TT-2	48.51	NA	NA	Dry	Dry
TT-13	46.46	32.72	13.74	32.94	13.52
TT-18	43.05	29.28	13.77	29.50	13.55
TT-19	42.80	29.05	13.75	29.28	13.52
TT-20	42.81	29.18	13.63	29.28	13.53
TT-21	43.50	29.84	13.66	30.07	13.43
TT-22	48.45	34.84	13.61	35.08	13.37
TT-23	51.53	37.74	13.79	37.97	13.56
TT-24	45.47	31.70	13.77	31.95	13.52
TT-25	42.56	NA	NA	29.05	13.51
TT-26S	45.43	NA	NA	31.97	13.46
TT-26D	45.72	NA	NA	32.29	13.43
TT-27	55.72	NA	NA	42.20	13.52
TT-28	46.97	NA	NA	33.19	13.78
TT-29	49.88	NA	NA	36.00	13.88
MW-9	51.63	8.45	43.18	38.05	13.58
RIZ-X	45.25	31.46	13.79	31.66	13.59

Table 6 - October and December 2022 Groundwater Elevation Survey Data

Notes:

NA - not available

Table 7 - Monitoring Well Groundwater Analytical Data

			Compound Nam CAS No	Perfluorina Acids by E	 N-Ethyl N-Ethyl Berfluorooctanesulfona Goacetic Acid (NEtFOSAA) 	N-Methyl SSP Perfluorooctanesulfona C-G- midoacetic Acid G-I (NMeFOSAA)	Perfluorobutanesulfonic S-52-548)	Perfluorodecanoic Acid (PFDA) 2-92	Perfluorododecanoic Acid (PFDoA) 1-22-L02	525 Perfluoroheptanoic Gé Acid (PFHpA) 6-	555 Perfluorohexanesulfoni 95 c Acid (PFHxS) 6-4	Perfluorohexanoic Acid (PFHxA)	Perfluorononanoic Acid (PFNA) 1-56-528	Perfluorooctanesulfonic Acid (PFOS) 1-62-	Perfluorooctanoic Acid (PFOA) L-29-525	928 Perfluorotetradecanoic Acid (PFTA)	Perfluorotridecanoic Acid (PFTrDA) 8-6-6	Perfluoroundecanoic Acid (PFUnA) &	PFAS6 (PFOA, PFOS, PFNA, PFHxS, PFHpA, and PFDA)
Sample ID	Sampling Date	Lab Sample ID	Laboratory Analytical Method Detection Limit	MCP Method 1 GW-1 Standard				20		20	20		20	20	20				20
TT-18	10/27/2022	L2260485-03	1.82	Otandara	ND	ND	ND	2.10	ND	120.00	ND	228.00	6.30	ND	52.10	ND	ND	ND	180.50
TT-19		L2260485-01	1.79		ND	ND	ND	ND	ND	246.00	3.53	350.00	4.99	8.61	19.00	ND	ND	ND	282.13
TT-20		L2260485-02	1.83		ND	ND	ND	ND	ND	930.00	3.00	2140.00	30.00	15.70	656.00	ND	ND	ND	1634.70
TT-21	10/27/2022	L2260485-05	1.82		ND	ND	ND	4.61	ND	1210.00	7.03	3560.00	7.10	70.10	253.00	ND	ND	ND	1551.84
TT-22	10/27/2022	L2260485-06	1.84		ND	ND	ND	ND	ND	27.40	6.50	101.00	2.04	9.25	37.30	ND	ND	ND	82.49
TT-23	10/27/2022	L2260485-07	1.77		ND	ND	ND	ND	ND	246.00	6.03	182.00	ND	2.34	54.90	ND	ND	ND	309.27
TT-24	10/27/2022	L2260485-04	1.80		ND	ND	ND	ND	ND	244.00	ND	437.00	8.01	ND	77.60	ND	ND	ND	329.61

Notes:

Units are in ng/L (parts per trillion)

ND indicates compound not detected above laboratory analytical method detection limit.

NA indicates that the sample was not analyzed for that compound.

Bold indicates compound detected above MCP Method 1 GW-1

standard

PFAS6 > 20 ppt and < 70 ppt PFAS6 > 70 ppt and < 110 ppt

PFAS6 > 110 ppt

Table 7 - Monitoring Well Groundwater Analytical Data

			Compound Name	Isotope Dilution Compounds	Perfluorobutanoic Acid (PFBA)	Perfluoropentanoic Acid (PFPeA)	1H,1H,2H,2H- Perfluorohexanesulfoni c Acid (4:2FTS)	Perfluoropentanesulfoni c Acid (PFPeS)	Perfluoroheptanesulfoni c Acid (PFHpS)	1H,1H,2H,2H- Perfluorodecanesulfoni c Acid (8:2FTS)	Perfluorononanesulfoni c Acid (PFNS)	Perfluorodecanesulfoni c Acid (PFDS)	Perfluorooctanesulfona mide (FOSA)	1H,1H,2H,2H- Perfluorooctanesulfonic Acid (6:2FTS)
			CAS No.		375-22-4	2706-90-3	757124-72-4	2706-91-4	375-92-8	39108-34-4	68259-12-1	335-77-3	754-91-6	27619-97-2
Sample ID	Sampling Date	Lab Sample ID	Method											
TT-18	10/27/2022	L2260485-03	Detection Limit 1.82		110.00	402.00	ND	ND	ND	9.37	ND	ND	ND	3470.00
TT-18 TT-19		L2260485-03	1.79		202.00	402.00 701.00	ND	ND	ND	9.37 27.00	ND ND	ND	ND	2870.00
TT-20		L2260485-02	1.83		1040.00	4060.00	23.40	ND	ND	73.20	ND	ND	ND	53700.00
TT-21	10/27/2022	L2260485-05	1.82		1790.00	6450.00	5.93	ND	ND	ND	ND	ND	ND	10100.00
TT-22	10/27/2022	L2260485-06	1.84		49.90	148.00	ND	ND	ND	ND	ND	ND	ND	4.77
TT-23	10/27/2022	L2260485-07	1.77		92.10	289.00	ND	ND	ND	ND	ND	ND	ND	348.00
TT-24	10/27/2022	L2260485-04	1.80		250.00	894.00	2.55	ND	ND	5.71	ND	ND	ND	5040.00

Notes:

Units are in ng/L (parts per trillion)

ND indicates compound not detected above laboratory analytical method detection limit.

NA indicates that the sample was not analyzed for that compound.

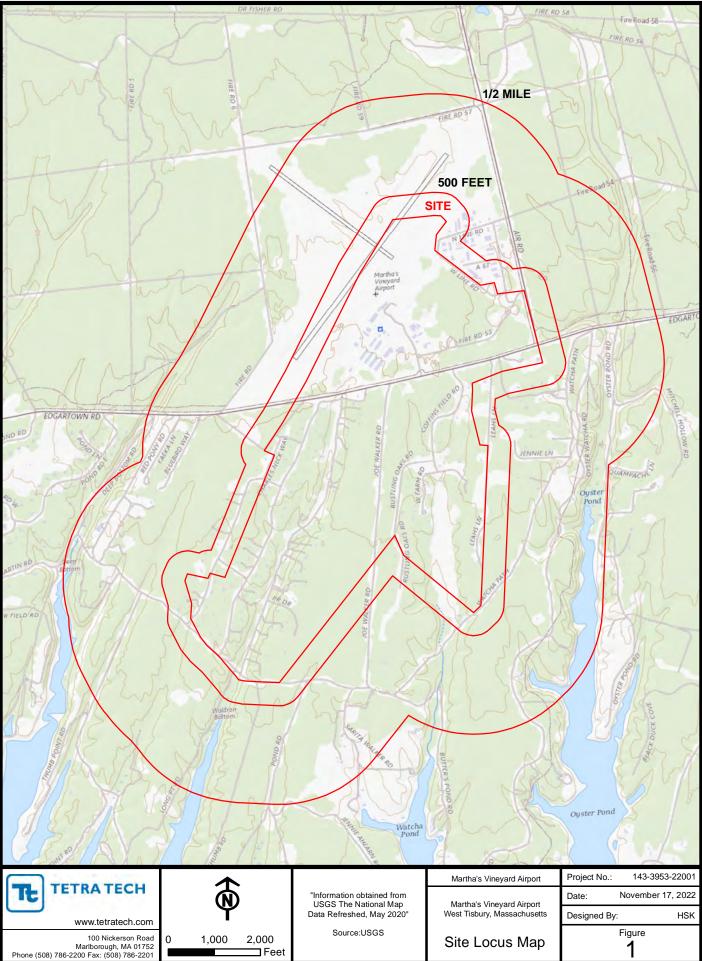
Bold indicates compound detected above MCP Method 1 GW-1

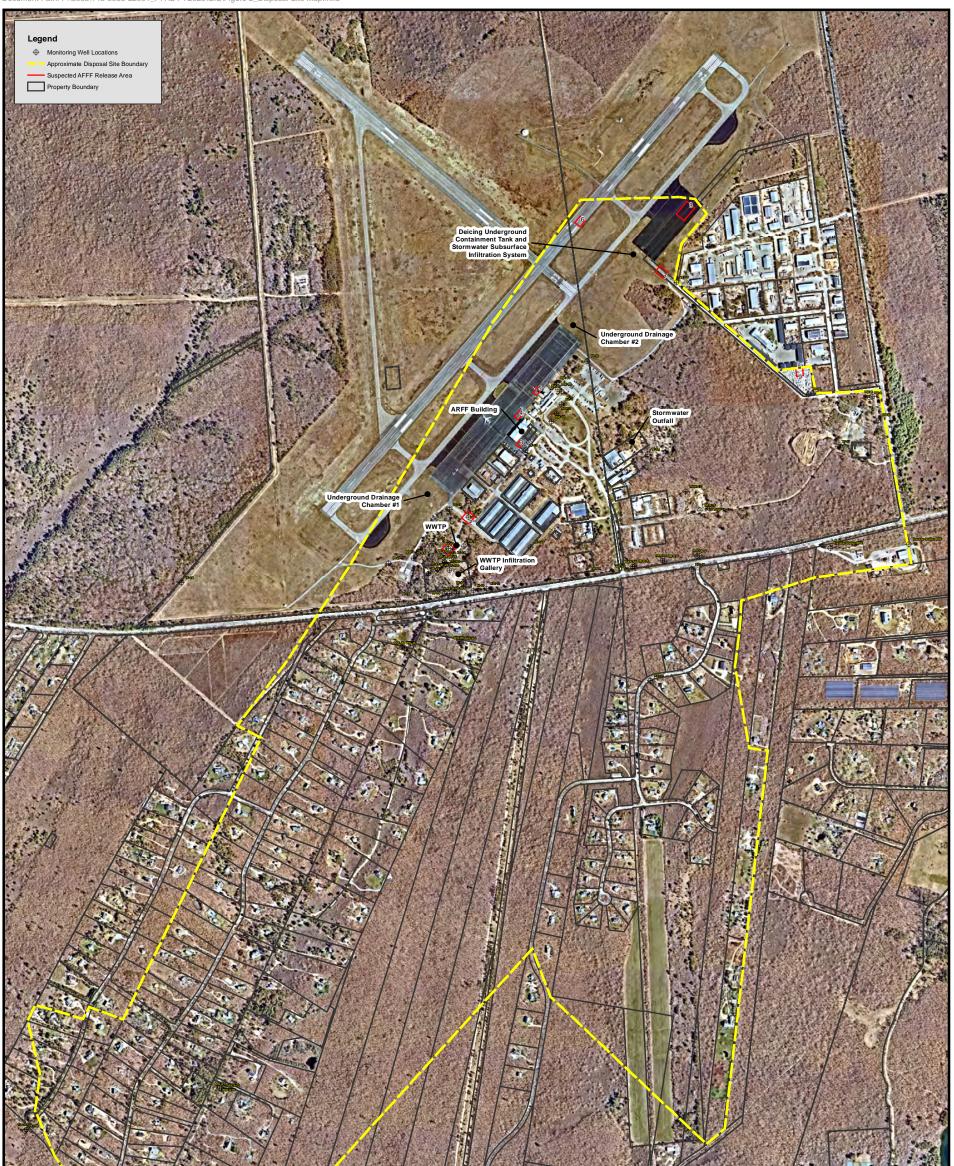
standard

PFAS6 > 20 ppt and < 70 ppt PFAS6 > 70 ppt and < 110 ppt

PFAS6 > 110 ppt

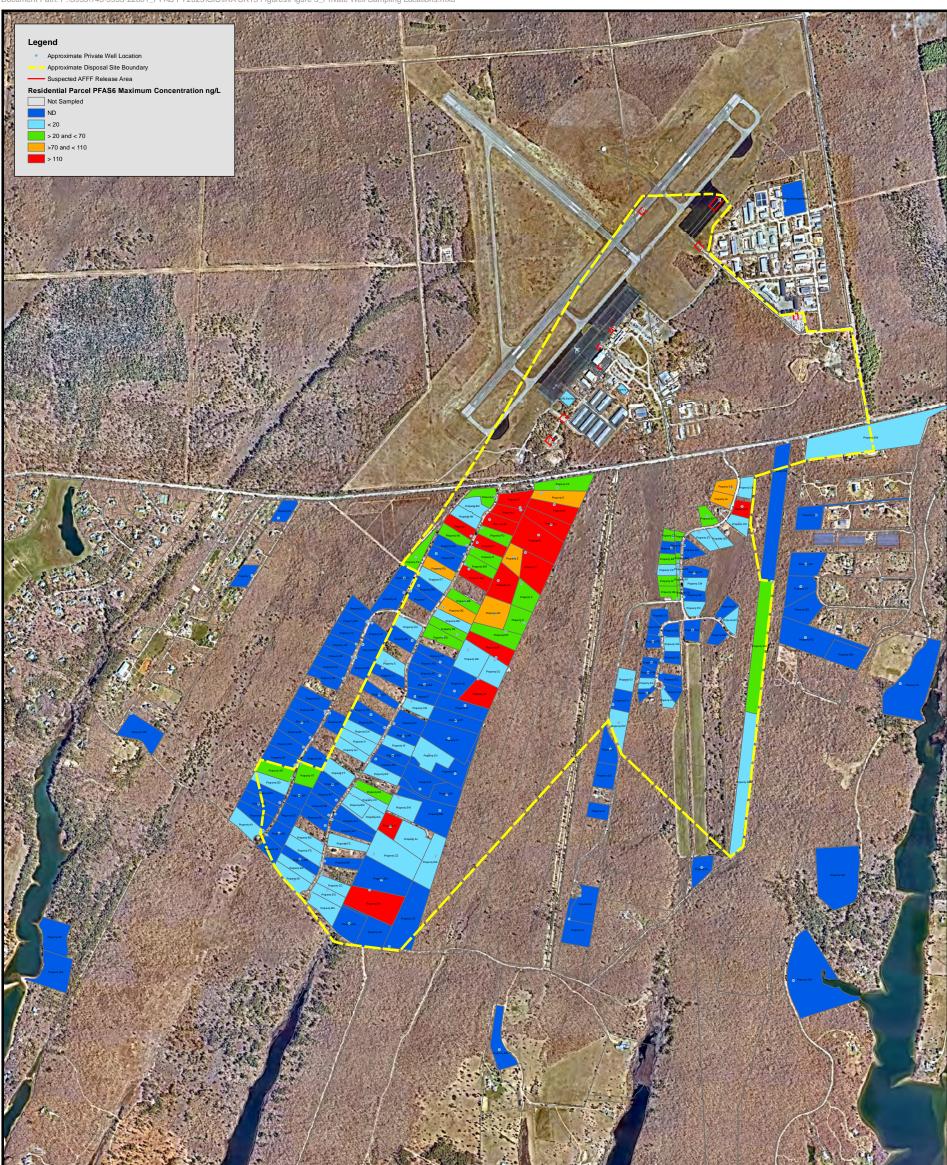
2 of 2



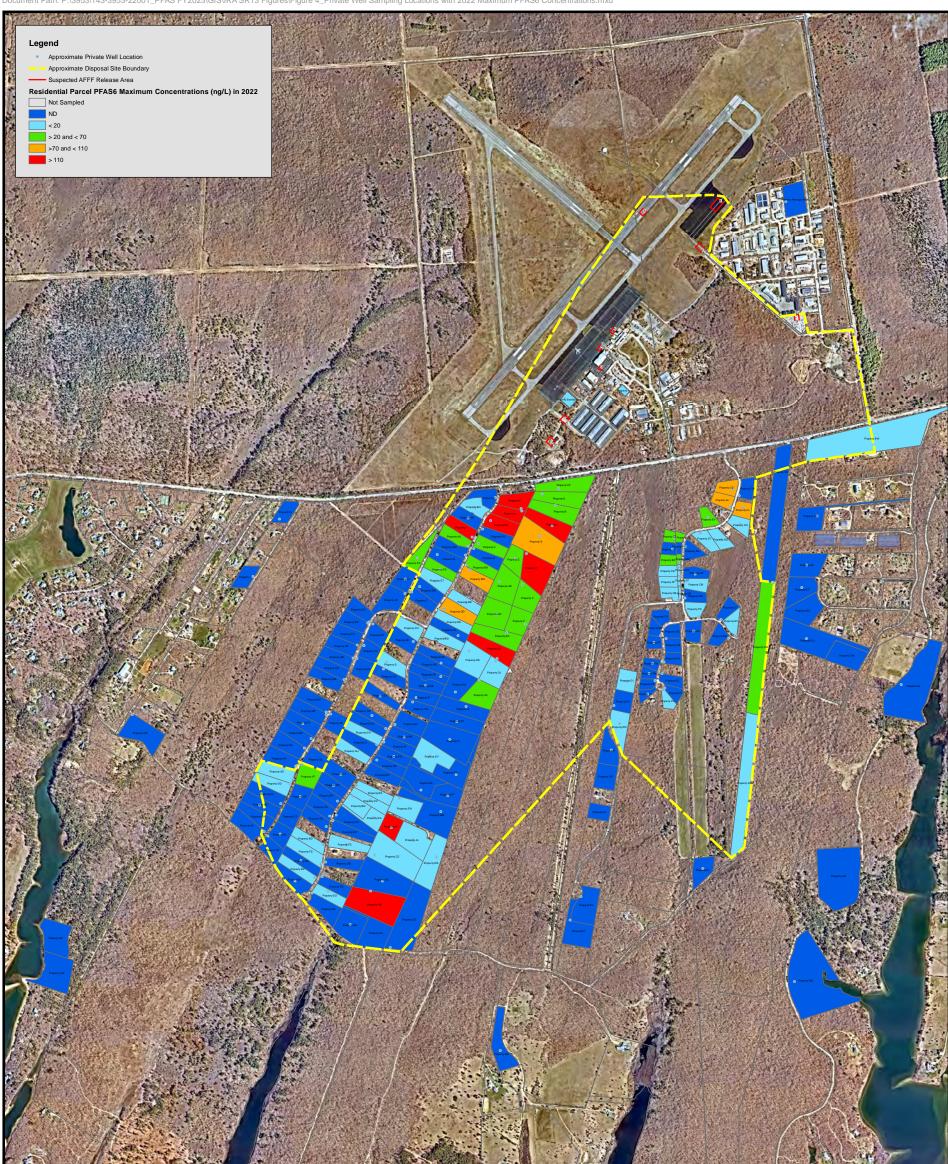


	*	Source: MassGIS, USGS,	Martha's Vineyard Airport	Project No.: 143-3953-22001
TE TETRATECH	\mathbb{N}	Nearmaps dated April 9, 2021	Martha's Vineyard Airport	Date: December 16, 2022
100 Nickerson Road	T		West Tisbury, Massachusetts	Designed By: HSK
Marlborough, MA 01752 508.786.2200 www.tetratech.com	0 625 1,250		Disposal Site Map	Figure 2

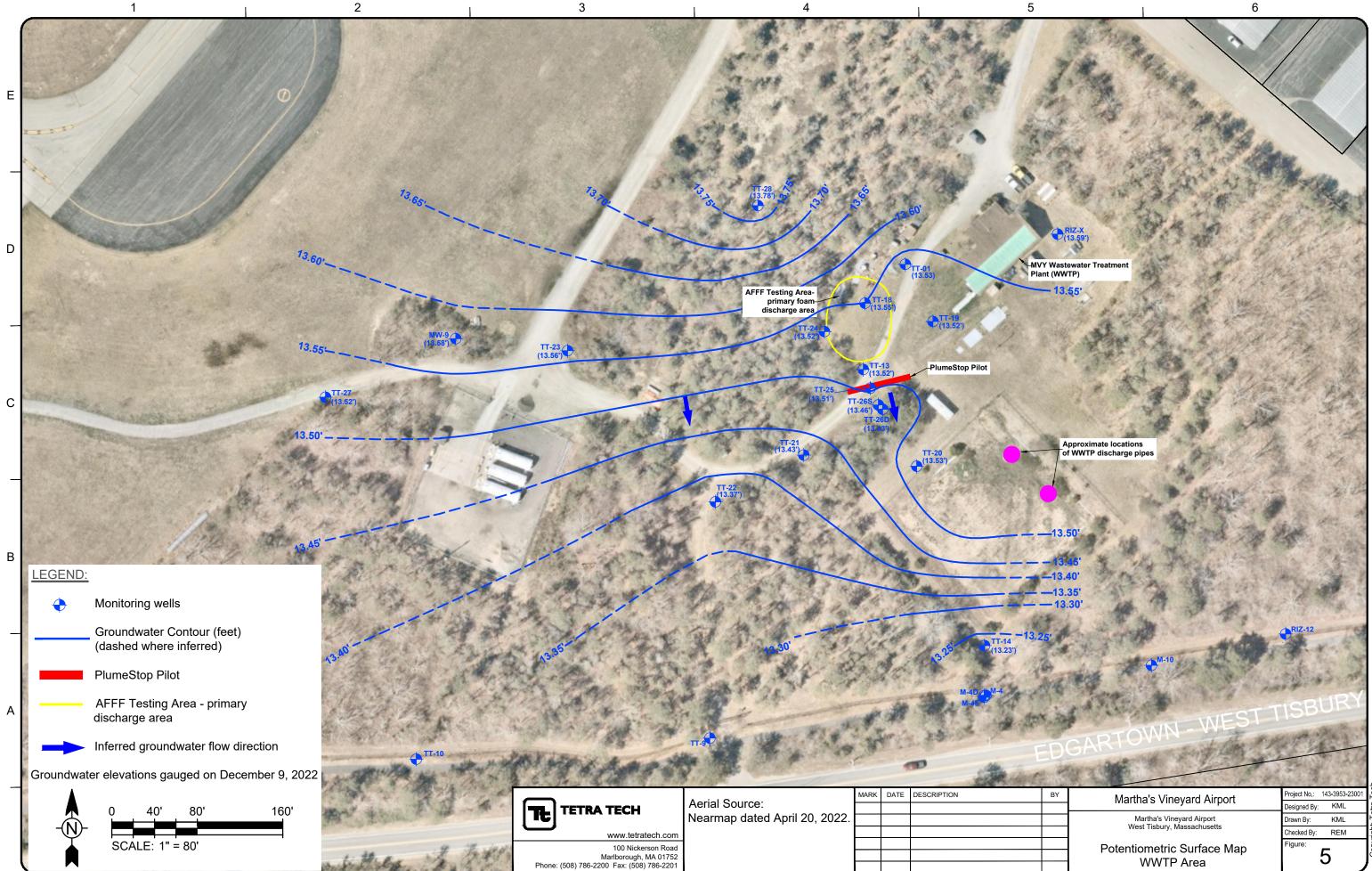
Document Path: P:\3953\143-3953-22001_PFAS FY2023\GIS\IRA SR13 Figures\Figure 3_Private Well Sampling Locations.mxc

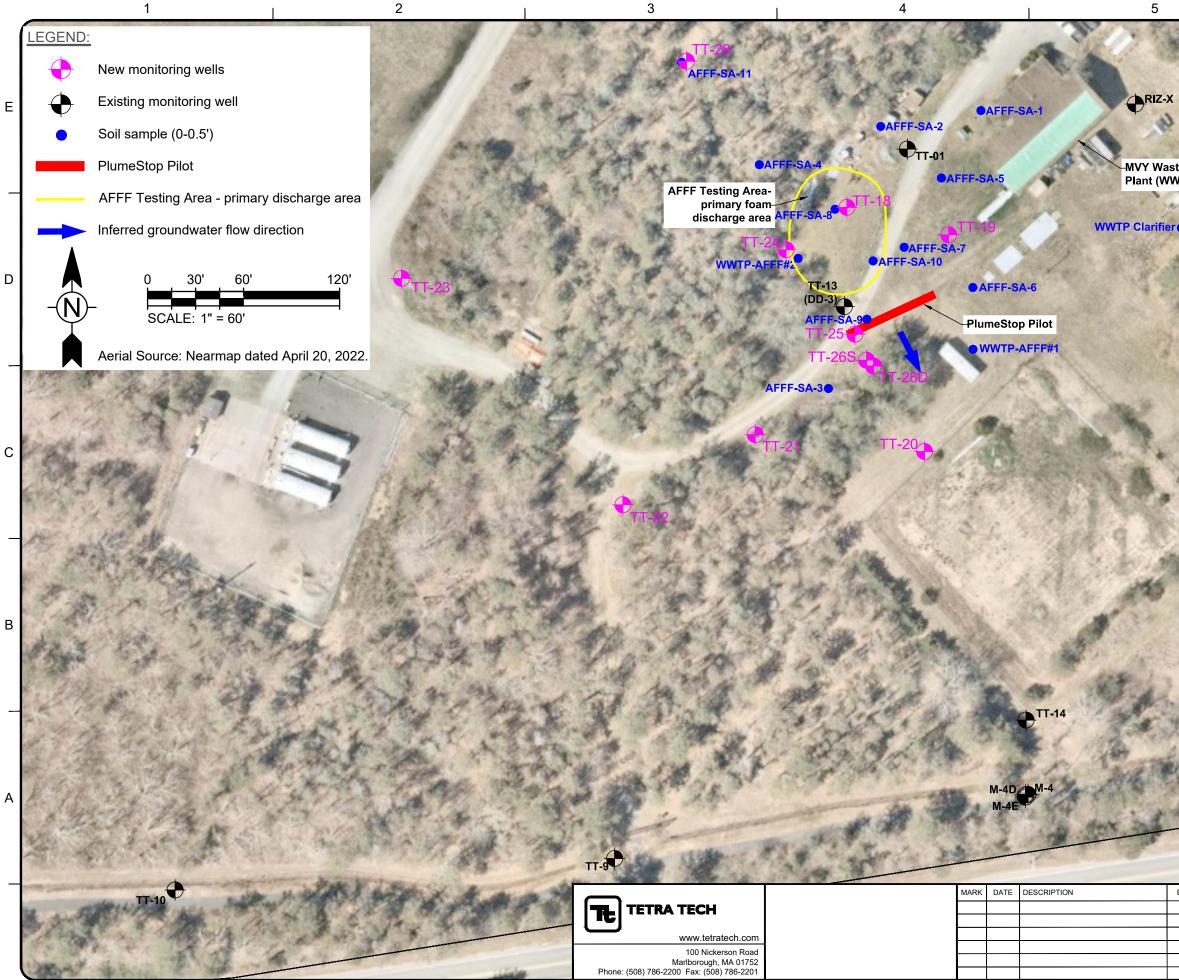


	\mathbf{T}	Source: MassGIS, USGS	Martha's Vineyard Airport	Project No.: 143-3953-22001
TE TETRATECH	\mathbb{N}	Nearmaps dated April 9, 2021	Martha's Vineyard Airport	Date: December 16, 2022
100 Nickerson Road	1		West Tisbury, Massachusetts	Designed By: HSK
Marlborough, MA 01752 508.786.2200 www.tetratech.com	0 625 1,250 1,875 2,500		Private Well Sampling Locations with Maximum PFAS6 Concentrations	Figure 3



		Source: MassGIS, USGS Nearmaps dated April 9, 2021	Martha's Vineyard Airport	Project No.: 143-3953-22001
TE TETRATECH	\mathbb{N}	Note: For private wells not sampled	Martha's Vineyard Airport	Date: December 16, 2022
100 Nickerson Road		in 2022, the maximum PFAS6 concentrations for the most recent	West Tisbury, Massachusetts	Designed By: HSK
Marlborough, MA 01752 508.786.2200 www.tetratech.com	0 625 1,250 1,875 2,500	sample are reported.	Private Well Sampling Locations with 2022 Maximum PFAS6 Concentrations	Figure 4





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MVY Wastewater Treatment Plant (WWTP)

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BY	Martha's Vineyard Airport	Project No.:	143-3953-23001
		Designed By:	KML
	Martha's Vineyard Airport	Drawn By:	KML
	West Tisbury, Massachusetts	Checked By:	REM
		Figure:	-
	PlumeStop Barrier Pilot Test Area	6	
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RIZ-12