

S-2190 January 17, 2023

Ms. Caprice Shaw Massachusetts Department of Environmental Protection 436 Dwight Street Springfield, MA 01103

Re: IRA Status Report No. 1
PFAS Release
Shutesbury Fire Department
42 Leverett Road, Shutesbury
RTN 1-21340

Dear Ms. Shaw:

On behalf of the Town of Shutesbury (the "Town"), Tighe & Bond has prepared this Immediate Response Action (IRA) Status Report in response to the detection of per- and polyfluoroalkyl substances (collectively known as "PFAS") in the drinking water well that serves the Shutesbury Fire Department at 42 Leverett Road and at proximal properties in Shutesbury ("the Site"). A Site Location Map, a Massachusetts Geographic Information Systems (MassGIS) Priority Resource Areas map showing sensitive environmental receptors in the area, and an Orthophotograph depicting PFAS6 concentrations are provided as Figures 1, 2, and 3, respectively in Appendix A. This report has been prepared in accordance with 310 CMR 40.0425 of the Massachusetts Contingency Plan (MCP).

The IRA Transmittal form (BWSC-105) is being submitted through eDEP concurrently with this report. An IRA Plan summarizing the initial assessment and response actions, and the Release Notification From (BWSC-103), were submitted on January 17, 2023. Copies of these documents can be viewed using the MassDEP Bureau of Waste Site Cleanup online database hyperlinked below:

https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=1-0021340

# **Release History**

# Release Discovery, June-July 2021

On June 22, 2021, MassDEP BWSC Site Discovery/Risk Reduction group was notified by the University of Massachusetts (UMass) that elevated concentrations of PFAS were detected in private potable water wells located around Leverett Road and Old Orchard Road. Samples from residential properties were obtained through a voluntary sampling program directed by UMass. On June 23, 2021, MassDEP issued a Release Log Form indicating a release that was less than the reporting thresholds. RTN 1-21340 was assigned to Leverett Road and MassDEP initiated a PFAS site investigation.

On July 6, 2021, MassDEP submitted requests for access and consent to enter residential properties in Shutesbury as well as the Shutesbury Fire Department, the Shutesbury Highway Department, and the Shutesbury Town Hall.

# **Source Discovery Program August-September 2021**

In August 2021, MassDEP's residential well sampling program (in partnership with UMass), identified detections of PFAS6 in private drinking water supplies from the 20, 35, 50, 59, and 62 Leverett Road properties at concentrations exceeding the Massachusetts Maximum Contaminant Level (MMCL) and RCGW-1 Reportable Concentration of 20 nanograms per liter (ng/L) for PFAS6. Note that re-sampling at 35 Leverett Road in September 2021 reported a PFAS6 concentration of 18.2 ng/L, slightly below 20 ng/L.

Due to exceedances of the RC/Drinking Water Standard, MassDEP initiated a site/source discovery program to identify potential properties at risk and to identify potential sources of PFAS contamination.

In September 2021, MassDEP sampled two drinking water supply wells at the Shutesbury Fire Department located at 42 Leverett Road, along with other residential and town properties along Leverett Road. Following the September 2021 sampling event, PFAS6 compounds were detected in the Fire Department wells that service the Fire Department, as well as off-site properties (50, 59, and 63 Leverett Road) at concentrations of 104 ng/L and 140 ng/L, which exceeds the 20 ng/L MMCL/RCGW-1 value, as well as the Imminent Hazard (IH) level of 90 ng/L. Following discovery, the Town or MassDEP provided bottled water to properties that exceeded the IH concentration (42, 50, and 59 Leverett Road). Water samples were subsequently obtained from the 62 and 63 Leverett Road properties and PFAS6 compounds were detected above the MMCL/RCGW-1 value and IH level. Subsequently, the Town installed single-vessel Point of Entry Treatment (POET) systems at each of these properties (42, 50, 59 and 63 Leverett Road, which are all served by the two wells on the Fire Department property) where PFAS6 exceeded the IH concentration.

# **Subsurface Investigation July-August 2022**

On July 15 and August 24, 2022, MassDEP conducted a subsurface investigation at the Shutesbury Fire Department property, consisting of the advancement of seven soil borings (SB-1 through SB-7) with the collection of soil samples for PFAS analysis. Three of the borings was completed as a groundwater monitoring well (MW-100, 101 and 102).

Of the seven soil boring locations, soil samples from five borings, located around the fire tower training area, had PFAS concentrations that exceeded one or more MassDEP RCS-1 criteria. Additionally, MassDEP collected groundwater samples from the three monitoring wells, along with four existing monitoring wells associated with a previous RTN. Of the seven monitoring wells sampled, PFAS6 compounds exceeded 20 ng/L in five of the wells. Following the subsurface investigation, MassDEP amended the Release Log Form, changing the status of the release to a reportable release.

# **Residential Well Sampling**

On December 8, 2022, Tighe & Bond collected water samples from the 42, 50, 59, 62, and 63 Leverett Road properties. Water samples were obtained to assess the effectiveness of the installed POET systems and included an influent sample collected before the granular activated carbon (GAC) vessel and an effluent sample collected after the GAC vessel.

Subsequent laboratory results indicated detections of PFAS6 compounds in all five locations. PFAS6 were detected in influent water samples from 42 Leverett Road (170 ng/L), 50 Leverett Road (150 ng/L), 59 Leverett Road (110 ng/L), and 63 Leverett Road (110 ng/L) at concentrations exceeding the 20 ng/L MMCL and the 90 ng/L IH level. PFAS6 compounds were not detected in four of the five effluent water samples (42, 59, 62, and 63 Leverett Road). The effluent water sample collected from 50 Leverett Road had one PFAS6 compound

detected, Perfluoroheptanoic acid (PFHpA), which was reported at a concentration of 4.9 ng/L, below the 20 ng/L MMCL. Since this detection, the Town has replaced the carbon media at the 50 Leverett Road property. Laboratory results from the December 2022 sampling round indicated that the POET systems were effective in removing PFAS from potable water at the properties.

# **Status of Immediate Response Actions**

## **Radius Sampling**

As of the submittal of this Status Report, Tighe & Bond has sampled potable wells at 45 properties. Samples were obtained from accessible properties within a 500-foot radius of the current PFAS detections and included an additional property outside of the 500-foot radius, which was previously sampled and was non-detect (105 Wendell Road). Additionally, Tighe & Bond sampled the effluent from the POET system at 50 Leverett Road, as the carbon vessel had been replaced since the December 2022 sampling round. Out of the 58 total properties within a 500-foot radius of PFAS detections, 43 were accessible for sampling. It should be noted that five of the properties had previously installed and sampled POET systems and did not require additional sampling. Six properties were inaccessible due to homeowner declining access, vacancy, and/or a lack of active water supplies (inaccessible properties described in greater detail below). The Town is currently working with two property owners to gain access to four properties within the 500-foot radius (11 and 16 Town Common Road, and 23 and 25 Wendell Road; 16 Town Common Road and 23 Wendell Road are vacant). During the course of this sampling round, the homeowners were unable to provide access for sampling; however, it is anticipated that samples will be collected from these properties within the next few weeks. Samples were collected from the 50, 73-75, 97, and 128 Leverett Road properties on March 11, 2023. Additionally, Tighe & Bond re sampled water from 25 Leverett Road on March 11, 2023. As of the submission of this report, laboratory results for these samples have not been received.

During the February 17 and 23, and March 11, 2023, sampling dates, Tighe & Bond collected one field blank per sampling day. Field blanks were collected approximately halfway through the completion of the sampling planned for a specific date and were collected under the same conditions as the potable water sample collected immediately before the blank sample.

POET systems are currently installed in the 16 and 35 Leverett Road properties (systems were installed by the owners, not part of the IRA). Tighe & Bond collected influent and effluent samples at these locations to determine the effectiveness of POET systems at these locations. With the exception of 50 Leverett Road, other properties with POET systems within the 500-foot radius (42, 59, 62, and 63 Leverett Road) were not sampled, since influent and effluent water samples were collected from these properties during the December 2022 sampling round and results indicated that the POET systems remained effective in removing PFAS.

Accessible properties that are within the 500-foot radius that have been sampled are as follows:

- 4, 10, 16, 17, 20, 25, 29, 35, 37, 60, 73-75, 87, 91, 94, 97, 105, 113, 117, 121, 128, and 135 Leverett Road;
- 3-5, 11, 16, 21-23, and 25 Wilson Road;
- 1, 15, 23, and 54 Pelham Hill Road;

- 1, 11, 34, and 53 Cooleyville Road;
- 8 & 10, 12, 16, 20-24, 27, 33, 45 and 72 Wendell Road; and
- 6 Town Common Road

Please note that 105 Wendell Road was also sampled due to it being sampled previously and its location near other affected properties. This property will not be sampled going forward unless it falls within a future 500-foot radius of another PFAS detection.

Reasoning for inaccessible properties during the Radius 1 sampling round are as follows:

- 24 Leverett Road could not be sampled due to the homeowner declining access
- 32 and 81 Leverett Road could not be sampled as these homes are currently vacant
- 66 Leverett Road could not be sampled as there is no active water supply on the property; currently, the lot is in proposal for the construction of a new library
- 10 and 21 Cooleyville Road could not be sampled because there is no active water supply at the properties
- 56 Wendell Road could not be sampled as the house burned down and there is no active water supply at the property

# **Residential Well Sampling Results**

Laboratory results for the radius sampling sample locations indicate that PFAS6 concentrations exceeded MMCL of 20 ng/L at three locations (16 Leverett, 20 Leverett Road and 25 Leverett Road). In addition, the PFAS6 concentration at 25 Leverett Road (439 ng/L) also exceeds the IH concentration. MassDEP was notified of the IH conditions within 2 hours of the Town gaining knowledge of the result. Re-analysis of the second sample bottle confirmed the elevated detections. This location is being re-sampled, given that these results show PFAS6 higher than any other location sampled, including the fire station, which is the assumed source area. Bottled water was immediately provided to the home and will continue until a two-vessel POET can be installed.

PFAS6 compounds were detected above the laboratory Reporting Limits (RLs), but below the IH level of 90 ng/L at 15 locations. The Town is working with a plumbing contractor to install two-vessel POET systems at all properties where the 20 ng/L MMCL was exceeded and single-vessel POET systems will be installed at properties where PFAS detections were less than 20 ng/L.

The laboratory data for the 500-foot radius private well sampling including the 105 Wendell Road property is summarized in Table 1, in Appendix B. The laboratory reports for potable wells located are included with the individual notification letters in Appendix C.

# **Point-of-Entry Treatment System Status**

Under the Massachusetts Contingency Plan (MCP), the detection of PFAS compounds in a private well constitutes a "Critical Exposure Pathway" or CEP, and the IRA must mitigate CEP's to the extent feasible. Based on laboratory results from the 500-foot radius sampling round, two properties had PFAS6 detections greater than 20 ng/L and will require installation of two-vessel POET systems (20 and 25 Leverett Road). The Town has opted to install single-vessel POET systems at locations where PFAS6 compounds were detected above the laboratory RLs, but do not exceed 20 ng/L, in lieu of providing bottled water, but depending on the schedule

for availability of POETs, bottled water may be provided in the interim. Based on laboratory results from the radius sampling round, single-vessel POET systems will be installed at 14 properties.

Installed POET systems will consist of vessels with 2-cubic feet of Filtrasorb 400 or 600 carbon, a 1-micron sediment filter ahead of the GAC vessels, and a flow meter. The flow meter readings and the influent data will be used to evaluate the lifespan of the carbon vessels once breakthrough of the primary vessel occurs. Locations where PFAS6 exceeds 20 ng/L will require two carbon vessels connected in series. Locations where PFAS6 compounds were detected, but did not exceed 20 ng/L will have a single carbon vessel installed.

The POET systems previously installed at 42, 50, 59, 62, 63, 42 and 59 Leverett Road will be upgraded from single-vessel to two-vessel systems upon detection of breakthrough of the current carbon systems.

## Field Blanks

Field blanks were collected on February 17 and February 23, and March 11, 2023, halfway through the completion of the sampling on each sampling date and were collected under the same conditions as the potable water sample collected immediately before. Laboratory results indicated that PFAS6 compounds were not detected above the laboratory reporting limits in the February 17 and 23, 2023 field blanks. Laboratory results have not yet been received for the March 11, 2023, field blank. Future sampling events will include the collection of one field blank per sampling date.

# **Additional Sampling and POET Sampling Frequency**

Newly installed POET systems will be sampled within 30 days of the system's installation. Two-vessel systems will be sampled at the influent, midfluent (between the carbon vessels) and effluent points, and single-vessel systems will be sampled at influent and effluent points. Samples will then be collected quarterly for the first year to establish the effectiveness of the systems. Using flow meters on the POET systems and influent concentrations, Tighe & Bond will determine the amount of PFAS that can be removed before PFAS breakthrough of the primary carbon vessel occurs. Based on these data, Tighe & Bond may propose a less-frequent POET monitoring schedule in a future IRA Plan Modification.

# **Imminent Hazard Evaluation**

The MCP requires the performance of an Imminent Hazard Evaluation (IHE) as part of all IRA's. The MCP defines six conditions at 310 CMR 40.0321(1) that pose or could pose an IH. These relate to explosive vapors in buildings, a release of reactive or explosive materials, roadway releases that could endanger public safety, a release to the environment that poses a Significant Risk to human health, if present for even a short time, a release to the environment that produces immediate or acute effects to fish or that produces readily apparent effects to human health. The PFAS releases at the site do not meet any of these criteria.

Seven additional specific circumstances that could constitute an Imminent Hazard are listed at 310 CMR 40.0321(2)(b). These relate to arsenic, cadmium, chromium, cyanide, mercury, methyl mercury and PCBs, none of which are contaminants of concern at this site.

## **Potable Well Imminent Hazards**

While not listed in the MCP, MassDEP has indicated that drinking water well PFAS6 concentrations in excess 90 ng/L are considered an Imminent Hazard. Based on this criterion, Imminent Hazards exist at the following eight locations (these locations are indicated by a purple border on Figure 3, but please note that 50, 59 and 63 Leverett Road are served by the two supply wells at the fire station):

- 42 Leverett Road
- 50 Leverett Road
- 59 Leverett Road
- 63 Leverett Road
- 25 Leverett Road

Bottled water was immediately provided and point of entry treatment (POET) systems have been installed at each of the above locations to mitigate the IH condition, except 25 Leverett Road (bottled water has been provided and a POET is scheduled). Additionally, the POET systems were determined to be successfully removing PFAS from potable water during the December 2022 sampling event, except at 50 Leverett Road, where the GAC media was recently replaced.

## **Remediation Waste**

The only remediation waste generated to date is the GAC replaced at 50 Leverett Road. This was a small GAC block or "briquet" (as opposed to loose carbon) that is stored in a marked drum in the fire station. Spent carbon will be retained until such time as there is sufficient volume to send the carbon for regeneration.

## **Permits**

No permits are required for the IRA activities completed to date or the proposed IRA activities planned under RTN 1-21340.

# **Notification of Environmental Sampling Results**

In accordance with the MCP at 310 CMR 40.1403(10) a Notice of Environmental Sampling is required any time environmental samples are taken at a property in the course of investigating a release for which a notification to the Department has been made on behalf of someone other than the owner of the property, within 30 days of the date the sample results are issued by the laboratory. Table C-1 in Appendix C provides a summary of the dates that laboratory reports were received, the dates when public notifications are due, and the dates when the notification letters were sent by the Town. Copies of the public notification letters sent since the submittal of IRA Plan are included in Appendix C. The BWSC-123 Forms for the potable well sampling are included with the individual letters.

# **Conceptual Site Model**

While all potential sources of contamination have not been identified, use of AFFF during fire training is an identified PFAS source at the fire station property, and aside from the detection at 25 Leverett Road, has the highest detection of PFAS in water collected at the Shutesbury Fire Department located at 42 Leverett Road (170 ng/L as of December 2022). It is suspected that the source of PFAS at the Site is a result of Class B aqueous film forming foam (AFFF) used in fire training practice at the property, likely resulting in soil contamination. This soil

contamination was likely transported to groundwater through percolation vertically through the overburden soils with precipitation, impacting groundwater in the bedrock aquifer.

The most elevated detections of PFAS6 compounds exceeding the IH of 90 ng/L were detected at 25 Leverett Road, at 42 Leverett Road (the Fire Department), 50 Leverett Road, 59 Leverett Road, and 63 Leverett Road. 50 Leverett Road abuts the fire department to the west and the 59 and 63 Leverett Road properties are located northwest and in close proximity to the Fire Department. As stated previously, there are two potable wells on the Fire Department property; one serves the Fire Department at 42 Leverett Road and the residence at 50 Leverett Road, and the other serves the residence at 63 Leverett Road and the Highway Department at 59 Leverett Road. Therefore, the elevated detections in potable water at these other addresses do not represent groundwater conditions at those properties.

MassDEP's assessment of the 42 Leverett Road property identified bedrock at depths of approximately 4 to 7 feet, with the bedrock surface elevation declining to the south. Groundwater depths varied from 2.52 to 6.14 feet but the monitoring wells installed on the property by MassDEP's contractor were installed with a "push" type rig and did not significantly penetrate the bedrock surface, such that the groundwater samples likely represent water perched on the bedrock, rather than the bedrock aquifer.

PFAS6 detections exceeding the MMCL of 20 ng/L were detected in properties east-northeast of the Fire Department and include 16 Leverett Road (28 ng/L), 20 Leverett Road (35.1 ng/L), and 25 Leverett Road (45. Detections in private wells extending further east/northeast are frequent with detections of PFAS6 compounds detected above the laboratory RLs, but less than the 20 ng/L MMCL. Properties east-northeast of the Shutesbury Fire Department consistently have detections less than 20 ng/L and include 4, 17, 29, 35, and 37 Leverett Road, 1 and 11 Cooleyville Road, 20 and 24, and 33 Wendell Road. PFAS6 were generally detected at locations in close proximity to the Fire Department and decline with distance from the Fire Department property.

Our current effort is focused on evaluating the extent of private well contamination and getting mitigation measures in place to abate the current CEPs. As the project progresses, additional information will be obtained and the CSM will be updated accordingly.

# **Conclusions**

As discussed above, a substantial sampling effort has been performed to identify the extent of PFAS contamination in private wells in the area surrounding the Shutesbury Fire Department. To date, Tighe & Bond has collected samples from 52 locations, including properties with previously-installed POET systems and all properties within a 500-foot radius of locations with PFAS detections.

The February and March 2023 sampling round consisted of sampling all accessible properties within a 500-foot radius around locations with PFAS detections. Radius sampling was conducted to determine the extent of PFAS contaminations to identify private wells in need of treatment. Elevated PFAS6 concentrations (exceeding 20 ng/L, but less than 90 ng/L) were detected at properties located proximal to the Shutesbury Fire Department at 42 Leverett Road. PFAS6 concentrations generally decrease with distance from the Fire Station.

To date, POETs have been installed at seven locations. Based on laboratory data of the February and March 2023 sampling round, the Town will be installing two-vessel POET systems at the 20 Leverett Road and 25 Leverett Road properties, as the MMCL of 20 ng/L

was exceeded at those locations. PFAS6 compounds were detected above the laboratory RLs but below 20 ng/L at 15 locations. One of these locations is 35 Leverett Road, which already has a POET system installed. The Town will be installing single-vessel POET systems at 14 properties. We will notify MassDEP when these systems have been installed and monitoring data in the next status report.

Upcoming IRA activities include sampling additional locations along Pelham Hill Road following PFAS detections at 54 Pelham Hill Road. Quarterly sampling events will be conducted to assess the limits and migration of the PFAS plume. Additionally, newly installed POET systems will be sampled within 30 days of the system's installation. Samples will then be collected quarterly to establish the effectiveness of the systems. Using flow meters on the POET systems and influent concentrations, Tighe & Bond will determine the amount of PFAS that can be removed before PFAS breakthrough of the primary carbon vessel occurs. Based on these data, Tighe & Bond may propose a less-frequent POET monitoring schedule in an IRA Plan Modification.

An update on these activities will be reported to MassDEP in the next IRA Status report. If you have any questions, please contact me at 413.572.3227.

Very truly yours,

**TIGHE & BOND, INC.** 

Jeffrey L. Arps, LSP Vice President

cc: Becky Torres, Town of Shutesbury

# **Appendices**

Appendix A – Figure 1 Site Locus

Figure 2 Priority Resources Map

Figure 3 PFAS6 Concentration Summary

Appendix B – Table 1 Summary of Non-POET Analytical Results

Table 2 Summary of POET Analytical Results

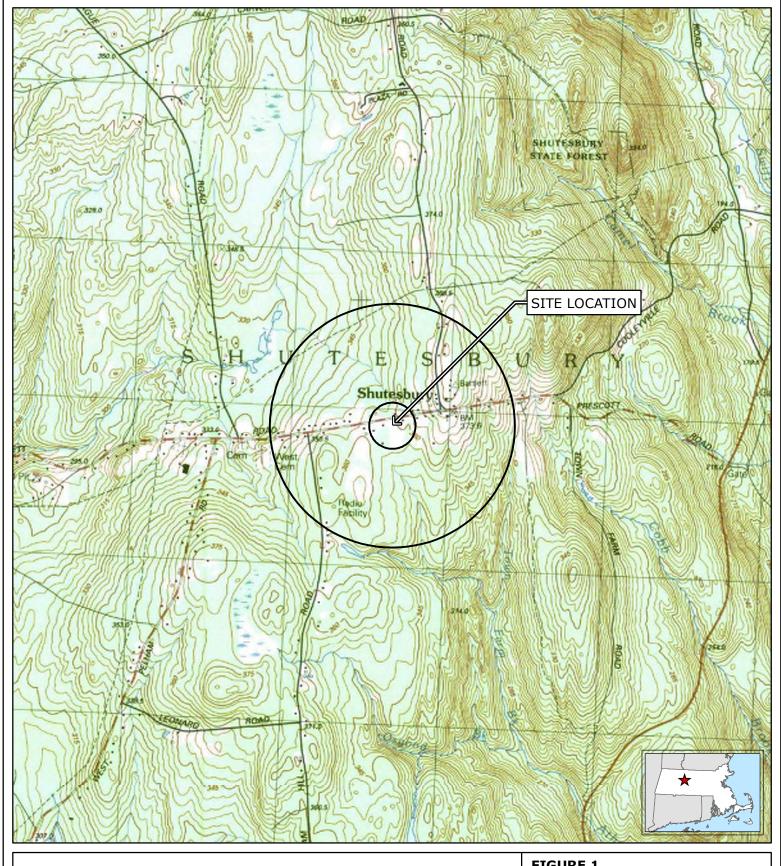
Table 3 Summary of Field Blank Analytical Results

Appendix C - Public Notification Letters

Appendix D - Potable Well Laboratory Reports

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**APPENDIX A** 

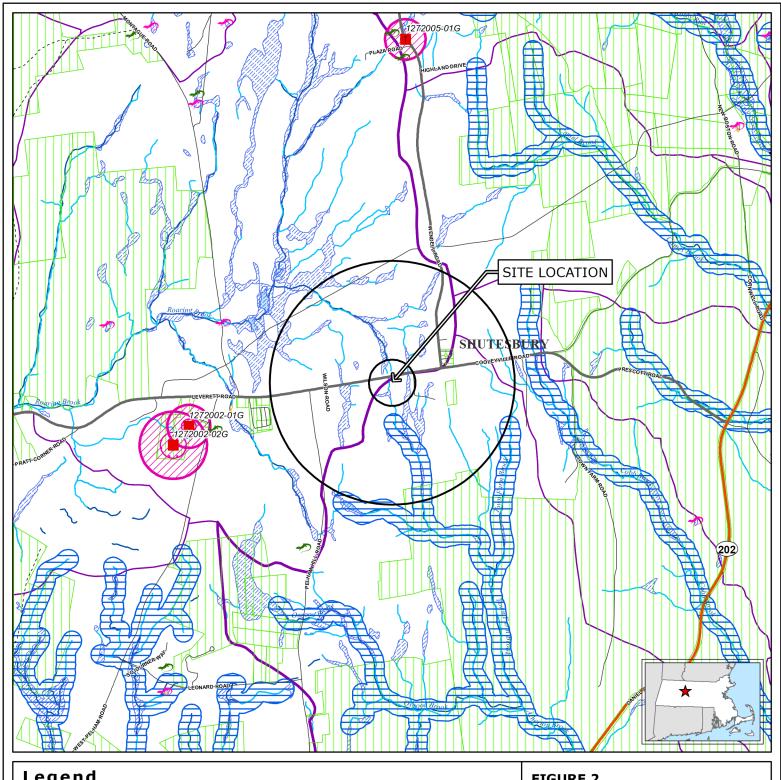


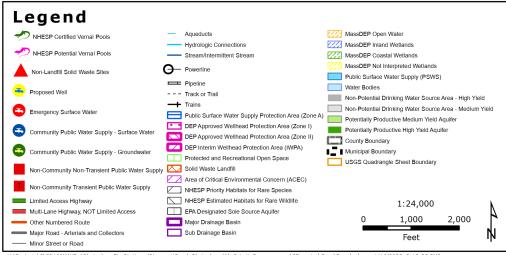
# 1:24,000 Tighe&Bond Based on USGS Topographic Map for Shutesbury, MR Revised 1990. Contour Interval Equals 3m. Circles indicate 500-foot and half-mile radii 1,000 2,000 Feet

# FIGURE 1 **SITE LOCATION**

Shutesbury Fire Station 42 Leverett Road Shutesbury, Massachusetts RTN 1-21340

January 2023





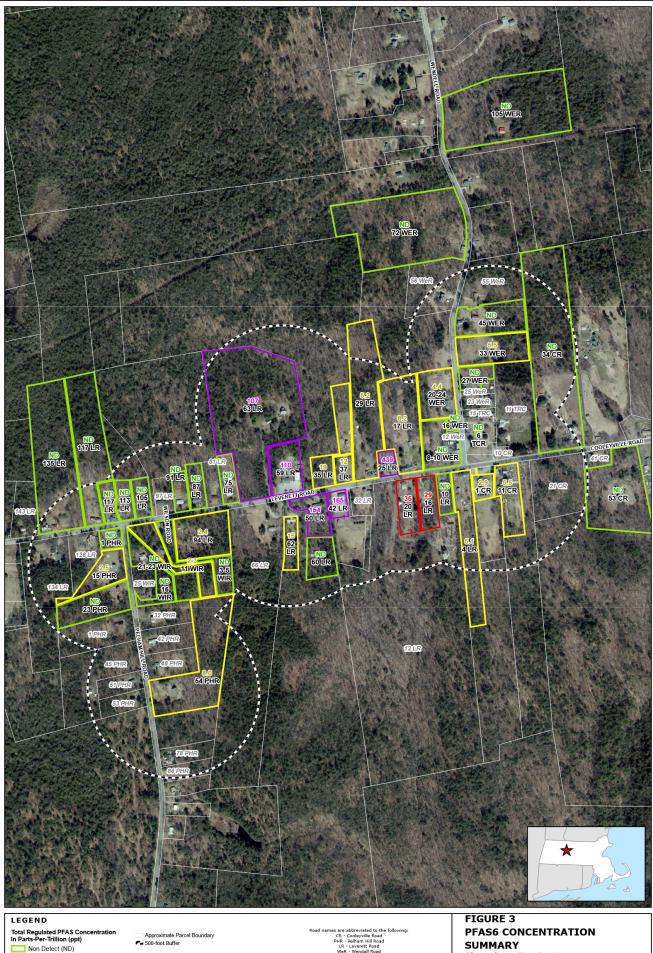
# FIGURE 2 PRIORITY RESOURCES

Shutesbury Fire Station 42 Leverett Road Shutesbury, Massachusetts RTN 1-21340

Data source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology Circles indicate 500-foot and half-mile radii. Data valid as of January 2023.

January 2023

Tighe&Bond



# Less Than 20 Greater Than 20 But Less Than 90

Greater Than or Equal to 90

1:6,000 250

Shutesbury Fire Station 42 Leverett Road Shutesbury, Massachusetts RTN 1-21340

March 2023

**APPENDIX B** 

TABLE 1
Summary of Non-POET Analytical Results
Shutesbury, Messachusetts
RTN 1-21340
Last Updated: 03/16/23 (J. Libby)

Last Updated: 03/16/23 (J. Libby)	State Park		ar classes		Regulate	d PFAS C	Ιō	(ng/L)		Ñ	n-Regulated PF	FAS Compou	spu	
Parameter	Sampling Date Location	l y pe	Sample ID	PFHpA	PFH <sub>x</sub> S PI	PFOA PF	PFNA PFOS	S PFDA	PFAS6	11CI-PF3OUdS 9CI-PF3ONS N-EtFOSAA F	9CI-PF3ONS	N-EtFOSA	PFBS	PFHXA
Sample Location/ID	MassDEP	od 1	GW-1 Criteria	NS				NS	20	NS	NS	NS	NS	NS
1 Cooleyville Road	8/5/2021	MO	1-CVR-BSMT-KIT	< 2.00	<2.00 2	2.42 <2	<2.00 2.42 <0.82 2.9	2 <2.00	2.9	- 71	- U	<2.00	<2.00	1.42 J
	11/16/2021	MC MC	11-COOI -KIT	1171						1/:0/	00.0/	< 2.00	0.880	1 09 1
11 Cooleyville Road	2/9/2023	ΜQ	23B1558-01	1.0 ]	<0.57	2.3	<0.78 3.2		5.5	<0.67	<0.80	<0.61	<0.67	0.91 ]
34 Cooleyville Road	2/9/2023	MQ	23B1447-01	<0.61		4	<0.80 <0.7	99.0> 8	QN 9	<0.69	<0.82	<0.63	<0.69	<0.80
53 Cooleyville Road	2/23/2023	DW	23B2850-01	<0.87	8	0> 06:0>	<0.80 <0.66	9 <0.84	QN 1	<0.58	<0.71	<0.58	<0.69	<0.82
4 Leverett Road	2/23/2023	DW	23B2863-01	<0.91	01/			1.	5.1	1.7 )	97	<0.61	<0.72	<0.85
10 Leverett Road	2/16/2023	DW	23B215/-01	< 0.89	اً				ON O	13	330	<0.59	<0.70	<0.83
16 Leverett Road	8/5/2021	N I	16-LK-K11 23B2160-01	0.746 J	20.80	2.6/	<22.00 <b>4.59</b>	<2.00	29	<0.59	<0.72	< 2.00	1.65 J	< 2.00
Deco 4 + 102000 - 121	9/2/2021	MQ	17-LR-KIT				.00 3.6		8.0		1	<2.00	2.13	1.15 J
I/ Leverett Rodu	2/17/2023	DW	23B2200-01							<0.60	<0.74	<0.60	1.1 )	<0.85
20 Leverett Road	8/4/2021	MO	20-LR-KIT		0.837 J 1		79.1 2.13		24			<2.00	1.42 J	3.35
7	2/16/2023	MO	23B2142-01					<0.83		<0.57	<0.70	<0.57	1.4 )	9 (
Z5 Leverett Koad	2/23/2023	M C	23B2851-U1							<0.0>	<0.83	<0.05	107	79
29 Leverett Road	8/4/2021	3 2	29-LK-K11 23B2204-01	<0.97	0.736J 3	2.7	<0.85 2.50 J	V <1.94	J. C.	<0.61	<0.75	<ul><li>&lt; 1.94</li><li>&lt; 0.61</li></ul>	0.81	1.70
	8/4/2021	DW	35-LR-KIT	1		1						<1.97	3.7	6.38
35 Leverett Road	9/2/2021	DW	35-LR-KIT						18		1	<2.00	2.88	5.88
	2/16/2023	INF	23B2172-01							<0.56	<0.69	<0.57	2.4	5.4
37 Leverett Road	8/4/2021	ΜΩ	37-LR-KIT		<2.00			< 2.00	8.9	L	, ,	<2.00	1.01	2.61
	2/9/2023	M C	23B1533-01						L	<0.0>	<0.78	<0.05	<0.05	3.4
42 Leverett Road	12/8/2021	IN P	221 1517-01	99.9	13	57		0.22	165			< 1.8	8.0	51.7
	8/4/2021	DW	50-LR-KIT	53.8								<1.91	7.01	40.7
50 Leverett Road	9/2/2021	DW	50-LR-KIT	58.2				<2.00			ı	<2.00	7.76	48.6
	12/8/2022	INF	22L1516-01	65								<2.0	8.4	48
7 1000	8/5/2021	ΜΩ	59-LR-BATH	44.3								<2.00	4.83	35
פא דבאבן ברו עספת	12/8/2021	INF	2211517-03	1.5			3.7 3.70	<2.00	110			<2.00	4.9	34
	8/4/2021	WC	60-I R-KTT	× 1 × 89			10	Ļ	1			<1.89	< 1.89	×1 80
60 Leverett Road	2/9/2023	MQ.	23B1451-01	0.58 0.58			<0.76 <0.7		2	<0.66	<0.78	<0.60	<0.66	<0.76
	8/4/2021	DW	62-LR-KIT	2.14				Ľ	40			<1.78	1.57 J	2.93
62 Leveratt Dood	9/2/2021	DW	62-LR-KIT	1.38 J	7.69 4		<2.00 12.8		25			<2.00	1.60 J	1.72 J
OZ TEVETELL NOBO	11/16/2021	DW	62-LR-KIT-TREATED	< 2.00				0 <2.00	_			<2.00	<2.00	<2.00
	12/8/2022	INF	22L1515-01	<1.8					Ĺ			<1.8	<1.8	<1.8
63 Leverett Road	12/8/2022	IN.	22L1514-01	50	ļ	31	5 3.5	<2.0	107			< 2.0	5.2	32
73-73 Leverett Rodu	9/2/2021	A C	/3-LK-KII	< 2.00		١,		٦,				< 2.00	0.862	22.00
87 Leverett Road	8/11/2021 2/16/2023	A A	23B2159-01	< 1.92	<0.77		<0.80 0.86	1 <0.83	2 2	<0.57	<0.70	<0.57	<0.192	<0.81
91 Leverett Boad	8/5/2021	DW	91-LR-KIT	<1.87	J	_	<1.87 <1.87	Ť				<1.87	<1.87	<1.87
	2/16/2023	DW	23B2128-01	<0.96	< 0.87	<1.0 <0		3 <0.93	ND	<0.64	<0.79	<0.64	<0.76	<0.91
94 Leverett Road	2/23/2023	DW	23B2995-01	< 0.90	Ť	m			2.4	<0.09	<0.74	<0.60	<0.71	<0.84
105 Leverett Road	8/4/2021	ΜΩ	105-LR-KIT	×1.94	<1.94 2	2.37 <1	<1.94 <b>0.661</b> J	1 <1.94	2.4	- ' - '	- 72 0/	<1.94 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1.24 ]	1.20 J
113 Leverett Road	2/15/2023	WC	23B2365 01	× 0.38					N N	00:0>	<0.77	<0.0>	1.61	<0.83
117 Leverett Road	2/16/2023	DW	23B2148-01	< 0.87	> 62:0>		Ľ	6 <0.84	N N	<0.58	<0.72	<0.58	<0.69	<0.82
121 Leverett Road	2/17/2023	DW	23B2205-01	< 0.89	< 0.80 <	<0.92 <0	<0.82 2.5	<0.86	2.5	<0.59	<0.73	<0.59	<0.70	<0.84
135 Leverett Road	2/9/2023	DW	23B1445-01	<0.62	1.1 $)$ $1$	.2 J <0	<0.81 <0.8	39.0> 0	3 ND	<0.70	<0.84	<0.64	<0.71	<0.82
1 Pelham Hill Road	2/17/2023	DW	23B2198-01	< 0.85	< 0.77 <	39	<0.79 <0.6	5 <0.82	ND	<0.57	<0.70	<0.57	<0.67	<0.80
15 Pelham Hill Road	2/9/2023	MQ	23B1532-01	< 0.66	< 0.64 1	_	_	<0.72	2.5	<0.75	<0.89	<0.68	<0.75	<0.87
23 Pelnam Hill Road	2/11/2023	MA C	23B2201-01	<0.8/	<0.79 0.	_		0 > 0		<0.58	<0.72	<0.58	<0.05	<0.82
54 Pelnam Hill Road	2/16/2023	M C	23B2145-01	3.6	+	4.4	<0.86 <0.7		0.8	<0.05	<0.79	<0.62	<0.74	1.6 0
8 & 10 Wondell Road	2/10/2023	A A	23B2100-01	V 0.87	<0.79	31 <0	81 14	20.05	20	V 0.30	<0.72	V 0.39	<0.0>	<0.02
16 Wendell Road	2/11/2023	A A	2382202-01	V0.07	6/:0>	00	71 1.4	20.07	N N	V 0 E1	27.0	V V E1	<0.09	20.02
TO WEILIGE LYDING	2/10/2023	DW.	23D21/0-01	11.0	< 0.0>	0.00	CC.O T/.	-/:0/	77	TO:0>	0.74.0	TC.0>	TO:0>	5

**TABLE 1**Summary of Non-POET Analytical Results
Shutesbury, Massachusetts
RTN 1-21340
Last Updated: 03/16/23 (J. Libby)

			4		Regula	ed PFAS	Compo	Regulated PFAS Compounds (ng/L	(7,	_	Non-Regulated PFAS Compounds	AS Compound	S	
Parameter	Sampling Date Locat	Location lype	Sample 1D	PFHpA	PFHxS	PFOA	PFNA	PFOS P	PFDA PFAS6	6 11CI-PF30UdS	9CI-PF3ONS N-EtFOSAA	N-EtFOSAA	PFBS	PFHxA
Sample Location/ID	MassDE	MassDEP MCP Method 1 GW-	l GW-1 Criteria	SN	NS	SN	SN	NS	NS 20	SN	SN	SN	NS	NS
20 & 24 Wendall Road	2/17/2023	MQ	23B2206-01	<0.94	<0.85	2.5	<0.87	> 6.1	<0.91 4.4	<0.63	<0.77	<0.63	1.2 J	<0.88
27 Wendell Road	2/16/2023	MQ	23B2136-01	>0.86	<0.77	68.0>	<0.80	0.94 ] <	<0.83 ND	<0.57	<0.70	<0.57	<0.68	<0.81
33 Wendell Road	2/16/2023	INF	23B2161-01	<0.89	0.95 J	3.3	<0.82	> 2.2	<0.85 5.5	<0.59	<0.73	<0.59	0.81 J	1.3 J
45 Wendall Road	2/23/2023	MQ	23B2854-01	<0.92	<0.83	<0.95	<0.85	> 07.0>	ON 88.0>	<0.61	<0.75	<0.61	<0.73	98.0>
72 Wendell Road	2/16/2023	MQ	23B2163-01	>0.96	>0.86	<1.0	68'0>	< 0.73 <	ON E6.0>	<0.64	<0.79	<0.64	<0.76	06.0>
10E Woodell Boad	8/4/2021	MQ	105-WR-KIT	<1.91	<1.91	1.07 J	<1.91	<1.91 <	1.91 ND			<1.91	0.878 J	<1.91
TOO Welldell Road	2/16/2023	DW	23B2168-01	< 0.94	< 0.85	<0.98	<0.87	0.73 J <	<0.91 ND	<0.63	1.2 J	<0.63	<0.75	<0.89
3 & 5 Wilson Road	2/23/2023	MQ	23B2855-01	<0.97	<0.88	<1.0	<0.90	< 0.74 <	<0.94 ND	<0.65	<0.80	<0.65	<0.77	<0.92
14 Wilcon Door	8/5/2021	MQ	11-WILSON-KIT	<1.89	<1.89	<1.89	<1.89	> 61.89	1.89 ND			<1.89	<1.89	<1.89
TT WIISON NORD	2/9/2023	DW	23B1449-01	<0.64	<0.61	2.3	<0.83	1.2 ] <	<0.69 2.3	<0.72	<0.86	<0.66	<0.72	<0.84
16 Wilcon Boad	8/5/2021	MQ	16-WILSON-KIT	<1.95	<1.95	<1.95	<1.95	<1.95 <	1.95 ND			<1.95	<1.95	<1.95
TO WILSOIL ROAD	2/9/2023	DW	23B1452-01	<0.62	<0.60	0.97 J	<0.81	0.99 J	<0.67 ND	<0.70	<0.84	<0.64	<0.70	<0.81
21 & 23 Wilson Road	2/20/2023	MQ	23B2199-01	<0.88	<0.80	<0.92	<0.82	> 20.0>	<0.85 ND	<0.59	<0.73	<0.59	<0.70	<0.83

218 x 33 Wilson Road

23 Wilson Road

24 Wasschusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates

14 WassDEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates

15 No Standard Standard Standards Reported above laboratory limits, Reporting Limit (RL) provided.

15 Sample not analyzed or analysis not provided Boxed/Bold values indicate screedance of GW-1 standards

16 Results presented in nanograms per liter (ng/L)

PFAS - Per and Polyfluoroalkyl Substances

17 Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.

18 - Result outside of laboratory calibration range. Value is estimated.

Only PFAS with results above RL are shown above

18 - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment

TABLE 2 Summary of POET Analytical Results Shutesbury, Massachusetts RTN 1-21340 Last Updated: 03/07/2023 (J. Libby)

Parameter Sample Location/ID	Camping Date				Kedula	Requiated PFAS Combounds (ng/L		u) spur	J/L)		Non-Kedulated	Non-Kedulated PFAS Compounds
Sample Location/ID	sampling pare	Sampling Date Location Type	Sample ID	PFHDA	PFHXS	PFOA	PFNA	PFOS	PFDA	PFAS6	PFBS	PFHXA
	MassDEF	MassDEP MCP Method 1 GN	GW-1 Criteria	SN	NS	NS	NS		NS	20	NS	SN
	8/5/2021	MQ	16-LR-KIT	0.746 J	1.26 J	2.67	<2.00	4.59	<2.00	7.3	1.65 J	<2.00
16 Leverett Road	2/16/2023	INF	23B2160-01	<0.88	<0.80	0.92	<0.82	28	<0.85	59	<0.70	<0.83
	2/16/2023	H	23B2160-02	< 0.93	<0.84	<0.97	<0.86	0.93 ]	<0.90	QN	<0.74	<0.88
	8/4/2021	DW	35-LR-KIT	3.38	0.984 J	12	0.866 3	5.71	<1.97	21	3.7	6.38
35 Loverett Doed	9/2/2021	DW	35-LR-KIT	3.03	<2.00	10.3	<2.00	4.91	<2.00	18	2.88	5.88
כם דבובו ניסמת	2/16/2023	INF	23B2172-01	3.6	0.98 ]	9.1	<0.78	6.2	<0.82	19	2.4	5.4
	2/16/2023	EFF	23B2172-02	< 0.85	<0.77	<0.89	<0.79	<0.65	< 0.82	ND	<0.67	1.2 J
	9/2/2021	MQ	42-LR-KIT	58.9	9.19	48.7	18.5	4.56	<2.00	140	8.49	45.2
42 Leverett Road	12/8/2022	INF	22L1517-01	69	13	22	21	2	<1.8	165	8.9	51
	12/8/2022	H	22L1517-02	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	ND	<1.9	<1.9
	8/4/2021	DW	50-LR-KIT	53.8	8.88	45.4	17.3	3.68	<1.91	129	7.01	40.7
	9/2/2021	DW	50-LR-KIT	58.2	9.83	46.3	16.6	4.4	<2.00	135	7.76	48.6
50 Leverett Road	11/16/2021	H	50-LR-KIT-TREATED	< 2.00	<2.00	<2.00	<2.00	<2.00	<2.00	ND	< 2.00	<2.00
	12/8/2022	INF	22L1516-01	65	12	52	20	5.3	<2.0	154	8.4	48
	12/8/2022	EFF	22L1516-02	4.9	<1.9	<1.9	<1.9	<1.9	<1.9	4.9	<1.9	6.4
	8/5/2021	DW	59-LR-BATH	44.3	8.2	29.2	10.8	2.86	<2.00	92	4.83	35
Dood +102000 103	9/2/2021	DW	59-LR-BATH	41	7.67	35.8	15.5	3.78	<2.00	104	5.26	33.7
חש דפגפו פון עסמת	12/8/2022	INF	22L1517-03	51	7.7	33	14	4.6	<2.0	110	4.9	34
	12/8/2022	EFF	22L1517-04	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	ND	<1.9	<1.9
	8/4/2021	DW	62-LR-KIT	2.14	11.1	7.39	<1.78	19.6	<1.78	40	1.57 J	2.93
	9/2/2021	DW	62-LR-KIT	1.38 J	7.69	4.96	<2.00	12.8	<2.00	25	1.60 J	1.72 J
62 Leverett Road	11/16/2021	MΩ	62-LR-KIT-TREATED	< 2.00	<2.00	<2.00	<2.00	<2.00	<2.00	ND	< 2.00	<2.00
	12/8/2022	INF	22L1515-01	<1.8	6.7	1.9	<1.8	8.9	<1.8	15	<1.8	<1.8
	12/8/2022	EFF	22L1515-02	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	ND	<1.8	<1.8
63 Leveratt Doad	12/8/2022	INF	22L1514-01	20	7.6	31	15	3.5	<2.0	107	5.2	32
O revereit noad	12/8/2022	EFF	22L1514-02	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	ND	<1.9	2
33 Wendell Road	2/16/2023	INF	23B2161-01	<0.89	0.95 J	3.3	<0.82	2.2	<0.85	5.5	0.81 J	1.3 J
oo wellaeli boaa	2/16/2023	EFF	23B2161-02	< 0.93	<0.84	1.3 J	<0.86	1.2 J	<0.90	ND	<0.74	<0.88

Sample Location/ID | Date | Description | Date | Date | Description | Date | Description | Date | Description | Date | Description | Description | Date | Description | De Summary of Field Blank Analytical Results
Suppression Massachusetts
RTN 1-21340
Last Updated: 03/16/23 (J. Libby)
Last Updated: 03/16/23 (J. Libby)
Last Updated: 03/16/23 (J. Libby)

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Last Updated: 03/16/23 (J. Libby)

Regulated PFAS Compounds (ng/L)

Regulated PFAS Compounds (ng/L)

Regulated PFAS Compounds (ng/L)

Last Updated: 03/16/23 (J. Libby)

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Last Updated: 03/16/23 (J. Libby)

Regulated PFAS Compounds (ng/L)

Last Updated: 03/16/23 (J. Libby)

Regulated PFAS Compounds (ng/L)

Regulated PFAS Compoun

**APPENDIX C** 

File Copy



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 8, 2023

Town of Shutesbury 1 Cooleyville Rd Shutesbury, MA 01072

Re:

Private Well Sampling 1 Cooleyville Rd, Shutesbury RTN 1-21340

Dear Town of Shutesbury:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 1 Cooleyville Rd as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 24, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since th PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours.

Town of Shutesbury

Beaky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## **BWSC123**

This Notice is Related to: Release Tracking Number

-	21340
	21010

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan. A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road City/Town: Shutesbury 01072 Zip Code: B. This notice is being provided to the following party: 1. Name: Town of Shutesbury 2. Street Address: 1 Cooleyville Rd City/Town: Shutesbury 01072 Zip Code: C. This notice is being given to inform its recipient (the party listed in Section B): That environmental sampling will be/has been conducted at property owned by the recipient of this notice. 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 1 Cooleyville Rd City/Town: Shutesbury Zip Code: 01072 MCP phase of work during which the sampling will be/has been conducted: ✓ Immediate Response Action Phase III Feasibility Evaluation Release Abatement Measure □ Phase IV Remedy Implementation Plan Utility-related Abatement Measure Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation Post-Temporary Solution Operation, Maintenance and Monitoring ☐ Phase II Comprehensive Site Assessment □ Other (specify) 3. Description of property where sampling will be/has been conducted: ✓ residential commercial industrial school/playground Other (specify) 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <pri>private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Becky Torres Contact Name: Street Address: 1 Cooleyville Road City/Town: Shutesbury 01072 Zip Code:

Email: townadmin

Revised: 5/30/2014

Telephone: (413) 572-3227

TABLE 1
1 Conleyville Read
2 Stuttesbury, Massachusetts
RTH 1-21380
Last Updated: 2/27/2023 (Inscrean)

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	2.90	200	2.90	0.50	1.73	1000	24.55	2381534-01	MG	2/9/23	
1.42 }	3.84	20	2.42		2.43	WET.	1.00.400	1-CVR-BSM1-KIT	D X	8/5/21	1 Copleyville Road
667	20		÷.	3	¥.		7	thod 1 GW-1 Criteria	REDEP MED ME	Ma	Sample Location / ID
PFHXA	PFAS6		PFOS	PFNA	PFCA	PFHXS	PEHDA		i yi xe	9180	***************************************
Non-Regulated PFAS Compounds		(1/6	(1/6u) spunodi	ted PFAS Compo	lated PF	Regu		Sample (C)	Location	Sampling	Parameter

Massièr NCP - Missachusetts Department of Environmental Protection Massièrnusetts Contingency Plain, Effective 04/25/2014 and undates #15 - No Standard.

\*\*\* Sample not analyzed or ornalysis not provided Boxed/Boild values indicate exceedance of GW-1 standards Boxed/Boild values indicate exceedance of GW-1 standards Pressived in Managrams per liter (rgyL)

PFAS - Per- analythoroalkyl Substances

- Vetus reported above the MDL but below the RL value and included in the PFASO calculation.

Chily PFAS - Per- analythoroalkyl Substances

- Vetus reported above the MDL but below the RL value and included in the PFASO calculation.

Chily PFAS with results above RL are shown above

NIF - Influent DW - Drinking Well; PDET - Point-of-Entry Treatment

File Copy



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 8, 2023

Frederick Wilson, Jr. 11 Cooleyville Rd Shutesbury, MA 01072

Private Well Sampling 11 Cooleyville Rd, Shutesbury RTN 1-21340

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dualvessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that Jqualified results are not considered detections for purposes of POET installation.

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A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

seche Becky Terres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

# **BWSC123**

This Notice is Related to: Release Tracking Number

1	]-	21340
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# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A.	. The address of the disposal site related to	o this Notice	and Release Tracking Numbe	r (provided above):
1.	Street Address: 42 Leverett Road			
	City/Town: Shutesbury	Zip Code:	01072	
В.	. This notice is being provided to the follow	ving party:		
1.	. Name: Frederick Wilson, Jr.			
2	Street Address: 11 Cooleyville Rd			
2.	. Street Address.			
	City/Town: Shutesbury	Zip Code:	01072	
C.	. This notice is being given to inform its re	cipient (the	party listed in Section B):	
	1. That environmental sampling will be/	has been co	nducted at property owned by the	recipient of this notice.
		. Coo oo oo oo oo	ed at amparty award by the main	signt of this notice
	<ul> <li>2. Of the results of environmental samp</li> </ul>	oling conduct	ad at property owned by the recip	olent of this notice.
	3. Check to indicate if the analytical re-			ed, the analytical results from
	the environmental sampling must be at	tached to thi	s notice.)	
	. Location of the property where the enviro	onmental sa	mpling will be/has been condu	cted:
1.	. Street Address: 11 Cooleyville Rd			
	City/Town: Shutesbury	Zip Code:	01072	
2.	. MCP phase of work during which the sample	ing will be/ha	s been conducted:	
	✓ Immediate Response Action		se III Feasibility Evaluation	
	Release Abatement Measure		se IV Remedy Implementation P	an
	Utility-related Abatement Measure Phase I Initial Site Investigation		se V/Remedy Operation Status -Temporary Solution Operation,	Maintenance and Monitoring
	Phase II Comprehensive Site Assessme	_		
		_	(specify)	
3.	<ol> <li>Description of property where sampling will</li> </ol>	be/has been	conducted:	
		industrial	school/playground C	other
				(specify)
	4. Description of the sampling locations and ty	rpes (e.g., so	il, groundwater, indoor air, soil g	as) to the extent known at the
-	ime of this notice.	ما المسامة	aint of ontar tractment cust	oms for DEAS analysis
Ir	nfluent and effluent samples from <pri< td=""><td>vate well/p</td><td>oint of entry treatment syst</td><td>sili&gt; ioi FFA3 allaiysis</td></pri<>	vate well/p	oint of entry treatment syst	sili> ioi FFA3 allaiysis
E.	. Contact information related to the party p	roviding thi	s notice:	
	Contact Name: Becky Torres			
	Street Address: 1 Cooleyville Road			
	City/Town: Shutesbury	Zip Code	01072	
	Telephone: (413) 572-3227	Email: 1	ownadmin	_

TABLE 1 11 Codeyville Road RTN 1-21340 Shutesbury, Massachusetts

Last Updated: 2/27/2023 (Darkson)

The market	Sampling	Location	Cample 10		Regul	atted PFA	atted PFAS Compou	unds (ng	(2)		Non-Regulated F	FAS Compounds
Parameter	Date	Type	or adues	PFHpA	PFHXS	PFOA	PFNA	PFOS PFDA	PFDA	PFAS6	PFBS	PFHXA
Sample Location/ID	Mass	DEP MCP Me	othod 1 GW-1 Criteria		115	188	521	115	2115	20	511	514
11 Coolandillo Board	11/16/21	DW	11-COOL-KIT 1.17 J	1.17 3	- Z. DO	3.22	42,420	2.97	-57.00	61.6	0.880 3	1.09 3
AA COOKY FIRE PAGE	2/9/23	DW	2381558-01	1.03	48.23	2.30	<0.16	3,20		5,50	<3.67	0.913

MassDEP NCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan, Effective 04/25/2014 and updates NS - No Standard

<sup>&</sup>lt;xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.
\*\*\*- Sample not analyzed or analysis not provided
Boxed/Bold values indicate exceedance of GW-1 standards
Results presented in nanograms per liter (ng/L)
PRAS - Per- and Polyfluorosikyl Substances
J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.
Only PFAS with results above RL are shown above
INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment</p>

File Copy



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 8, 2023

Geoffrey and Andrea Rogers 34 Cooleyville Rd Shutesbury, MA 01072

Re:

Private Well Sampling

34 Cooleyville Rd, Shutesbury

RTN 1-21340

Dear Mr. and Mrs. Rogers:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 34 Colleyville Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 21, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

# **BWSC123**

nis	NOt	ice	18	Re	at	ea	to:
elea	ise	Tra	ick	ding	N	um	be

# OTICE OF ENVIRONMENTAL CAMPLING

	As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan
A. 1.	The address of the disposal site related to this Notice and Release Tracking Number (provided above):  Street Address: 42 Leverett Road
	City/Town: Shutesbury Zip Code: 01072
1.	This notice is being provided to the following party:  Name: Geoffrey and Andrea Rogers
2.	Street Address: 34 Cooleyville Rd
	City/Town: Shutesbury Zip Code: 01072
	<ul> <li>2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.</li> <li>3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)</li> <li>Location of the property where the environmental sampling will be/has been conducted:</li> <li>Street Address: 34 Cooleyville Rd</li> </ul>
	City/Town: Shutesbury Zip Code: 01072
2.	MCP phase of work during which the sampling will be/has been conducted:    Immediate Response Action
3.	(specify)  Description of property where sampling will be/has been conducted:
	residential ☐commercial ☐industrial ☐school/playground ☐Other
4.	(specify)  Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the

E. Contact information related to the party providing this notice:

Contact Name: Becky Torres

time of this notice.

Street Address: 1 Cooleyville Road

City/Town: Shutesbury

Telephone: (413) 572-3227

Zip Code:

Email: townadmin

01072

Influent and effluent samples from <private well/point of entry treatment system> for PFAS analysis

Revised: 5/30/2014

# TABLE 1

34 Cooleyville Road

Shutesbury, Massachusetts

RTN 1-21340

Last Updated: 3/1/2023 (Dackson)

Daramotor	Sampling	Location	Samuel In		Regu	lated PFA	Compo	unds (ng	(1)	
T OI	Date	Type	on sidings	PFHpA	PFHxS	PFHXS PFOA I	PENA	PFOS PFDA		PFAS6
Sample Location/ID	Mass	SDEP MCP N	ethod 1 GW-1 Criteria		SN	385	SK	SNS		20
34 Cooleyville Road	2/9/23	DW	23B1447-01	19,05	<0.58	<0.84	69.05	<0.78		ND.
Manager Manager Comp	the same of Same	no destat fire	starting Management Continues also seems of the	Carellana			2000	1000		

Effective 04/25/2014 and appares

NS - No Standard

<xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided. "-" - Sample not analyzed or analysis not provided Boxed/Bold values indicate exceedance of GW-1 standards Results presented in nanograms per liter (ng/L) PFAS - Per- and Polyfluoroalkyl Substances J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation. Only PFAS with results above RL are shown above INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment</p>



File Copy

Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Lucy Blakely 53 Cooleyville Rd Shutesbury, MA 01072

Re:

Private Well Sampling

53 Cooleyville Rd, Shutesbury

RTN 1-21340

Dear Ms. Blakely:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 53 Cooleyville Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on March 7, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond

MassDEP

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

# **BWSC123**

This Notice is Related to: Release Tracking Number

-	21340
	-1010

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A.	A. The address of the disposal site related to this	Notice	and Release Tracking N	umber (provided above):
1.	Street Address: 42 Leverett Road			
	City/Town: Shutesbury Zip	Code:	01072	
В.	B. This notice is being provided to the following	party:		
1.	1. Name: Lucy Blakeley			
2.	Street Address: 53 Cooleyville Rd			
	City/Town: Shutesbury Zip 0	Code:	01072	
C.	C. This notice is being given to inform its recipie	nt (the	party listed in Section B)	:
	1. That environmental sampling will be/has be	een con	ducted at property owned	by the recipient of this notice.
	_			* *
	2. Of the results of environmental sampling o	onducte	ed at property owned by the	e recipient of this notice.
	Check to indicate if the analytical results a			hecked, the analytical results from
	the environmental sampling must be attached	I to this	notice.)	
	D. Location of the property where the environment	ıtal san	npling will be/has been c	onducted:
1.	Street Address: 53 Cooleyville Rd			
	City/Town: Shutesbury Zip 0	Code:	01072	
2.	2. MCP phase of work during which the sampling wil	l be/has	been conducted:	
	✓ Immediate Response Action	_	e III Feasibility Evaluation	
	Release Abatement Measure Utility-related Abatement Measure		e IV Remedy Implementat e V/Remedy Operation St	
	Phase I Initial Site Investigation			ation, Maintenance and Monitoring
	☐ Phase II Comprehensive Site Assessment ☐	Othe	r	
3	3. Description of property where sampling will be/has	s heen	(specify)	
٠,	☑ residential ☐ commercial ☐ indu		school/playground	Other
		otriai		(specify)
4.	4. Description of the sampling locations and types (e	.g., soil	, groundwater, indoor air,	soil gas) to the extent known at the
-	leftuant and offluent complex from enricets	uall/na	int of onto troots out	austam for DEAC analysis
111	Influent and effluent samples from <private td="" v<=""><td>veli/po</td><td>or entry treatment</td><td>system&gt; for PFAS analysis</td></private>	veli/po	or entry treatment	system> for PFAS analysis
_		,		
	E. Contact information related to the party providi Contact Name: Becky Torres	ng this	notice:	
	Street Address: 1 Cooleyville Road			
		Code:	01072	
	The state of the s		wnadmin	

# Tighe&Bond

TABLE 1
53 Cooleyville Road
Shutesbury, Massachusetts
RTN 1-21340

Last Updated: 3/1/2023 (Dackson)

Daramater	_	Location	Cample TD		Regul	ated PFA	S Compo	gn) spun	(1/	
- withington	Date	Type	or sidings	PFHpA	PFHXS	PFHXS PFOA PFNA	PFNA	PFOS	PFDA	PFAS6
Sample Location/ID	Massi	DEP MCP Me	thod 1 GW-1 Criteria		NS	SM	SN	SN		
53 Cooleyville Road	2/23/2023	DW	2382850-01	<0.87 <0.28 <0.90 <0.80	<0.78	<0.90	<0.80	-:0.66	< 0.84	ND
MassDEP MCP - Massachusetts Departme	artment of Engineeratal Brot									

NS - No Standard

- xxx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided. "-" - Sample not analyzed or analysis not provided Boxed/Bold values indicate exceedance of GW-1 standards Results presented in nanograms per liter (ng/L) PFAS - Per- and Polyfluoroalkyl Substances
J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation. Only PFAS with results above RL are shown above
INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment

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Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 13, 2023

Samuel Tobin & Isabel Castellanos 10 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 10 Leverett Rd, Shutesbury RTN 1-21340

Dear Mr. Tobin & Ms. Castellanos:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 10 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 24, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond

MassDEP





# Massachusetts Department of Environmental Protection

# Bureau of Waste Site Cleanup

# BWSC123

This Notice is Related to: Release Tracking Number

-	213
-	213

# NOTICE OF ENVIRONMENTAL SAMPLING

-0 As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road City/Town: Shutesbury Zip Code: B. This notice is being provided to the following party: 1. Name: Samuel Tobin & Isabel Castellanos Street Address: 10 Leverett Rd City/Town: Shutesbury 01072 Zip Code: C. This notice is being given to inform its recipient (the party listed in Section B): That environmental sampling will be/has been conducted at property owned by the recipient of this notice. 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 10 Leverett Rd City/Town: Shutesbury \_\_\_ Zip Code: MCP phase of work during which the sampling will be/has been conducted: ☐ Phase III Feasibility Evaluation Immediate Response Action ☐ Phase IV Remedy Implementation Plan Release Abatement Measure Utility-related Abatement Measure □ Phase V/Remedy Operation Status Post-Temporary Solution Operation, Maintenance and Monitoring Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment (specify) Description of property where sampling will be/has been conducted: industrial school/playground Other commercial ✓ residential Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road City/Town: Shutesbury 01072 Zip Code: Telephone: (413) 572-3227 Email: townadmin

Revised: 5/30/2014

10 Leverett Road: Shutesbury, Massachusetts RTW 1-21340:

Sample Location/ID Parameter Last Updated: 2/27/2023 (Disclaren) MassOEP MCP Method 1 GW-1 Criteria Lab ID PFHpA Regulated PFAS Compounds (ng/L)
PFHXS PFOA PFNA PFOS PFDA PFASE Non-Regulated PEAS Compounds
11Cl-PE3OUS 9Cl-PE3ONS

 <sup>&</sup>lt;a href="https://doi.org/10.100/j.j.com/pc/">cax indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided "A". Sample not englyzed or analysis not provided Boxed/Bolt values indicate exceedance of GW.1 standards Results presented in nanograms per liter (ng/L)
 <a href="https://doi.org/">press/</a> and Polyfluoroalkyl Substances.
 <a href="https://doi.org/">https://doi.org/</a> and press/</a> and press/
 <a href="https://doi.org/">https://doi.org/</a> and press/</a> a

File Copy



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Steven Hickey Kristen McCarthy 16 Leverett Rd Shutesbury, MA 01072

Re

Private Well Sampling 16 Leverett Rd, Shutesbury RTN 1-21340

Dear Mr. Hickey & Ms. McCarthy:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from perand polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 16 Leverett Rd as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 28, 2023 to monitor the POET system that was installed in your home by the Town of Shutesbury. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are present in the untreated water but the system is successfully removing PFAS, as evidenced by the "midfluent" and "effluent" results being non-detect. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)

# Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

# NOTICE OF ENVIRONMENTAL SAMPLING

21340 As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road City/Town: Shutesbury 01072 Zip Code: B. This notice is being provided to the following party: 1. Name: Steven Hickey & Kristen McCarthy Street Address: 16 Leverett Rd City/Town: Shutesbury 01072 Zip Code: C. This notice is being given to inform its recipient (the party listed in Section B): 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice. 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 16 Leverett Rd City/Town: Shutesbury Zip Code: 01072 2. MCP phase of work during which the sampling will be/has been conducted: Immediate Response Action Phase III Feasibility Evaluation Release Abatement Measure Phase IV Remedy Implementation Plan Utility-related Abatement Measure ☐ Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation Post-Temporary Solution Operation, Maintenance and Monitoring ☐ Phase II Comprehensive Site Assessment ☐ Other (specify) 3. Description of property where sampling will be/has been conducted: ✓ residential commercial industrial school/playground Other 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <pri>private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road City/Town: Shutesbury 01072 Zip Code: Telephone: (413) 572-3227 Email: townadmin

Revised: 5/30/2014 Page 1 of 2

Shutesbary, Massachusetts 16 Leverett Road

Last Updated: 3/9/2023 (J. Libby) RTN 1-21340

Non-Regulated PFAS Compounds 1.65 J PFBS Regulated PFAS Compounds (rg/L) FMxS PFOA PFNA PFOS PFDA PFASS 29 4.59 28 0.933 PFHpA PFHxS PFOA 2.67 1.26 ) 0.7463 | NessDEF MCP Nethod 1 GW-1 Criteria | NessDEF MCP Nethod 1 GW-1 Criteria | N/2021 | DW | 16-ER-KIT | Criteria | N/2023 | EFF 2382160-02 Sample 1D Location Sampling Date 2/16/2023 Sample Location/ID 16 Leverett Road Parameter

MassDEF MCP - Missachusetts Department of Environmental Protection Hassachusetts Contingency Plan. Effective 04/25/2014 and updates <xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.</p> NS - No Standard

... - Sample not analyzed or analysis not provided

Boxed/Bold values indicate exceedance of GW-1 standards
Results presented in nanograms per liter (ng/L)
PFAS - Per- and Polyfluoreadin's Substances
PFAS - Per- and Polyfluoreadin's Substances
Darks - Per- and Polyfluoreadin's Substances
Orly PFAS with results above RL are shown above
INF - Influent; DW - Drinking Well; POET - Point, of -Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Mark & Carrie Hawkins 17 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 17 Leverett Rd, Shutesbury RTN 1-21340

Dear Mr. and Mrs. Hawkins:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 17 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on March 1, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours.

220 KG

Town of Shutesbury

Becky Torres
Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)



## Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

### BWSC123

This Notice is Related to: Release Tracking Number

-	21340
	-

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road City/Town: Shutesbury \_ Zip Code: 01072 B. This notice is being provided to the following party: 1. Name: Mark & Carrie Hawkins Street Address: 17 Leverett Rd Zip Code: 01072 City/Town: Shutesbury C. This notice is being given to inform its recipient (the party listed in Section B): That environmental sampling will be/has been conducted at property owned by the recipient of this notice. 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 17 Leverett Rd City/Town: Shutesbury Zip Code: MCP phase of work during which the sampling will be/has been conducted: ✓ Immediate Response Action Phase III Feasibility Evaluation Release Abatement Measure Phase IV Remedy Implementation Plan Utility-related Abatement Measure Phase V/Remedy Operation Status Post-Temporary Solution Operation, Maintenance and Monitoring Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment ☐ Other (specify) Description of property where sampling will be/has been conducted: residential □ commercial □ industrial school/playground Other (specify) Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <pri>private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road City/Town: Shutesbury 01072 Zip Code: Telephone: (413) 572-3227 Email: townadmin

Page 1 of 2 Revised: 5/30/2014

TABLE 1
17 Leverett Road
17 Leverett Road
Shutneburgts
RTN 1-21340
Lest Updated: 3/9/2023 (1.18by)

Dawn seek or	Sampling	Location	Committee and		Regulat	ed PFAS	Compo	unds (r	(7/6u		Non-Regulated P	FAS Compounds
120000	Date	Type	or aiduse	PFHPA	PFHXS	PFOA	PFNA	SO	PFDA	PFAS6	PFBS	PFHXA
Sample Location/ID	M	assDEP MCP Net	hod 1 GW-1 Criteria	RIS	15 115 115 115.	Sil	JIS.	100	SS.	20	38	118
7   suscept Board	9/2/2021	WQ	17-LR-KIT	1.86.3	1,783	4.39	-2.00	3.6	\$0.50	8.0	2.13	1.153
A LEVELELL RICHO	2/17/2023	DW	2382200-01	1.63	1.2.3	4.7	10.84	3.5	× 0.87	8.2	1.13	~0.85

MassDEP NCP - Nassachusetts Department of Environmental Protection Massachusetts Confingency Ran, Effective 04/25/2014 and updates



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 17, 2023.

Philip Edwards & Rebecca Phillips 20 Leverett Rd Shutesbury, MA 01072

Re: Private Well Sampling

20 Leverett Rd, Shutesbury

RTN 1-21340

Dear Mr. Edwards & Ms. Phillips:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 20 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 23, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations exceeds 20 ppt, the Town will contact you to install a dual-vessel POETto remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures: BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

Telephone: (413) 572-3227

## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## **BWSC123**

This Notice is Related to: Release Tracking Number

-	21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan. A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road City/Town: Shutesbury 01072 Zip Code: B. This notice is being provided to the following party: 1. Name: Philip Edwards & Rebecca Phillips 2. Street Address: 20 Leverett Rd City/Town: Shutesbury 01072 Zip Code: C. This notice is being given to inform its recipient (the party listed in Section B): 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice. 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 20 Leverett Rd City/Town: Shutesbury 01072 Zip Code: MCP phase of work during which the sampling will be/has been conducted: ✓ Immediate Response Action ☐ Phase III Feasibility Evaluation Release Abatement Measure ☐ Phase IV Remedy Implementation Plan Utility-related Abatement Measure Phase V/Remedy Operation Status Phase I Initial Site Investigation Post-Temporary Solution Operation, Maintenance and Monitoring ☐ Phase II Comprehensive Site Assessment ☐ Other (specify) Description of property where sampling will be/has been conducted: ✓ residential commercial industrial school/playground (specify) 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <pri>private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Becky Torres Contact Name: Street Address: 1 Cooleyville Road City/Town: Shutesbury 01072

Revised: 5/30/2014 Page 1 of 2

Email: townadmin

Zip Code:

**TABLE 1**20 Leverett Road
Shutesbury, Massachusetts

RTN 1-21340

Last Updated: 2/27/2023 (JJackson)

Parameter	Sampling	Location	Cample ID		Regula	ted PF	Regulated PFAS Compounds	unds (r	۱g/L)		Non-Regulated PI	FAS Compounds
raiailletei	Date	Type	Sample 10	PFHpA	PFHxS	PFOA	PFHxS PFOA PFNA PFOS	PFOS	PFDA	PFAS6	PFBS	PFHxA
Sample Location/ID	Ma	ISSDEP MCP M	MassDEP MCP Method 1 GW-1 Criteria	SN	NS	NS	NS	NS	NS	20	NS	SN
20 Leverett Boad	8/4/21	DW	20-LR-KIT	6.9	0.837 J	15	6.9 0.837 J 15 0.879 J 2.1	2.1	<2.00	24	1.42 J	3.4
50 revelerr Wada	2/16/23	DW	23B2142-01	11	< 0.77	21	21 1.1 J	3.1	< 0.83	35	1.4 ]	6.0

MassDEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates

NS - No Standard

<xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.</p>
"-" - Sample not analyzed or analysis not provided
Boxed/Bold values indicate exceedance of GW-1 standards
Results presented in nanograms per liter (ng/L)
PFAS - Per- and Polyfluoroalkyl Substances
J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.
Only PFAS with results above RL are shown above
INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Lucas Winfield 25 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 25 Leverett Rd, Shutesbury

RTN 1-21340

Dear Mr. Winfield:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 25 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on March 7, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method I GW-I Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations exceeds 20 ppt, the Town will contact you to install a dual-vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

_		
	-	21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

					assachuseus Contingency No	mbor (provided above):
				to this Notice	and Release Tracking Nu	illiber (provided above).
S	treet Addre	ess: 42 Leve	erett Road			
		Shutesbury		Zip Code:	01072	
Т	nis notice	is being pro	ovided to the follo	owing party:		
		as Winfield				
		ess: 25 Leve	erett Rd			
					01072	
C	ity/Town:	Shutesbury	1	Zip Code:	01072	
. T	1. That 2. Of th	environmen	ntal sampling will b environmental sa	ne/has been co mpling conduct results are atta	ed at property owned by the	by the recipient of this notice.
. 8	Street Addr	f the proper ess: 25 Levents Shutesburg	erett Rd	Zip Code:	onpling will be/has been on the option of th	conducted:
2. 1	MCP phase Immedia Release Utility-re	e of work durate Response Abatement elated Abate Initial Site In	ring which the san e Action Measure ment Measure	Pha	as been conducted: ase III Feasibility Evaluation ase IV Remedy Implementa ase V/Remedy Operation S st-Temporary Solution Ope ner	ation Plan
3.	Description	of property	where sampling v	will be/has bee	n conducted:	
		esidential	commercial	industrial		Other(specify)
45	Ethio no	ntino				t system> for PFAS analysis
			1 4 14 4 4 5 7 7 7 7	ty providing t	nis notice:	
	Contact in					
E.	ntact Nam	e: Becky 7	Torres			
E. Co	ontact Nam reet Addres	_	Torres	Zip Co		

Page 1 of 2 Revised: 5/30/2014

## TABLE 1

25 Leverett Road Shutesbury, Massachusetts

Sample Location/ID	Parameter		Last Updated: 2/27/2023 (Jacks)	RTN 1-21340
NASSDEP MOVE	Date	Samping	1)	
SSDEP MORE	Type	Popularion.	location	
10-158CBEC	and a Court Criteria	Sample ID	- 1	
160	SN	PEHDA		
160 1.63 250 22 7.3 4198	SN SN	PIHXS PROA	Regulated PFA	
22	546	o would	S Compour	
7.3 <03	NS NS	1000	SOS PED	de (ma)
939	0.7	1	A PFASE	
	177	1989	PFBS	Non-Regulated
	62	N.	H3d	PFAS Comp

2/23/2023 DW 2/20235: 01 2/20239: 01 2/202

cxx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided "-" - Sample not analyzed or analysis not provided "-" - Sample not analyzed or analysis not provided Boxed/Bold values indicate exceedance of GW-1 standards Results presented in nanograms per later (rol/L) reported above the MDL but below the RL; value not included in the PFAS6 calculation. ) - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation. ) - Influent; DW - Drinking Well; PQET - Point-of-Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Michael Pill 37 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 29 Leverett Rd, Shutesbury RTN 1-21340

Dear Mr. Pill:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 29 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on March 1, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# T

## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

## 1 - 21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site related t	to this Notice	and Release Tracking	Number (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	_ Zip Code:	01072	
This notice is being provided to the follows:     Name: Michael Pill     Street Address: 29 Leverett Rd	wing party:		
City/Town: Shutesbury	Zip Code:	01072	
C. This notice is being given to inform its re  1. That environmental sampling will be  2. Of the results of environmental sample  3. Check to indicate if the analytical re the environmental sampling must be at	has been cor oling conducte sults are atta	nducted at property owned ed at property owned by to ched. (If item 2. above is	I by the recipient of this notice.
D. Location of the property where the environ     Street Address: 29 Leverett Rd	onmental sar	mpling will be/has been	conducted:
City/Town: Shutesbury	Zip Code:	01072	
MCP phase of work during which the sample     Immediate Response Action     Release Abatement Measure     Utility-related Abatement Measure     Phase I Initial Site Investigation     Phase II Comprehensive Site Assessment	Phas Phas Phas Phas Post-	e III Feasibility Evaluation se IV Remedy Implementa se V/Remedy Operation S -Temporary Solution Operation (specify)	ation Plan
Description of property where sampling will			
✓ residential			
E. Contact information related to the party pr	roviding this	notice:	
Contact Name: Becky Torres		1000 100 100 100 100 100 100 100 100 10	
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code:		
Telephone: (413) 572-3227	Email: to	wnadmin	

TABLE 1
Summary of Non-POET Analytical Results
29 Leverett Road
Shutesbury, Massachusetts

RTN 1-21340 Last Updated: 2/27/2023 (Uscison)

Parameter	Sampling	Location	2		Regul	ated PF	Om	unds (n	9/1)		Non-Regulated Pr	FAS Compounds
-	Date	Type	Souther to	PFHpA	PFHXS	PFOA	Š	PFOS	PFDA	PFAS6	PERS	PFHYA
Sample Location/ID	Massi	DEP MCP N	lethod 1 GW-1 Criteria	514	88	in in	3	511 511	130	20	2115	311
29 Leverett Road 8/4/21 DW 29-LR-KIT 1.55 J 0.736 J 3.91 < 1.94 1.90 J < 1.94	8/4/21	DW	29-LR-KIT	1.55 3	1.55 J 0.736 J 3.91	3.91	V0.15	1.90	45 98	3.91	1.97	1 70 1
										-		4170

MassDEP MCP - Nessachusetts Department of Environmental Protection Massachusetts Contingency Plan, Effective 04/25/2014 and updates Italics indicates property has POET installed

NS - No Standard

- XX Indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

- XX Indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

- XX Indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

- XX Indicates indicate exceedance of GW-1 standards

- Boxes/Bold values indicate exceedance of GW-1 standards

- Research Polyfluor calky/ Substances

- PAS - Per - and Polyfluor calky/ Substances

- Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.

- Only PFAS with results above RL are shown above

- Influent; DW - Drinking Well; POET - Point-of-Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Carol Holzberg 37 Leverett Rd Shutesbury, MA 01072

Re-

Private Well Sampling 35 Leverett Rd, Shutesbury RTN 1-21340

Dear Ms. Holzberg:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 35 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 28, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format: the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# T

## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

	-	
1	-	21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site relate	d to this Notice	and Release Tracking N	lumber (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to the form     Name: Carol Holzberg	llowing party:	_	
Street Address: 35 Leverett Rd			
City/Town: Shutesbury	Zip Code:	01072	
C. This notice is being given to inform its  1. That environmental sampling will  2. Of the results of environmental sa  3. Check to indicate if the analytical the environmental sampling must be	be/has been con impling conductor results are attach	nducted at property owned ed at property owned by the ched. (If item 2. above is	by the recipient of this notice.
D. Location of the property where the env     Street Address: 35 Leverett Rd	vironmental sa	mpling will be/has been	conducted:
City/Town: Shutesbury	Zip Code:	01072	
MCP phase of work during which the san     Immediate Response Action     Release Abatement Measure     Utility-related Abatement Measure     Phase I Initial Site Investigation     Phase II Comprehensive Site Assessi	Phas	se III Feasibility Evaluation se IV Remedy Implementa se V/Remedy Operation S -Temporary Solution Oper	ation Plan
3. Description of property where sampling v	vill be/has been		
☑ residential ☐ commercial	industrial	school/playground	Other(specify)
<ol> <li>Description of the sampling locations and time of this notice.</li> </ol>	types (e.g., so	l, groundwater, indoor air,	soil gas) to the extent known at the
Influent and effluent samples from <	orivate well/po	oint of entry treatment	system> for PFAS analysis
E. Contact information related to the part Contact Name: Becky Torres	y providing this	notice:	
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury Telephone: (413) 572-3227	Zip Code	: 01072 ownadmin	

7ABLE 1 35 Leverett Road Shutesbury, Massachusetts RTN 1-21340

Last Updated: 3/15/23 (3.Libby)

Parameter	Date	Type	Sample ID	DENA	Regula	sted PFAS	Compoun	/Bu) sp.			Non-Regulated PF	AS Compounds
Sample Location/ID	Ma	CONTRO MOD MAN	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Mul	PPHXS		PFNA	PFOS	PFDA P	PAS6	pres	DEMAA
	0111111	מפיירו הוכר הינה	tod I GW-1 Criteria	100	MS	SN	SN	SW	1	90	SAC.	
	8/4/21	DW	75.10.KIT	96.6	000	ľ	l		1	2	143	NS
	672734	200	100000	0000	0.984	12.0		5.71	c1.97	21.1	3.70	6 38
35 Leweratt Road	175/57	200	35-CR-KIT	3.03	e2.00		00 E	4 00	1000			0000
2001 322 22 22	2/16/23	TAJE	2302133 01	1			OU.S.	46.4	0075	7.81	2.88	5.88
	2 10 1 1	TALL	7387172-01	3.6	0.98 J		<0.7R	6.3	60.00	10		
	2/16/23	194	2383123.63	100	100			7:5	70'00	13	6.4	5.4
Aless DEP MCP - Massachusette Depa	setment of Sourier	The second second	20.2717002	\$0.00 80.00	///O>	<0.89	< 0.79	c0.65	40.82	ON	<0.67	121

exx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

"-- Sample not analyzed or analysis not provided
Boxed/Bold values indicate exceedance of GW-1 standards
Results presented in nanograms per liter (Ing.L)
PFAS - Per- and Polyfluoroalikyl Satistances

J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.

Only PFAS with results above RL are shown above.

INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 8, 2023

Carol Holzberg 37 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 37 Leverett Rd, Shutesbury RTN 1-21340

Dear Ms. Holzberg:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 37 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 24, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

BICKL TOTLE Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Conv

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# TO

## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## **BWSC123**

This Notice is Related to: Release Tracking Number

-  21340
----------

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site relate	d to this Notice	and Release Tracking N	lumber (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to the fol	lowing party:		
Name: Carol Holzberg			
Street Address: 37 Leverett Rd			
City/Town: Shutesbury	Zip Code:	01072	
C. This notice is being given to inform its	recipient (the	party listed in Section B	):
1. That environmental sampling will be	e/has been cor	ducted at property owned	by the recipient of this notice.
2. Of the results of environmental sa	mpling conducte	ed at property owned by th	e recipient of this notice.
3. Check to indicate if the analytical			checked, the analytical results from
the environmental sampling must be	attached to this	s notice.)	
<ul> <li>D. Location of the property where the env</li> <li>1. Street Address: 37 Leverett Rd</li> </ul>	ironmental sar	npling will be/has been	conducted:
City/Town: Shutesbury	Zip Code:	01072	
2. MCP phase of work during which the same	pling will be/has	s been conducted:	
☑ Immediate Response Action		e III Feasibility Evaluation	
Release Abatement Measure Utility-related Abatement Measure		se IV Remedy Implementa	
Phase I Initial Site Investigation		se V/Remedy Operation Si Temporary Solution Oper	ation, Maintenance and Monitoring
Phase II Comprehensive Site Assessn		r	
		(specify)	
Description of property where sampling w			
✓ residential	industrial	school/playground	Other(specify)
4. Description of the sampling locations and	tynes (e.a. soi	I amundwater indoor air	
time of this notice.	() peo (e.g., se.	, groundwater, mader an,	son gasy to the extent known at the
Influent and effluent samples from <p< td=""><td>rivate well/po</td><td>oint of entry treatment</td><td>system&gt; for PFAS analysis</td></p<>	rivate well/po	oint of entry treatment	system> for PFAS analysis
E. Contact information related to the party	providing this	notice:	
Contact Name: Becky Torres			
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code:	01072	
Telephone: (413) 572-3227	Email: to	wnadmin	

Revised: 5/30/2014

TABLE 1

37 Leverett Road Shutesbury, Massachusetts

RTN 1-21340

Last Updated: 2/27/2023 (Decision)

Daramoher	Sampling	Location Tone	Grando ID		Regulated PFAS Compounds (ng/L)	ed PFAS	Compo	) spuno	ng/r)		Non-Regulated PFAS Compounds
-	Date	cocation type Sample to		PFHDA PFHXS PFOA PFNA PFOS PFDA PFAS6	PFHxS	PFOA	PENA	PFOS	PFDA	PFAS6	PFHXA
Sample Location/ID	Mass	MassDEP MCP Method 1 GW-1 Criteria	GW-1 Criteria	NS	SK	55.	NS.	SM	165	20	CT Z
7 Leverett Road	23B1533-01	23B1533-01 2/9/2023	DW 1.73 0.773 5.9 -0.76	1.73	0.77.1	5.9	410.76	5.8	×0.63	12	
MassDEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates NS - No Standard	setts Departm	ent of Environment	al Protection Ma:	ssachuset	ts Conting	ency Plan	n. Effect	ve 04/2	5/2014 a	nd updat	sa
<xx (rl)="" above="" compound="" indicates="" laboratory="" limit="" limits,="" not="" provided.<br="" reported="" reporting="" was="">"." - Sample not analyzed or analysis not provided</xx>	was not reports or analysis no	ed above laboratory t provided	limits, Reportin	g Limit (R	L) provide	Ď.					
Boxed/Bold values indicate exceedance of GW-1 standards	e exceedance o	of GW-1 standards									
Results presented in nanograms per liter (ng/L) PFAS - Per- and Polyfluoroalkyl Substances	grams per liker valkyl Substanc	(ng/L)									
<ol> <li>Value reported above the MDL but below the RL; value not included in the PFASS calculation.</li> </ol>	the MDL but be	low the RL; value r	ot included in th	PEASE	calculation	-					
E - Result outside of laboratory calibration range. Value is estimated. On lopids with neutre above PI are shown above.	story calibratic	in range. Value is e	stimated.								
INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment	dng Well; POET	- Point-of-Entry T	eatment								



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 8, 2023

Sandra Olken 60 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 60 Leverett Rd, Shutesbury

RTN 1-21340

Dear Ms. Olken:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 60 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 21, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torces

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)

## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## **BWSC123**

This Notice is Related to: Release Tracking Number

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

1	7-	21340
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A. The address of the disposal site     Street Address: 42 Leverett Road	related to this Notice	e and Release Trackin	g Number (provided above):
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to to     Name: Sandra Olken	he following party:		
Street Address: 60 Leverett Rd			
City/Town: Shutesbury	Zip Code:	01072	
2. Of the results of environment	will be/has been contal sampling conducte	ducted at property owned by	ed by the recipient of this notice.
Location of the property where the     Street Address: 60 Leverett Rd  City/Town: Shutesbury	e environmental sam  Zip Code:	opling will be/has been	conducted:
2. MCP phase of work during which the  Immediate Response Action Release Abatement Measure Utility-related Abatement Measure Phase I Initial Site Investigation Phase II Comprehensive Site Asset	Phase	e III Feasibility Evaluation of IV Remedy Implement of V/Remedy Operation S remporary Solution Ope	ation Plan
. Description of property where sampling	ng will be/has been co	(specify)	
✓ residential	_	school/playground	Other(specify)
Description of the sampling locations me of this notice.	and types (e.g., soil,	groundwater, indoor air,	soil gas) to the extent known at the
<ul> <li>Description of the sampling locations me of this notice.</li> <li>Influent and effluent samples from</li> </ul>	and types (e.g., soil, <pri>private well/poir</pri>	groundwater, indoor air, nt of entry treatment	soil gas) to the extent known at the system> for PFAS analysis
nfluent and effluent samples from  Contact information related to the pa	<pre><pre>orivate well/poir</pre></pre>	nt of entry treatment	soil gas) to the extent known at the system> for PFAS analysis
Contact information related to the particular Name: Becky Torres	<pre><pre>orivate well/poir</pre></pre>	nt of entry treatment	soil gas) to the extent known at the system> for PFAS analysis
4. Description of the sampling locations ime of this notice. Influent and effluent samples from Contact information related to the particular Name:  Becky Torres Street Address: 1 Cooleyville Road Sity/Town: Shutesbury	<pre><pre>orivate well/poir</pre></pre>	nt of entry treatment	soil gas) to the extent known at the system> for PFAS analysis

# TABLE 1

60 Leverett Road Shutesbury, Massachusetts RTN 1-21340

Last Updated: 3/1/2023 (Dackson

Parameter	Date	Type	Sample ID	PFHnA	in	ulated PF	AS Compo	unds (ng/		
Canal Continuity	2000	adkı		PHHPA	PFHXS	PFOA	PFNA	PFOS	PFDA	PFAS6
Sample Location/10	MassDE	P MCP Method	1 GW-1 Criteria	SM	514	100	SN	NS	261	20
60 Leverett Road	8/4/21 2/9/23	DW	60-LR-KIT 23B1451-01	<0.50	A0.58	10.00	~1.09	0.642 1	51 BS	NO.
MassDEP MCP - Massachusetts Den										

NS - No Standard

<xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.
"-" - Sample not analyzed or analysis not provided
Boxed/Bold values indicate exceedance of GW-1 standards
Results presented in nanograms per liter (ng/L)
PFAS - Per- and Polyfluoroalky! Substances
J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.
Only PFAS with results above RL are shown above
INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment</p>



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Richard Strangman, Jr. 87 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 87 Leverett Rd, Shutesbury RTN 1-21340

Dear Mr. Strangman:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 87 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 27, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)



## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

1	-	21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site related	to this Notice	and Release Tracking I	Number (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to the follo	owing party:		
Name: Richard Strangman, Jr.			
Street Address: 87 Leverett Rd			
City/Town: Shutesbury	_ Zip Code:	01072	
C. This notice is being given to inform its	recipient (the	party listed in Section B	3):
1. That environmental sampling will be	e/has been cor	nducted at property owned	by the recipient of this notice.
✓ 2. Of the results of environmental san	npling conducte	ed at property owned by tr	ne recipient of this notice.
<ul> <li>3. Check to indicate if the analytical r</li> </ul>		and the second s	checked, the analytical results from
the environmental sampling must be	attached to this	s notice.)	
D. Location of the property where the envi	ronmental sar	mpling will be/has been	conducted:
Street Address: 87 Leverett Rd			
City/Town: Shutesbury	_ Zip Code:	01072	
2. MCP phase of work during which the samp	oling will be/has	s been conducted:	
✓ Immediate Response Action	☐ Phas	e III Feasibility Evaluation	1
Release Abatement Measure		se IV Remedy Implementa	
Utility-related Abatement Measure Phase I Initial Site Investigation		se V/Remedy Operation S -Temporary Solution Operation	ration, Maintenance and Monitoring
Phase II Comprehensive Site Assessm		r	
		(specify)	
<ol> <li>Description of property where sampling wiresidential ☐ commercial</li> </ol>	industrial	School/playground	Other
E residential Commercial	Illuusulai		(specify)
Description of the sampling locations and time of this notice.	types (e.g., soi	l, groundwater, indoor air,	2.7.000.00
Influent and effluent samples from <pr< td=""><td>rivate well/no</td><td>oint of entry treatment</td><td>system&gt; for PEAS analysis</td></pr<>	rivate well/no	oint of entry treatment	system> for PEAS analysis
	read from pe	on only a dament	oyotoma tor 1 710 analysis
E. Contact information related to the party	providing this	notice:	
Contact Name: Becky Torres			
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code:	01072	
Telephone: (413) 572-3227	Email: to	wnadmin	

87 Leverett Koad Shutesbury, Massachusetts 87 Leverett Road Sample Location/ID Parameter: KFN 1-21340 8/11/21 2/16/23 PFHDA PFHXS Regulated PFAS Compounds (ng/L) PFOA PENA 1.23 F 10.00 1.23 - 10.00 0.592 1 PFDA PFAS6 Non-Regulated PFAS Compounds

TABLE

Summary of flow-POET Analytical Results

NassBEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan, Effective 04/25/2014 and updates trailed indicates property has POET Installed

0.692 3

NS - No Standard

<xx indicates compound was not reported above laboratory firsts, Reporting tirnt (Rt.) provided:</p>
? - Sample not analyzed or analysis not provided;
Eoxed/Bolt values indicate exceedance of GNL 1. Standards
Results presented in nanograms per lifer (ng/L)
PRAS - Per- and Phyl/fuorpaikly Substances
3 - Vetue reported above the MDL but batow the Rt. value not included in the PFA56 calculation.
Only PFAS with results above Rt. are shown above
INF - Influent; DW - Drinking Well; POET: - Peint of Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 13, 2023

Jim Henry 91 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 91 Leverett Rd, Shutesbury RTN 1-21340

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dualvessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that Jqualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 91 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 24, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)



## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

**BWSC123** 

This Notice is Related to: Release Tracking Number

## MPLING 1 - 21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

	lated to this Notice	and Release Tracking Number (provided above):
Street Address: 42 Leverett Road		
City/Town: Shutesbury	Zip Code:	01072
This notice is being provided to the	e following party:	
Name: Jim Henry		
Street Address: 91 Leverett Rd		
City/Town: Shutesbury	Zip Code:	01072
. This notice is being given to info	rm its recipient (the	party listed in Section B):
. This flotter is being given	will be/has been co	nducted at property owned by the recipient of this notice.
1. That environmental sampling		ted at property owned by the recipient of this notice.
<ul><li>2. Of the results of environment</li></ul>	ntal sampling conduc	ted at property owned by the recipient of this notice.
3. Check to indicate if the ana	lytical results are atta	ached. (If item 2. above is checked, the analytical results from
the environmental sampling m	iust be attached to th	is notice.)
D. Location of the property where t	he environmental sa	ampling will be/has been conducted:
Street Address: 91 Leverett Rd		04070
011)	Zip Code:	
<ol><li>MCP phase of work during which t</li></ol>	he sampling will be/h	as been conducted:
Immediate Response Action	I I Ph	ase III Feasibility Evaluation lase IV Remedy Implementation Plan
Release Abatement Measure		V/Pomody Operation Status
Utility-related Abatement Meas Phase I Initial Site Investigation	= -	ase Wikemedy Operation Operation, Maintenance and Monitoring
Phase II Comprehensive Site A	Assessment Of	her(specify)
3. Description of property where sar	npling will be/has bee	sh conducted.    School/playground Other
		(specify)
Description of the sampling location	ons and types (e.g.,	soil, groundwater, indoor air, soil gas) to the extent known at the
time of this notice.		/point of entry treatment system> for PFAS analysis
Influent and effluent samples t	rom <private td="" well<=""><td>point of chity trouting and</td></private>	point of chity trouting and
	WIN HALL	
E. Contact information related to t	he party providing t	this notice:
Contact Name: Becky Torres		
Street Address: 1 Cooleyville Road		04070
City/Town: Shutesbury	Zip Co	
Telephone: (413) 572-3227	Email	townadmin Page 1 of 2

Revised: 5/30/2014 Page 1 of 2

## TABLE 1

91 Leverett Road Shutesbury, Massachusetts

RTN 1-21340

Last Updated: 2/27/2023 (Decision

Daramotor	Sampling	Location	e-male to		Reg	gulated PF	AS Compo	unds (ng/	5	
TOLONICACI	Date	Type	orandupe	PFHpA	PFHxS PFOA	PFOA	PENA	PFOS	PFDA	PFAS6
Sample Location/ID	M	assDEP MCP Met	hod 1 GW-1 Criteria	SN	SN	SN	SN	SR	SN	20
Of I awarest Road	8/5/21	WD	91-LR-KIT	<1,87	0.784 3	0.858 J	<1.87	<1.87	<1.87	ND
20 CO	2/16/23	DW	2382128-01	<0.96	<0.87	<1.0	<0.89	<0.73	<0.93	ND
MassDEP MCP - Massachusetts Departi	ment of Enviro	nmental Protecti	on Massachusetts Co	ntingency	Plan Effecti	ve 04/25/2	014 and up	dates		

J:\S\S2190 Shutesbury Peer Review\FD PFAS 2022\Data\Individual Tables\IndividualFiles.xlsx

NS - No Standard

<sup>&</sup>lt;xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided. "-" - Sample not analyzed or analysis not provided Boxed/Bold values indicate exceedance of GW-1 standards Results presented in nanograms per liter (ng/L) PFAS - Per- and Polyfluoroalkyl Substances J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation. Only PFAS with results above RL are shown above INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment</p>



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Robin Marie King-Franklin 94 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 94 Leverett Rd, Shutesbury RTN 1-21340

Dear Ms. King-Franklin:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 94 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on March 7, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres J Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

## Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

### BWSC123

This Notice is Related to: Release Tracking Number

## 21340

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): 1. Street Address: 42 Leverett Road City/Town: Shutesbury 01072 Zip Code: B. This notice is being provided to the following party: 1. Name: Robin Marie King-Franklin Street Address: 94 Leverett Rd City/Town: Shutesbury 01072 Zip Code: C. This notice is being given to inform its recipient (the party listed in Section B): That environmental sampling will be/has been conducted at property owned by the recipient of this notice. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 94 Leverett Rd City/Town: Shutesbury Zip Code: 01072 2. MCP phase of work during which the sampling will be/has been conducted: Immediate Response Action Phase III Feasibility Evaluation Release Abatement Measure Phase IV Remedy Implementation Plan Utility-related Abatement Measure ☐ Phase V/Remedy Operation Status ■ Phase I Initial Site Investigation Post-Temporary Solution Operation, Maintenance and Monitoring ☐ Phase II Comprehensive Site Assessment □ Other (specify) Description of property where sampling will be/has been conducted: ✓ residential commercial ☐ industrial school/playground Other 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road City/Town: Shutesbury 01072 Zip Code:

Email: townadmin

Revised: 5/30/2014

Telephone: (413) 572-3227

94 Leverett Road Shutesbury, Massachusetts RTN 1-21340

Last Updated: 3/15/2023 (3.Libby)

Parameter	Sampling	Location	Sample ID		Reg	ulated P	AS Comp	ounds (ng.	(1)	
	Date	Type	The second	PFHDA	PFHXS PFOA PENA	PFOA	PENA	PFOS	PEDA	DEASS
Sample Location/ID	M	assDEP MCP M	ethod 1 GW-1 Criteria	S.M	SR	SM	SM	7.00	780	20
94 I pyerest Road	ECUCIECIC	DW	10 300CBCL	10000		l			100	4.4
5 1 mm 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1	elentenen	200	10-0667007	80.90	1870>	56.03	50.83	2.4	78.05	2.4

Process Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates

NS - No Standard

<sup>&</sup>lt;xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.</p>
"-" - Sample not analyzed or analysis not provided
Boxed/Bold values indicate exceedance of GW-1 standards
Results presented in nanograms per liter (ng/L)
PFAS - Per- and Palyfluoroalkyl Substances

J - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation. Only PFAS with results above RL are shown above INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment

File Cope



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Mark Wightman 113 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 113 Leverett Rd, Shutesbury

RTN 1-21340

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 113 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 28, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusettscertified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)



## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

1	-	21340	

## NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A The address of the disposal site re	elated to this Notice	and Release Tracking Number (provided above):
Street Address: 42 Leverett Road		
	= 0.1	01072
City/Town: Shutesbury	Zip Code:	01072
B. This notice is being provided to th	e following party:	
Name: Mark Wightman		
Street Address: 113 Leverett Rd		
	Zin Code:	01072
City/Town: Shutesbury	Zip Code:	01072
C. This notice is being given to infor	m its recipient (the	party listed in Section B):
1. That environmental sampling	will be/has been co	nducted at property owned by the recipient of this notice.
2. Of the results of environmen	tal sampling conduct	ted at property owned by the recipient of this notice.
_		
<ol> <li>Check to indicate if the analythe environmental sampling me</li> </ol>	yucar results are atta ust be attached to thi	ached. (If item 2. above is checked, the analytical results fron is notice.)
Street Address: 113 Leverett Rd  City/Town: Shutesbury		onting will be/has been conducted:
2. MCP phase of work during which th		as been conducted: ase III Feasibility Evaluation
✓ Immediate Response Action □ Release Abatement Measure	☐ Pha	ase IV Remedy Implementation Plan
Utility-related Abatement Measu	re Pha	ase V/Remedy Operation Status st-Temporary Solution Operation, Maintenance and Monitoring
☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site As		ner
		(specify)
<ol> <li>Description of property where sample of property where sampl</li></ol>		school/playground Other
Presidential Gorinion		(specify)
4. Description of the sampling location	ns and types (e.g., so	oil, groundwater, indoor air, soil gas) to the extent known at th
time of this notice.	m -nrivate well/r	point of entry treatment system> for PFAS analysis
influent and efficient samples fro	Jili Sprivate Well/	John of Gray accument Systems 18. 1 . 1 to assure
E. Contact information related to the	party providing th	is notice:
Contact Name: Becky Torres	F, F3	
Street Address: 1 Cooleyville Road		
City/Town: Shutesbury	Zip Cod	
Telephone: (413) 572-3227	Email:	townadmin

Revised: 5/30/2014 Page 1 of 2



TABLE 1 113 Leverett Road Shutesbury, Massachusetts RTN 1-21340

Last updates: 3/9/2023 (J.Libby)					1						Non-Beaulated DEAC Compounds
	Sampling	1			Re	gulated PP	AS Compo	ds (ng/	2		contract respondent to the company to the
Parameter	Date	Location Type	Sample ID	PFMDA	PFHXS	XS PFOA PFNA	PFNA	PFOS	PFDA	PFAS6	PFBS
	2000					-	100	200	200	30	240
Comments I notation / WPA		ASSESSED MCP MATERIAL	1 CW-1 Criteria	200	100	700	500	202	12.50	02	
Sample Location/ 1D		SOSOULT PACE PRODUCT	2000							1000	177
4 4 D Lanceste Donnel	SCHOLARIC	DW	2382165-01	N8 02	- CO: 100	1.53		1.6.1		0	1.0.1
The second secon			The second secon								

113 Leverett Road

27.19/2023

Wassptg N.O. - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 13, 2023

Mark Wightman 117 Leverett Rd Shutesbury, MA 01072

Re:

Private Well Sampling 117 Leverett Rd, Shutesbury RTN 1-21340

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 117 Leverett Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 24, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusettscertified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP (w/out enclosures)

## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to: Release Tracking Number

## NOTICE OF ENVIRONMENTAL SAMPLING

21340

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road Zip Code: City/Town: Shutesbury B. This notice is being provided to the following party: Name: Markk Wightman Street Address: 117 Leverett Rd 01072 Zip Code: City/Town: Shutesbury C. This notice is being given to inform its recipient (the party listed in Section B): 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice. 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 117 Leverett Rd 01072 Zip Code: City/Town: Shutesbury MCP phase of work during which the sampling will be/has been conducted: ☐ Phase III Feasibility Evaluation Immediate Response Action Phase IV Remedy Implementation Plan Release Abatement Measure Phase V/Remedy Operation Status Utility-related Abatement Measure Post-Temporary Solution Operation, Maintenance and Monitoring Phase I Initial Site Investigation Phase II Comprehensive Site Assessment □ Other (specify) Description of property where sampling will be/has been conducted: Other school/playground industrial commercial ✓ residential 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the Influent and effluent samples from <private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road 01072 City/Town: Shutesbury Zip Code: Email: townadmin Telephone: (413) 572-3227

Page 1 of 2 Revised: 5/30/2014

117 Leverett Road

Shutesbury, Massachusetts

RTN 1-21340 Last Hodated: 2/27/2023 (Macison)					Regulated P	FAS Compo	1/6u) spun		DEASE
Parameter	Sampling	Location Type Sample ID	Sample ID	РЕНРА	PFHDA PFHXS PFOA PFNA PFOS PFDA CITATION NS NS 20	PFNA	PFOS	MS	20
Sample Location/ID		ASSDEP MCP Metho	d 1 GW-1 Criteria	(10 U	<0.79 <0.91	4.0.81	<0.66	×0.84	200
117 Leverett Road	2382148-01	2/16/2023	DW Decreting	Contingent	y Plan. Effective 04/2	5/2014 and u	pdates		
MassDEP MCP - Massachusetts Dep	artment of En	Wironmental Protect	DOD MASSACII DESCRIPTION						
NS - No Standard	anorted above	laboratory limits, R	teporting Limit (RL	) provided.					

-xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.
 -xx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.
 -x= Sample not analyzed or analysis not provided.
 Boxed/Pold values indicate exceedance of GW-L standards
 Results presented in nanograms per liter (ng/L)
 pFAS. Per and Polyfluoroalkyl Substances.
 - Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.
 E - Result outside of laboratory calibration range. Value is estimated.
 Only PFAS with results above RL are shown above.
 INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment.



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 13, 2023

George & Martha Arvanitis 15 Pelham Hill Rd Shutesbury, MA 01072

Re-

Private Well Sampling 15 Pelham Hill Rd, Shutesbury RTN 1-21340

Dear Mr. and Mrs. Arvanitis:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 15 Pelham Hill Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 24, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# The

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to: Release Tracking Number

# - 21340

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

		e and Release Tracking Number (provided above):
Street Address: 42 Leverett Road		
City/Town: Shutesbury	Zip Code:	01072
B. This notice is being provided to	the following party:	
Name: George & Martha Arvanitis		
2. Street Address: 15 Pelham Hill Ro		
City/Town: Shutesbury	Zip Code:	01072
C. This notice is being given to info	orm its recipient (the	party listed in Section B):
1. That environmental sampling	g will be/has been cor	nducted at property owned by the recipient of this notice.
=		ed at property owned by the recipient of this notice.
_		
<ol> <li>Check to indicate if the anather the environmental sampling n</li> </ol>	alytical results are attac nust be attached to this	ched. (If item 2. above is checked, the analytical results from snotice.)
<ol> <li>Location of the property where t</li> <li>Street Address: 15 Pelham Hill Rd</li> </ol>	ne environmentai sar	mpling will be/has been conducted:
City/Town: Shutesbury	Zip Code:	01072
2. MCP phase of work during which to	ne sampling will be/has	s been conducted:
Immediate Response Action		e III Feasibility Evaluation
☐ Release Abatement Measure ☐ Utility-related Abatement Measure		se IV Remedy Implementation Plan se V/Remedy Operation Status
Phase I Initial Site Investigation	Post-	-Temporary Solution Operation, Maintenance and Monitoring
☐ Phase II Comprehensive Site A	ssessment	
3. Description of property where sam	oling will be/has been	(specify)
☑ residential ☐ comme		School/playground Other
		(specify)
<ol> <li>Description of the sampling locatio time of this notice.</li> </ol>	ns and types (e.g., soil	I, groundwater, indoor air, soil gas) to the extent known at the
Influent and effluent samples from	om <private po<="" td="" well=""><th>pint of entry treatment system&gt; for PFAS analysis</th></private>	pint of entry treatment system> for PFAS analysis
E. Contact information related to the	party providing this	notice:
Contact Name: Becky Torres		
Street Address: 1 Cooleyville Road		
City/Town: Shutesbury	Zip Code:	
Telephone: (413) 572-3227	Email: to	wnadmin

TABLE 1
15 Pelham Hill Road
Shutesbury, Messachusetts
RTN 1-21340
Last Updated: 2/27/2023 (Xuskin)

Parameter	Sampling Location Type	Sample ID		Regula	ted PFA	Compo	spunds (	ng/L)	
	١,	outside and	PFHpA	PFHXS	PFOA PFNA	PENA	PFOS PFDA	PEDA	PFASS
Sample Location/ID	MassDEP MCP Method	1 GW-1 Criteria	5.00	Sil	24	SII	SM	201	20
15 Palham Hill Board	22845.23.04 20.0034	200	I			l	l		200
4 or Periodici Prio Model	1707/6/7 to-2001007	DW.	< 0.66	< 0,54	1.4 1	<0.8%	2.5	< 0.72	2.5
MassDEP MCP - Massach	usetts Department of Environment	all protection Ma	CONTRACTOR AND	and branch or	ancu dia	2000	100	9	

NS: No Standard

«xx indicates compound was not reported above laboratory limits, Reporting Limit (Rt.) provided.

«xx indicates compound was not reported above laboratory limits, Reporting Limit (Rt.) provided.

Boxed/Boid values indicate exceedance of GW-1 standards.

Besuits presented in nanograms per liter (ng/L)

PFAS - Per- and Polyfluoroalkyl Substances.

J. Value reported above the MDL but below the Rt.; value not included in the PFAS6 calculation.

E. Resuit outside of laboratory calibration range. Value is estimated.

Only PFAS with resuits above Rt. are shown above.

INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment. . Effective 04/25/2014 and updates



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 13, 2023

Kenneth Hopkins & Desiree Church 54 Pelham Hill Rd Shutesbury, MA 01072

Re:

Private Well Sampling

54 Pelham Hill Rd, Shutesbury

RTN 1-21340

Dear Mr. Hopkins & Ms. Church:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 54 Pelham Hill Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on February 24, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# The second

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

**BWSC123** 

This Notice is Related to: Release Tracking Number

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

1	-	21340

A. The address of the disposal site relat	ed to this Notice	and Release Tracking	Number (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to the fo	ollowing party:		
Name: Kenneth Hopkins & Desiree Ch	urch		
Street Address: 54 Pelham Hill Rd			
City/Town: Shutesbury	Zip Code:	01072	
C. This notice is being given to inform it	s recipient (the	party listed in Section E	3):
<ul><li>1. That environmental sampling will</li></ul>	be/has been cor	nducted at property owner	d by the recipient of this notice.
2. Of the results of environmental s	ampling conducto	ed at property owned by t	he recipient of this notice
_			checked, the analytical results from
the environmental sampling must b			checked, the analytical results from
D. Location of the property where the en	vironmental sar	mpling will be/has been	conducted:
City/Town: Shutesbury	Zip Code:	01072	
2. MCP phase of work during which the sai	mpling will be/has	s been conducted:	
✓ Immediate Response Action  Release Abatement Measure		e III Feasibility Evaluation se IV Remedy Implement:	
Utility-related Abatement Measure		se V/Remedy Operation S	
☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assess	ment Dothe		ration, Maintenance and Monitoring
I hase it completensive site Assess	ment 🔲 One	(specify)	
3. Description of property where sampling	will be/has been	conducted:	
	☐ industrial	school/playground	Other
Description of the sampling locations an	d types (e.g. soii	aroundwater indeer air	(specify)
time of this notice.	u types (e.g., son	, groundwater, indoor air	, soil gas) to the extent known at the
Influent and effluent samples from <	private well/po	oint of entry treatment	system> for PFAS analysis
E. Contact information related to the part	y providing this	notice:	
Contact Name: Becky Torres Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code:	01072	
Telephone: (413) 572-3227	Email: to		
	_		

TABLE 3

54 Petham Hil Road

Shutesbury, Massachusetts

RTN 1-21340

Last Updated: 7/7//2023 (thicken)

Darmatac	Sampling ;		e mala ta		Regulated PFAS Compounds (n	ed PFA	Compo	) spunc	ng/C	_	Non-Regulated PFAS Compounds
	Date	adde about	On other way	PEHDA PF	DA PEHAS PEOA PENA PEOS PEDA PEASE	PFOA	ANA	PFOS	AG3d	PFAS6	PFHXA
Sample Location/ID	MassD	MassDEP MCP Method 1 GW-1 Criteria 💢 💮	GW-1 Criteria	# (r)	7%	888	9.0	300	36 36	20	20.00
54 Pelham Hil Roski	2382145-01	216/2023	MG	3.6	A	4 +-	A 44.58		100.00	8,0	[.6.]
MASSELL AUM GAUSSELL	menteded stesin	of Environmental	SEAT GOLD CHOSE	Territoria de la constanta	Te Contin	CONC.	Continuonen Dan Effacti		200	201	5 CM DC

Nass DEP McP - Massachusetts, Department of Environmental Protection Massachusetts Contingency Man. Effective 04/25/2014 and updates NS - No Standard

<a href="Assachusetts">Assachusetts</a> Continue Massachusetts Department of Environmental Protection Massachusetts Contingency Man. Effective 04/25/2014 and updates

<a href="Assachusetts">Assachusetts</a> Continue Massachusetts not provided

\*\*\*\* - Sample not analyzed or analysis not provided

\*\*\*\* - Sample not analyzed or analysis not provided

\*\*\*\* - Sample not analyzed or analysis not provided

\*\*\*\* - Sample not analyzed or analysis not provided

\*\*\*\* - Sample not analyzed or analyzed exceedance of GW-1 standards

\*\*\*\* - Sample not analyzed or analyzed exceedance of GW-1 standards

\*\*\*\* - Sample not analyzed or analyzed exceedance of GW-1 standards

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\*\*\*\* - Sample not analyzed or analyzed exceedance of GW-1 standards

\*\*\*\* - No Sample not analyzed or analyzed exceedance of GW-1 standards

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\*\*\*\* - No Sample not analyzed or analyzed exceedance of GW-1 standards

\*\*\*\* - No Sample not analyzed exceedance of GW-1 standards

\*\*\*\* - No Sample not analyzed exceedance of GW-1 standar



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Shutesbury Community Church 6 Town Common Rd Shutesbury, MA 01072

Re:

Private Well Sampling

6 Town Common Rd, Shutesbury

RTN 1-21340

Dear Shutesbury Community Church:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 6 Town Common Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on March 3, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

# 不

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

-	21340
,	

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site related to this Notice and Related To the Notice and Related
A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):     Street Address: 42 Leverett Road
1. Street Address: 42 Levelett Hodd
City/Town: Shutesbury Zip Code: 01072
B. This notice is being provided to the following party:
Name: Shutesbury Community Church
Street Address: 6 Town Common Rd
City/Town: Shutesbury Zip Code: 01072
C. This notice is being given to inform its recipient (the party listed in Section B):
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
<ol> <li>Check to indicate if the analytical results are attached. (If item 2, above is checked, the analytical results from the environmental sampling must be attached to this notice.)</li> </ol>
D. Location of the property where the environmental sampling will be/has been conducted:
Street Address: 6 Town Common Rd
City/Town: Shutesbury Zip Code: 01072
2. MCP phase of work during which the sampling will be/has been conducted:
☑ Immediate Response Action ☑ Phase III Feasibility Evaluation
Release Abatement Measure Phase IV Remedy Implementation Plan Utility-related Abatement Measure Phase V/Remedy Operation Status
Utility-related Abatement Measure ☐ Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation ☐ Post-Temporary Solution Operation, Maintenance and Monitoring
☐ Phase II Comprehensive Site Assessment ☐ Other
3. Description of property where sampling will be/has been conducted:
✓ residential □ commercial □ industrial □ school/playground □ Other
(specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the
time of this notice.
Influent and effluent samples from <private entry="" of="" point="" system="" treatment="" well=""> for PFAS analysis</private>
E Contest information related to the contest of the
E. Contact information related to the party providing this notice:  Contact Name: Becky Torres
Street Address: 1 Cooleyville Road
City/Town: Shutesbury Zip Code: 01072
Telephone: (413) 572-3227 Email: townadmin

Revised: 5/30/2014

TABLE

6 Town Common Road Shutesbury, Massachusetts RTM 1-21340

Last Updated: 3/9/2023 (3,11bby)

Parameter	. •	Cross Th		Regulat	ed PFAS	lated PFAS Compounds (1	Hands (T	(7/8)	-
	Date Committee	The State of the S	FHDA	PPHXS	PFOA	PFNA	SOH	PFDA	PEMDA PINKS PFOA PFNA PFOS PFDA PFASE
Sample Location/ID	Mass DEP HCP Method 1, GW-1, Criteria		9	970	8	89	Z	88	30
6 TOWN Containon Read	2/16/2023 BW	2382166-01	S8.00	25. 55.	1 1 3	111111	0.82		2.171
Machine MCD . Researchment	The Court of the Party of the Court of the C	The state of the s		***************************************					

RassbEF RGP - Researchusetts Department of Environmental Protection Messanthusetts Confingency Wan, Effective 04/25/2014 and updates 48 - Standards compound was not reported above laboratory limits, Reporting Limit (RL) provided.

\*\*\*\* As Standards compound was not reported above laboratory limits, Reporting Limit (RL) provided.

\*\*\*\* Sample not analyzed or analysis not provided 
Boxel-fillod has broked exceedance of GWP. 1 standards

\*\*\*\* Sample not analyzed or analyzed to provided.

\*\*\*\* Sample not analyzed or analyzed or analyzed by any analyzed or analyzed analyzed or analyzed analyzed or analyzed or analyzed or analyzed or analyzed or analyzed or analyzed analyzed or analyzed analyzed or analyzed analyzed or analyzed analyzed or analyzed or analyzed analyzed or analyzed or analyzed analyzed analyzed or analyzed analyzed or analyzed analyzed analyzed or analyzed analyzed or analyzed analyzed analyzed or analyzed analyzed analyzed or analyzed analyzed analyzed analyzed or analyzed analyz



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Kathryn & Gregory Steve 8 & 10 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling

8 & 10 Wendell Rd, Shutesbury

RTN 1-21340

Dear Mrs. and Mr. Steve:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 8 and 10 Wendell Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on March 1, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours.

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

# 本

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## **BWSC123**

This Notice is Related to: Release Tracking Number

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

1 -	21340	
-----	-------	--

A. The address of the disposal site related	d to this Notice	a and Polosee Treetie	y riaii
Street Address: 42 Leverett Road	a to this Notic	e and Release Tracking	g Number (provided above):
			-
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to the foll	owing party:		
Name: Kathryn & Gregory Steve			
2. Street Address: 8 and 10 Wendell Rd			
City/Town: Shutesbury	_ Zip Code:	01072	
C. This notice is being given to inform its	recipient (the	party listed in Section	R)·
<ul> <li>1. That environmental sampling will be</li> </ul>			
2. Of the results of environmental same			od by the recipient of this notice.
3. Check to indicate if the analytical return the environmental sampling must be a	esults are attac	ched. (If item 2. above is	s checked, the analytical results from
the environmental sampling must be a	attached to this	notice.)	
D. Location of the property where the envir	ronmental san	npling will be/has been	conducted:
Street Address: 8 and 10 Wendell Rd			
City/Town: Shutesbury	_ Zip Code:	01072	
2. MCP phase of work during which the samp		heen conducted:	
Immediate Response Action		III Feasibility Evaluation	
Release Abatement Measure	■ Phase	e IV Remedy Implement	ation Plan
Utility-related Abatement Measure Phase I Initial Site Investigation	☐ Phase	V/Remedy Operation §	Status
Phase II Comprehensive Site Assessme	ent Other	emporary Solution Ope	eration, Maintenance and Monitoring
		(specify)	
Description of property where sampling will		onducted:	
residential ☐commercial ☐	industrial	school/playground	Other
<ol> <li>Description of the sampling locations and ty time of this notice.</li> </ol>	pes (e.g., soil,	groundwater, indoor air.	(specify)
Influent and effluent samples from <pri></pri>	vate well/poi	nt of entry treatment	system> for PFAS analysis
Contact information of the contact information o			
Contact information related to the party processor Name: Becky Torres	roviding this n	otice:	
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	71. 6	04070	
Felephone: (413) 572-3227	Zip Code:	01072	
	Email: tow	naumin	

Revised: 5/30/2014

TABLE 1
8 & 10 Wendell Road
Shutesbury, Messachusetts
RTN 1-21340
Last Updaket: 3/9/2023 (3.Libby)

Date	Bell I Inches	-	DELLANA	BELL	-	-			
ample Location/ID Mas	SOFP MCP Mothod	1 Call of Assessment		PERKS PEOA PENA PEOS PEDA	PPOA	PFNA	5046	PFDA	PFAS6
& 10 Wendell Road 3747/30/38	DOLLAR TO THE PARTY OF THE PART	T GW - L CHEFTS	100	. SIZ	MS	115	805	382	20
NechEd March March 11 11 11 11 11 11 11 11 11 11 11 11 11	ON	2382202-01	50,97	50,70	1.3.1	48 00	1 4 4	1000	

No. - No Standard

- xx Indextee compound was not reported above laboratory limits, Reporting Limit (RL) provided.

- x standard analyzed or analysis not provided

- x standard analyzed or analysis not provided

Boxee/Beld values indicate exceedance of GW-1 standards

Results presented in nanograms per liker (ng/L)

PFAS - Per - and Pelythoroalkyl Substances

- Value reported above the MDL but below the RL; value not included in the PFASS calculation,

- Result outside of laboratory calibration range, Value is estimated.

Only PFAS with results above RL are shown above

INF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Russell Wallack Katherine Kellman 16 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling 16 Wendell Rd, Shutesbury RTN 1-21340

Dear Mr. Wallack & Ms. Kellman:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 16 Wendell Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 28, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at [413] 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

# T

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

# **BWSC123**

This Notice is Related to: Release Tracking Number

# - 21340

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

			TOOK.
A. The address of the disposal site related	to this Notice	and Release Tracking N	Number (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	_ Zip Code:	01072	
B. This notice is being provided to the folk	owing party:		
Name: Russell Wallack & Katherine Kellm	nan	_	
Street Address: 16 Wendell Rd			
City/Town: Shutesbury	_ Zip Code:	01072	
C. This notice is being given to inform its	recipient (the	party listed in Section B	):
1. That environmental sampling will be	has been cor	ducted at property owned	by the recipient of this notice.
2. Of the results of environmental same	nolina conducte	ed at property owned by the	ne recipient of this notice
_			
<ol> <li>Check to indicate if the analytical returns the environmental sampling must be a</li> </ol>			checked, the analytical results from
D. Location of the property where the envir	ronmontal car	maling will be thee been	
Street Address: 16 Wendell Rd	onnentai sai	npling will be/has been	conducted:
	7: 0 1	04070	
City/Town: Shutesbury	_ Zip Code:	01072	
2. MCP phase of work during which the samp	_		
<ul> <li>✓ Immediate Response Action</li> <li>☐ Release Abatement Measure</li> </ul>		e III Feasibility Evaluation se IV Remedy Implementa	
Utility-related Abatement Measure	☐ Phas	se V/Remedy Operation S	tatus
<ul> <li>□ Phase I Initial Site Investigation</li> <li>□ Phase II Comprehensive Site Assessment</li> </ul>			ration, Maintenance and Monitoring
	_	(specify)	
Description of property where sampling will			
residential ☐ commercial	industrial	school/playground	Other(specify)
4. Description of the sampling locations and t	ypes (e.g., soi	, groundwater, indoor air,	
time of this notice.			
Influent and effluent samples from <pr< td=""><td>ivate well/po</td><td>oint of entry treatment</td><td>system&gt; for PFAS analysis</td></pr<>	ivate well/po	oint of entry treatment	system> for PFAS analysis
E Contact information what the the			
E. Contact information related to the party party party in Contact Name: Becky Torres	providing this	notice:	
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code:	01072	
Telephone: (413) 572-3227	Email: to		

TABLE 1 16 Wendell Road Shutesbury, Massachusetts RTN 1-21340 Last Updated: 3/9/2023 (3.Ubby)

Darameter	Sampling	ampling toreston Dura Commis TO	Cumula III		Regula	Regulated PFAS Compounds (ng/L)	S Compe	) spunc	19/F)		Non-Regulated PFAS Compounds
in a second	Date	add: iinneann		PFHPA PFHS PFOA PFNA PFOS PFDA PFAS6	PFHoS	PFOA	PFNA	PFOS	PFDA	PFAS6	9CI-PE3ONS
Sample Location/ID	2	MassDEP MCP Method 1 GW-1 Criteria	1 GW-1 Ortterla	115	SII	BB	821 83	129	WS.	20	115
6 Wendell Road	2/16/2023	DW	2382170-01	CO:17	50,03	<0.60	< 0.71	0.99 ]	40,00	3.0	0.743
MassDEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates NS - No Standard	usetts Departi	ment of Environment	tal Protection Mas	sachusett	is Conting	tency Plan	n. Effect	we 04/2	5/2014	apdn pue	59
<xx compound="" indicates="" was<br="">"-" - Sample not analyzed or</xx>		not reported above laboratory limits. Reporting Limit (RL) provided. analysis not provided	y limits. Reporting	Limit (R	L) provide						
Boxed/Bold values indicate ex Results presented in nanogran	8 =	ceedance of GW-1 standards ns per liter (ng/L)									
PFAS - Per- and Polyfluoroalky 1 - Value reported above the I		// Substances MDI hat below the SI value not included in the DEASS colouistion	not included in the	DEACE.	administra.						
Result outside of laboratory colloration range. Value is estimated, only PFAS with results above RL are shown above.	ratory calibrat yore RL are sh	y calbration range. Value is R. are shown above	estimated.	200	decisedo						
INF - Influent: DW - Drinking	king Well; POI	Well; POET - Point-of-Entry Treatment	reatment								



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Greg Steve 20 & 24 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling

20 & 24 Wendell Rd, Shutesbury

RTN 1-21340

Dear Mr. Steve:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the treatment system located at 20 & 24 Wendell Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water samples on March 7, 2023 to monitor you well for PFAS. The samples were submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS6 are present in your well water. Since the PFAS6 concentrations does not exceed 20 ppt, the Town will contact you to install a single vessel POET to remove PFAS from your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Blcks 10

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)
MassDEP, Bureau of Waste Site Cleanup (w/out enclosures)

TABLE 1

20 R 2a Wendell Road
Shutesbury, Massachusetts
RTN 1-21346
Last Updated: 3/15/2023 (1 Lbby)

	Sampling		Camada ID		Regulat	ed PFA	S Compo	) spuned	(1/Er		Mon-Regulated PFAS Compounds
a de dimpolot		coresions (Abe	201195	PFHDA	PFHXS PFOA PFNA PFOS PFDA P	PFOA	VENA	SOdd	PFDA	PFAS6	PF85
Sample Location/ID	*ಗa5sD£	lassDEP MCP Matho	od 1 GW+t Criteria	:K9:	\$\$.	24% (**	N).	NS.	25	70	284
20 & 24 Wendali Road	2/17/2023	MG	2382206-01	(新版) 16.00 L	588.80% L	2.5	38.9%	(6.00), 6.1 K	(6.0%)	4.4	1,23
Massage MCP - Massage base	a je mentipeta je z	ancementa	ital Orgipefino Massac	tassachuseus Contingency Plan - Effective 34/25/2014 and unitabes	STREET, STREET	o Otan S	Total Control	CACCAC	Mac VI	30,42,17.11	

Massich M.P. Massachusetts Department brightering Protection Massachusetts Department brightering Protection Massachusetts Department brightering Protection Massachusetts Department by M.S. No Stantide not analysts on the posted above laboratory limits, Reporting Limit (RL) provided <a href="#"></a> Sample not analysts of analysis and provided Boxed/Baild values indicate, exceedance of GW-L standards Results presented in paragrams per liter (ng/L) PRAS-Per- and Polyfluoroalikyl Substances

FAS-Per- and Polyfluoroalikyl Substances

J. Velue responsed above the MDL but below the AL; value not included in the PFAS's calculation.

E. Result optiside of laboratory calbration, range, Value is estimated.

Only PFAS with results above NL are shown above.



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 13, 2023

Anne Ward Jeff Landsdell 27 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling 27 Wendell Rd, Shutesbury RTN 1-21340

Dear Ms. Ward & Mr. Landsdell:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 27 Wendell Rd as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 24, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at [413] 259-1214 if you have any questions regarding this information.

Very truly yours,

## Town of Shutesbury

Becky Torres Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)



# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

**BWSC123** 

This Notice is Related to: Release Tracking Number

	_		_
1	1-	21340	

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

	The address of the disposal site relate	d to this Notice	and Release Tracking I	Number (provided above):
1.	Street Address: 42 Leverett Road			
	City/Town: Shutesbury	Zip Code:	01072	
В.	This notice is being provided to the fo	llowing party:		
1.	Name: Anne Ward & Jeff Landsdell			
2	Street Address: 27 Wendell Rd			
2.			2002	
	City/Town: Shutesbury	Zip Code:	01072	
c.	This notice is being given to inform its	recipient (the	party listed in Section E	3):
	✓ 1. That environmental sampling will	be/has been cor	nducted at property owner	d by the recipient of this notice.
	2. Of the results of environmental sa	empling conduct	ed at property owned by t	he recinient of this notice
	<ul> <li>3. Check to indicate if the analytical</li> </ul>			checked, the analytical results from
	the environmental sampling must be	e attached to this	s notice.)	
D.	Location of the property where the en-	vironmental sa	mpling will be/has been	conducted:
	Street Address: 27 Wendell Rd			
	City/Town: Shutesbury	Zip Code:	01072	
2	MCP phase of work during which the san	npling will be/ha	s been conducted:	
-	✓ Immediate Response Action		se III Feasibility Evaluation	n
	Release Abatement Measure	☐ Pha	se IV Remedy Implement	ation Plan
	Utility-related Abatement Measure Phase I Initial Site Investigation		se V/Remedy Operation S	Status ration, Maintenance and Monitoring
	Phase II Comprehensive Site Assessi	Name of the last o		ration, maintenance and monitoring
		_	(specify)	
3.	Description of property where sampling v	will be/has been	conducted:	
		industrial	school/playground	Other(specify)
	Description of the sampling locations and	d tunes (e.g. se	il aroundwater indoor air	
	ne of this notice.	u types (e.g., so	ii, groundwater, indoor aii	, soil gas) to the extent known at the
	ifluent and effluent samples from <	private well/p	oint of entry treatmen	t system> for PFAS analysis
			•	
	Contact information related to the part	y providing this	s notice:	
-	ontact Name: Becky Torres			
	reet Address: 1 Cooleyville Road	7'n Oada	01072	
	ity/Town: Shutesbury	Zip Code	ownadmin	
Te	elephone: (413) 572-3227	Email: 1	umiaulilli	

TABLE 1
27 Wendell Road
Shutesbury, Massachusetts
RTN 1-21340
Last Updated: 2/27/2023 (tacses)

27 Wandali Daad 2202126.01	Sample Location/ID	Parameter Sampling Date	The state of the s
2/16/2023	MassDEP MCP Method	Location Type	
DIA.	d 1 GW-1 Criteria	Sample ID	
<0.86	NS	ренра	
< 0.77	311	Regula	
28.02	115	proa	
V0.80	838	PFOA PFNA	
0.94	105	pends	
< 0.83	SN	npounds (ng/L) A PFOS PFDA	
0.74	20	PFAS6	

MassDEP MCP - Massechusetts Department of Environmental Protection Massachusetts Contingency Plan, Effective 04/25/2014 and updat NS - No Standard

xxx indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.
 xxx - Sample not analyzed or analysis not provided.
 Boxed/Boid values indicate exceedance of GW-1 standards.
 Results presented in nanograms per liter (rg/L).
 PFAS - Per- and Polyfluoroality! Substances.
 x Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.
 E - Result outside of laboratory calibration range. Value is estimated.
 Only PFAS with results above RL are shown above.
 INF - Influent; DW - Drinking Welt; POET - Point-of-Entry Treatment.



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Lori Nichols 45 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling 45 Wendell Rd, Shutesbury RTN 1-21340

Dear Ms. Nichols:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 45 Wendell Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on March 7, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Beck Tours

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to: Release Tracking Number

# NOTICE OF ENVIRONMENTAL SAMPLING

21340 As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road City/Town: Shutesbury 01072 Zip Code: B. This notice is being provided to the following party: 1. Name: Lori Nichols Street Address: 45 Wendell Rd City/Town: Shutesbury 01072 Zip Code: C. This notice is being given to inform its recipient (the party listed in Section B): That environmental sampling will be/has been conducted at property owned by the recipient of this notice. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: Street Address: 45 Wendell Rd City/Town: Shutesbury 01072 Zip Code: 2. MCP phase of work during which the sampling will be/has been conducted: Immediate Response Action ☐ Phase III Feasibility Evaluation Release Abatement Measure Phase IV Remedy Implementation Plan Utility-related Abatement Measure Phase V/Remedy Operation Status Phase I Initial Site Investigation Post-Temporary Solution Operation, Maintenance and Monitoring Phase II Comprehensive Site Assessment Other (specify) Description of property where sampling will be/has been conducted: ✓ residential commercial industrial school/playground Other 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road

01072

Zip Code:

Email: townadmin

Revised: 5/30/2014

City/Town: Shutesbury

Telephone: (413) 572-3227

45 Wendall Road Shutesbury, Massachusetts RTN 1-21340 Last Updated: 3/15/2023 (J.Libby)

Parameter Sampling	Location Type	Sample ID	DELLOA	Regulated PFAS Compounds (ng	ted PFA	Comp	ounds (	ds (ng/L)	
Sample Location/ID M	assDEP MCP Method	1 GW-1 Criteria	NS.	SN	NN	SM	S.F.	N.	20
45 Wendall Road 2/23/2023	DW	23/62/85/4-01	<0.02	18.00	20.05	50.85	< 0.70	RR U.	O D

MassDEP MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updat 4.5 - No Standard - Ax indicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

- "-" - Sample not analyzed or analysis not provided based/Bold values indicate exceptance of GW-1 standards Results presented in annograms per liter (reg/1) FFAS - Per- and Polyfluoroalkyl Substances

- Value reported above the MDL but below the RL; value not included in the PFAS6 calculation.

E - Result outside of laboratory calibration range. Value is estimated.

Only PFAS with results above RL are shown above
NF - Influent; DW - Drinking Well; POET - Point-of-Entry Treatment

Tighe&Bond



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Jen Malcolm-Brown 72 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling 72 Wendell Rd, Shutesbury RTN 1-21340

Dear Ms. Malcolm-Brown:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 72 Wendell Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on March 3, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

**Becky Torres** 

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy: Jeffrey Arps, Tighe & Bond (w/out enclosures)



# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

# **BWSC123**

This Notice is Related to: Release Tracking Number

1	٦.	21340	
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# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site relat	ed to this Notice	and Release Tracking I	Number (provided above):
Street Address: 42 Leverett Road			
City/Town: Shutesbury	Zip Code:	01072	
This notice is being provided to the form     Name: Jen Malcolm-Brown	ollowing party:		
Street Address: 72 Wendell Rd			
City/Town: Shutesbury	Zip Code:	01072	
C. This notice is being given to inform i			
<ul> <li>1. That environmental sampling will</li> </ul>	ll be/has been co	nducted at property owner	by the recipient of this notice.
2. Of the results of environmental s	sampling conduct	ed at property owned by t	he recipient of this notice.
3. Check to indicate if the analytic the environmental sampling must be a sampling m			checked, the analytical results from
D. Location of the property where the en     Street Address: 72 Wendell Rd	nvironmental sa	mpling will be/has been	conducted:
City/Town: Shutesbury	Zip Code:	01072	
2. MCP phase of work during which the sa			
Immediate Response Action		se III Feasibility Evaluation	
Release Abatement Measure Utility-related Abatement Measure		se IV Remedy Implement se V/Remedy Operation S	
☐ Phase I Initial Site Investigation	Pos	t-Temporary Solution Ope	ration, Maintenance and Monitoring
☐ Phase II Comprehensive Site Asses	sment  Oth	er(specify)	
Description of property where sampling	will he/has heen		
✓ residential	_	school/playground	Other(specify)
Description of the sampling locations a time of this notice.	nd types (e.g., so	il, groundwater, indoor air	
Influent and effluent samples from	<pre><pre>cprivate well/p</pre></pre>	oint of entry treatmen	t system> for PFAS analysis
E. Contact information related to the pa	rty providing thi	s notice:	
Contact Name: Becky Torres			
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code		
Telephone: (413) 572-3227	Email: 1	ownadmin	

TABLE 1
72 Wendell Road
5hutesbury, Nassachusetts
RTN 1-21340
Last Updated: 3/9/2023 (J.IJEby)

Barnathan	Sandana P	Sandian The	of the state of		and from	STATE OF THE PERSON	4	or all	(m) (m)	
Parameter	Date	da uonevo		PFHpA	PFHXS	PFOA	PFOA PFNA	PFOS	PFDA	PFAS6
Sample Location/ID	×	INSIDEP MCP Me	thod 1 GW-1 Criteria	SII	MSS	115	115	175	813	20
72 Wendell Road	2/16/2023	DW	2382163-01	149,956 × 1	<0.0386	0.10	60.05	c0.73	00,00	0.00

Massber MCP - Hassedusetts Department of Environmental Protection Massachusetts Contingency Man. Effective 04/25/2014 and updates. No Standard MCP - Hassedusetts Department of Environmental Protection Massachusetts Contingency Man. Effective 04/25/2014 and updates. No Standard MCP - "- " Sample not analyzed or analysis not provided Boxed/Body values indicate exceedance of GW-1 standards. Results presented in management of GW-1 standards.

1 - Value reported above the MOS but below the RL; value mot included in the PFASS calculation.

E - Result ordated order order value from the RL; value mot included in the PFASS calculation.

Golly PFAS with results above RL are shown above. Man is estimated.

Only PFAS with results boxed Rule silven above.

IMF - Influent; DW - Drinking Welf; POET - Point-of-Entry Treatment.



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Mary Lou Ferro 105 Wendell Rd Shutesbury, MA 01072

Re:

Private Well Sampling 105 Wendell Rd, Shutesbury RTN 1-21340

Dear Ms. Ferro:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 105 Wendell Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 28, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

# **BWSC123**

This Notice is Related to: Release Tracking Number

1	]-	21340	
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# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

As required by one own to		and Dalance Treation N	mbor (are ided about)
A. The address of the disposal site related	to this Notice	and Release Tracking N	umber (provided above).
Street Address: 42 Leverett Road			
City/Town: Shutesbury	Zip Code:	01072	
B. This notice is being provided to the fol	lowing party:		
Name: Mary Lou Ferro		_	
Street Address: 105 Wendell Rd			
City/Town: Shutesbury	Zip Code:	01072	
C. This notice is being given to inform its	recipient (the	party listed in Section B)	:
1. That environmental sampling will I	oe/has been cor	ducted at property owned	by the recipient of this notice.
2. Of the results of environmental sa			
_			
<ul> <li>3. Check to indicate if the analytical</li> </ul>	results are atta	ched. (If item 2. above is o	hecked, the analytical results from
the environmental sampling must be	attached to the	s notice.)	
D. Location of the property where the env	rironmental sa	mpling will be/has been o	onducted:
Street Address: 105 Wendell Rd			
City/Town: Shutesbury	Zip Code:	01072	
2. MCP phase of work during which the san	npling will be/ha	s been conducted:	
✓ Immediate Response Action		se III Feasibility Evaluation	
Release Abatement Measure		se IV Remedy Implemental	
☐ Utility-related Abatement Measure ☐ Phase I Initial Site Investigation		se V/Remedy Operation St -Temporary Solution Oper	ation, Maintenance and Monitoring
Phase II Comprehensive Site Assessi	_		
		(specify)	
Description of property where sampling v			Down
residential commercial	industrial	school/playground	Other(specify)
Description of the sampling locations and	throse (a.a. so	il aroundwater indoor air	
time of this notice.	rypes (e.g., so	ii, groundwater, indoor dii,	son gas, to the extent them at the
Influent and effluent samples from <	private well/p	oint of entry treatment	system> for PFAS analysis
E. Contact information related to the part	v providing thi	s notice:	
Contact Name: Becky Torres	, p. c		
Street Address: 1 Cooleyville Road			
City/Town: Shutesbury	Zip Code	: 01072	
Telephone: (413) 572-3227		ownadmin	

TABLE 1

105 Wendell Road Shutesbury, Massachusetts

RTN 1-21340

Non-Regulated PFAS Compounds 0.878.3 PFBS 9CI-PF3ONS 1.2.1 PENDA PEHES PEOA PENA PEOS PEDA PEASE Augustines Rode 27.16/2023 DW 2382168-01 -0.04 -0.55 -0.03 -0.03 -0.733 -0.01 Massachusetts Department of Environmental Protection Massachusetts Contingency Plan. Effective 04/25/2014 and updates Regulated PFAS Compounds (ng/L) 1.071 NassDEP MCP Nethod 1 GW-1 C/Rech 105-WR-RIT Sample 1D Sampling Location WO 8/4/2021 Date Last Updated: 3/27/2023 (Dadson Sample Location/ID Paraneter

NS - No Standard

<xx indicates compound was not reported above laboratory limits. Reporting Limit (RL.) provided.</p>

Packet by Alues indicate exceedance of GW-1 standards

Results presented in nanograms per III et (ng/L)

PFAS. Fer. and Polythocrows per III et (ng/L)

PVAs. Fer. and Polythocrows the MPL is ubstance that the PFASS calculation.

J - Value reported above the MPL but below the RL; value not included in the PFASS calculation.

GNIY FAS with results above RL are shown above

INF - influent; DW - Drinking Well; PCET - Point-of-Ertry Treatment.



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 8, 2023

Mark Dannenhauer & Jane Urban 16 Wilson Rd Shutesbury, MA 01072

Re:

Private Well Sampling 16 Wilson Rd, Shutesbury RTN 1-21340

Dear Mr. Dannenhauer & Ms. Urban:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 16 Wilson Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 21, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

recky loves

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

## **BWSC123**

This Notice is Related to: Release Tracking Number

1	7-	21340
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# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

	d to this Notice	and Release Tracking Number (provided above):
Street Address: 42 Leverett Road		
City/Town: Shutesbury	Zip Code:	01072
B. This notice is being provided to the fol	lowing party:	
Name: Mark Dannenhauer & Jane Urbar	n	
Street Address: 16 Wilson Rd		
City/Town: Shutesbury	Zip Code:	01072
C. This notice is being given to inform its	recipient (the	party listed in Section B):
<ul> <li>1. That environmental sampling will be</li> </ul>	e/has been cor	ducted at property owned by the recipient of this notice.
2. Of the results of environmental sa	mplina conducte	ed at property owned by the recipient of this notice.
_		
the environmental sampling must be		ched. (If item 2. above is checked, the analytical results from notice.)
D 1		
<ol> <li>Location of the property where the env</li> <li>Street Address: 16 Wilson Rd</li> </ol>	ironmentai sar	npling will be/has been conducted:
City/Town: Shutesbury	Zip Code:	01072
2. MCP phase of work during which the same	pling will be/has	been conducted:
✓ Immediate Response Action		e III Feasibility Evaluation
Release Abatement Measure Utility-related Abatement Measure		e IV Remedy Implementation Plan e V/Remedy Operation Status
Phase I Initial Site Investigation	☐ Post	Temporary Solution Operation, Maintenance and Monitoring
☐ Phase II Comprehensive Site Assessn	nent    Othe	
3. Description of property where sampling w	ill he/has heen	(specify)
✓ residential □commercial	industrial	school/playground Other
		(specify)
<ol> <li>Description of the sampling locations and time of this notice.</li> </ol>	types (e.g., soil	, groundwater, indoor air, soil gas) to the extent known at the
Influent and effluent samples from <p< td=""><td>rivate well/po</td><td>pint of entry treatment system&gt; for PFAS analysis</td></p<>	rivate well/po	pint of entry treatment system> for PFAS analysis
E. Contact information related to the party Contact Name: Becky Torres	providing this	notice:
Street Address: 1 Cooleyville Road		
City/Town: Shutesbury	Zip Code:	01072
Telephone: (413) 572-3227	Email: to	

Revised: 5/30/2014

TABLEX

16 Wilson Road Shuteshury, Massachusetts RTN 1-21340

	PFASG	20	÷.	
(1)	PFDA	515		
Gu) spun	PFOS	-0.2	() () () ()	0.993
AS Compo	PFNA	12.5	4. 3.	
ulated PF.	S PEOA PENA PEOS PEDA PEA	130	78.97.	0.97.)
Res	PFMXS	43	\$ 100 m	30.34
	PFHDA	353	85/64	-33,655
	ng toxanon sample in	DEP MCP Met	FIW 16-W1LSON-KIT	DW 2381452-01
	Sampling	Mas		2/9/23
Last Updated; 2/1/2023 (Dadach)	Parameter		77 January addition	16 Wilson Road

Massage MCP - Massachusetts Department of Environmental Protection Massachusetts Contingency Man, Effective 84/25/2014 and updates #S ~ #o Standard

-xxx tudicates compound was not reported above laboratory limits, Reporting Limit (RL) provided.

-xxx tudicates compound was not reported above laboratory limits, Reporting Limit (RL) provided Boxed/Bold visitos limitotie axxeedence of GW-1 standards Results presented in parograms for liter (ng/1) page, "ret sind Polyflucovally! Eubstances of the RL, when not included in the pressection of the page of above the ADI Limit below the RL, when not included in the pressection only IRAE with results above RL are shown above and the FL pullent; DW brinking Well; Poetr - Point - G-Entry Treatment



Shutesbury Select Board P.O. Box 276 Shutesbury MA 01072 413.259.1214 selectboard@shutesbury.org

March 9, 2023

Katarina Catalano Mike Owen 21 Wilson Rd Shutesbury, MA 01072

Private Well Sampling 21 Wilson Rd, Shutesbury RTN 1-21340

Dear Ms. Catalano & Mr. Owen:

Private well monitoring in the vicinity of the Shutesbury Fire Station located at 42 Leverett Road in Shutesbury has shown impacts from per- and polyfluoroalkyl substances, or PFAS, in the drinking water samples of some residences. The Town is monitoring all homes within 500 feet of any home with a detection and installing point-of-entry treatment (POET) systems, consisting of granular activated carbon (GAC), in homes with PFAS detections. Homes with PFAS6 concentrations below 20 nanograms per liter (ng/L, or parts-per-trillion (ppt)) will have a single-vessel POET system installed and homes with PFAS6 exceeding 20 ppt will receive a dual-vessel POET system. Homes with no PFAS6 detections will continue to be monitored on a semi-annual basis. Please note that J-qualified results are not considered detections for purposes of POET installation.

Enclosed is a copy of the laboratory analytical results for the water samples collected from the private well at 21 Wilson Rd. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP). Tighe & Bond personnel collected the residential well water sample on February 27, 2023 to monitor your water for PFAS. The sample was submitted to Pace Analytical Laboratory (Pace) of East Longmeadow, Massachusetts, a Massachusetts-certified environmental laboratory, for per- and polyfluoroalkyl substances (PFAS) analysis.

A copy of the laboratory analytical results for the above-referenced samples are attached to this letter. Analytical results have been compared to Massachusetts Drinking Water Maximum Contaminant Levels (MMCLs, 310 CMR 22.00) and Massachusetts Contingency Plan Method 1 GW-1 Groundwater Standard (MCP, 310 CMR 40.0974) of 20 ppt for PFAS6. These water quality results indicate that PFAS are not present in your well water. A data summary table is attached that shows the data in a table format; the PFAS6 compounds are shaded gray on the table.

Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements. Please call the undersigned at (413) 259-1214 if you have any questions regarding this information.

Very truly yours,

Town of Shutesbury

Becky Torres

Town Administrator

Enclosures:

BWSC-123

Summary Data Table Laboratory Report

Copy:

Jeffrey Arps, Tighe & Bond (w/out enclosures)

# Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

## BWSC123

This Notice is Related to: Release Tracking Number

1	-	21340	
1	-	21340	

# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan A. The address of the disposal site related to this Notice and Release Tracking Number (provided above): Street Address: 42 Leverett Road \_ Zip Code: 01072 City/Town: Shutesbury B. This notice is being provided to the following party: Name: Katrina Catalano & Mike Owen Street Address: 21 Wilson Rd Zip Code: 01072 City/Town: Shutesbury C. This notice is being given to inform its recipient (the party listed in Section B): That environmental sampling will be/has been conducted at property owned by the recipient of this notice. Of the results of environmental sampling conducted at property owned by the recipient of this notice. 3. Check to indicate if the analytical results are attached. (If item 2, above is checked, the analytical results from the environmental sampling must be attached to this notice.) D. Location of the property where the environmental sampling will be/has been conducted: 1. Street Address: 21 Wilson Rd Zip Code: 01072 City/Town: Shutesbury MCP phase of work during which the sampling will be/has been conducted: Release Abatement Measure
Utility-related Abatement Measure
Phase I Initial Site Investigation
Phase II Comprehensive Comprehens Phase III Feasibility Evaluation Phase IV Remedy Implementation Plan ☐ Phase V/Remedy Operation Status Post-Temporary Solution Operation, Maintenance and Monitoring ☐ Phase II Comprehensive Site Assessment ☐ Other \_ (specify) Description of property where sampling will be/has been conducted: residential ☐commercial ☐industrial ☐school/playground Other (specify) 4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice. Influent and effluent samples from <private well/point of entry treatment system> for PFAS analysis E. Contact information related to the party providing this notice: Contact Name: Becky Torres Street Address: 1 Cooleyville Road 01072 City/Town: Shutesbury Zip Code: Email: townadmin Telephone: (413) 572-3227

TABLE 1 21-23 Wilson Road Shutesbury, Massachusetts ETH 1-21340

PFDA PFASG Regulated PFAS Compounds (ng/L) 
 Framework
 Date
 Type
 Sample Location/ID
 PFNA
 PF Sample ID Location Sampling Last 155dated: 2727/2823 (3384ser)

\*\*\* No Standard \*\*\*

\*\*\* As Standard \*\*\*

\*\*\* As Standard \*\*\*

\*\*\* Sample not analyze for analysis for provided \*\*

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**APPENDIX D** 

February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: Shutesbury, Massachusetts 1 Cooleyville Rd

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B1534

Enclosed are results of analyses for samples as received by the laboratory on February 13, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

### Table of Contents

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Sample Preparation Information	6
QC Data	7
Semivolatile Organic Compounds by - LC/MS-MS	7
B331804	7
Flag/Qualifier Summary	9
Certifications	10
Chain of Custody/Sample Receipt	11



Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 2/24/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B1534

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

1 Cooleyville Road 23B1534-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington
Technical Representative

na Watslengton



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B1534

Date Received: 2/13/2023

Field Sample #: 1 Cooleyville Road

Sampled: 2/9/2023 09:00

90.2

Sample ID: 23B1534-01
Sample Matrix: Ground Wate

D5-NEtFOSAA

Sample Matrix: Ground Water										
			Semivol	atile Organic Compoun	ds by - LC	MS-MS				
								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.71	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.83	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.60	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.63	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorooctanoic acid (PFOA)	1.7	1.9	0.88	ng/L	1	J	EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorooctanesulfonic acid (PFOS)	2.9	1.9	0.81	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorononanoic acid (PFNA)	ND	1.9	0.82	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorodecanoic acid (PFDA)	ND	1.9	0.68	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.9	0.65	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.63	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.61	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.58	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.55	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.48	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.82	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.9	0.71	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.9	0.85	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.76	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:36	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		81.	4	70-130					2/22/23 15:36	
M3HFPO-DA		74.	1	70-130					2/22/23 15:36	
13C-PFDA		86.	4	70-130					2/22/23 15:36	

70-130

2/22/23 15:36



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1534-01 [1 Cooleyville Road]	B331804	269	1.00	02/20/23



#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
atch B331804 - EPA 537.1											
Blank (B331804-BLK1)					Prepared: 02	2/20/23 Anal	yzed: 02/22/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.82	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.60	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	1.8	0.62	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.87	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.80	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.82	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.68	ng/L							
-EtFOSAA (NEtFOSAA)	ND	1.8	0.64	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.62	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.60	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.57	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.55	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.47	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	0.81	ng/L							
IFPO-DA)	•			•							
Cl-PF3OUdS (F53B Major)	ND	1.8	0.70	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.84	ng/L							
3-Dioxa-3H-perfluorononanoic acid DONA)	ND	1.8	0.75	ng/L							
rrogate: 13C-PFHxA	32.5			ng/L	36.8		88.4	70-130			
rrogate: M3HFPO-DA	34.0			ng/L	36.8		92.3	70-130			
rrogate: 13C-PFDA	32.8			ng/L	36.8		89.2	70-130			
ırrogate: D5-NEtFOSAA	134			ng/L	147		90.7	70-130			
CS (B331804-BS1)					Prepared: 02	2/20/23 Anal	yzed: 02/22/2	23			
erfluorobutanesulfonic acid (PFBS)	1.34	1.8	0.69	ng/L	1.60		83.6	50-150			J
erfluorohexanoic acid (PFHxA)	1.32	1.8	0.80	ng/L	1.81		73.0	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.19	1.8	0.59	ng/L	1.65		71.9	50-150			J
erfluoroheptanoic acid (PFHpA)	1.67	1.8	0.61	ng/L	1.81		92.5	50-150			J
erfluorooctanoic acid (PFOA)	1.47	1.8	0.85	ng/L	1.81		81.5	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.66	1.8	0.78	ng/L	1.68		99.1	50-150			J
erfluorononanoic acid (PFNA)	1.41	1.8	0.80	ng/L	1.81		77.7	50-150			J
erfluorodecanoic acid (PFDA)	1.98	1.8	0.66	ng/L	1.81		109	50-150			
-EtFOSAA (NEtFOSAA)	1.57	1.8	0.63	ng/L	1.81		86.9	50-150			J
erfluoroundecanoic acid (PFUnA)	1.65	1.8	0.61	ng/L	1.81		91.0	50-150			J
-MeFOSAA (NMeFOSAA)	1.68	1.8	0.59	ng/L	1.81		92.6	50-150			J
erfluorododecanoic acid (PFDoA)	1.40	1.8	0.56	ng/L	1.81		77.3	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.71	1.8	0.54	ng/L	1.81		94.3	50-150			J
erfluorotetradecanoic acid (PFTA)	1.43	1.8	0.47	ng/L	1.81		79.3	50-150			J
exafluoropropylene oxide dimer acid	1.49	1.8	0.80	ng/L	1.81		82.6	50-150			J
IFPO-DA)											
Cl-PF3OUdS (F53B Major)	1.58	1.8	0.69	ng/L	1.71		92.6	50-150			J
Cl-PF3ONS (F53B Minor)	1.58	1.8	0.82	ng/L	1.69		93.6	50-150			J
8-Dioxa-3H-perfluorononanoic acid DONA)	1.58	1.8	0.74	ng/L	1.71		92.6	50-150			J
urrogate: 13C-PFHxA	34.1			ng/L	36.2		94.2	70-130			
ırrogate: M3HFPO-DA	35.8			ng/L	36.2		98.9	70-130			
urrogate: 13C-PFDA	34.6			ng/L	36.2		95.5	70-130			
urrogate: D5-NEtFOSAA	138			ng/L	145		95.5	70-130			



4,8-Dioxa-3H-perfluorononanoic acid

(ADONA)

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B331804 - EPA 537.1											
LCS Dup (B331804-BSD1)				1	Prepared: 02	2/20/23 Analy	yzed: 02/22/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.66	1.8	0.69	ng/L	1.58		105	50-150	21.5	50	J
Perfluorohexanoic acid (PFHxA)	1.74	1.8	0.79	ng/L	1.78		97.8	50-150	27.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.59	1.8	0.58	ng/L	1.63		97.5	50-150	28.9	50	J
Perfluoroheptanoic acid (PFHpA)	2.14	1.8	0.60	ng/L	1.78		120	50-150	24.4	50	
Perfluorooctanoic acid (PFOA)	1.86	1.8	0.84	ng/L	1.78		105	50-150	23.4	50	
Perfluorooctanesulfonic acid (PFOS)	1.98	1.8	0.77	ng/L	1.66		120	50-150	17.4	50	
Perfluorononanoic acid (PFNA)	1.99	1.8	0.79	ng/L	1.78		111	50-150	34.3	50	
Perfluorodecanoic acid (PFDA)	2.22	1.8	0.66	ng/L	1.78		125	50-150	11.8	50	
N-EtFOSAA (NEtFOSAA)	2.01	1.8	0.62	ng/L	1.78		113	50-150	24.3	50	
Perfluoroundecanoic acid (PFUnA)	1.91	1.8	0.60	ng/L	1.78		107	50-150	14.9	50	
N-MeFOSAA (NMeFOSAA)	1.94	1.8	0.58	ng/L	1.78		109	50-150	14.8	50	
Perfluorododecanoic acid (PFDoA)	1.88	1.8	0.56	ng/L	1.78		105	50-150	29.1	50	
Perfluorotridecanoic acid (PFTrDA)	1.98	1.8	0.53	ng/L	1.78		111	50-150	14.7	50	
Perfluorotetradecanoic acid (PFTA)	1.48	1.8	0.46	ng/L	1.78		83.2	50-150	3.43	50	J
Hexafluoropropylene oxide dimer acid	2.07	1.8	0.79	ng/L	1.78		116	50-150	32.4	50	
(HFPO-DA)			0.60								
11Cl-PF3OUdS (F53B Major)	1.97	1.8	0.68	ng/L	1.68		117	50-150	21.7	50	
9Cl-PF3ONS (F53B Minor)	1.99	1.8	0.81	ng/L	1.66		120	50-150	22.9	50	

ng/L

1.69

123

50-150

26.9

50

1.8 0.73

2.07



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

ENCORE

75151534

Phone: 413-525-2332

Pace Analytical

Fax: 413-525-6405

CHAIN OF CUSTODY RECORD

East Longmeadow, MA 01026 39 Spruce Street

Doc # 381 Rev 2\_06262019

Preservation Codes Face Attachated - Sodium Bisutfate GW= Ground Water WW = Waste Water = Sadium Hydroxsde DW = Drinking Water Sodium Thápauliate Matrix Codes - Sulforic Acid 4 = Atr 5 = 50H N - Nitric Acid 4 - Methanol DI = DI Water St. > Studge SOL - Solid ទ 0 = Other 0 - Other 2 Preservation Code Page Please use the following codes to indicate possible sample concentration within the Conc Code column responsible for missing samples H - High; M - Medium; L - Low; C - Cleas; U -\*Pace Analytical is not from prepacked coolers Chromatogram AIMA-LAP,LLC AMALYSIS REQUESTED О Other freezer? Y / N Glassware in Cooler? Y / N Prepackaged MCP Certification Form Required MA MCP Required CT RCP Required Courter Use Only MA State DW Required RCP Certification Form Requi LITER BIY SARR ENCORE Ü 000 BACTERIA (ved Aletals Samples Orthophosphate Sam BACTERIA PLASTIC Field Filtered Field Filtered PCB ONLY VIALS Lab to Fitter Lab to Fitter PLASTIC School MWRA NON SOXHLET GLASS. legal document that must be complete and accurate and is used to information on the Chain of Custody. The Chain of Custody is a determine what analyses the laboratory will perform. Any missing vakes your partnership on each project and will try to assist with information is not the laboratory's responsibility. Pace Analyhosi Disclaimer: Pace Analytical is not responsible for any omitted SOXHET VIALS missing information, but will not be held accountable. 000 00 0 0 ķ Material Concession Zurps//Tightbond.com; Stransk/Tightbond.com  $\supset$ Municipality Requested furnancumd Time Brownfield Rush Approval Required Due Date: PWSID # 10-Day う り り EXCEL 3-Day 4-Day 0 Ø Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMPTORAB 625 13 2 PFAS 10-Day (std) 🗆 P  $\Box$ Ending Date/Time Government Email To: 2/8/23 0900 Fax To #: ormat: Federal Other 7-Day ·Day -Day à Project Entity 53 Southampton Road, Westfield, Massachusetts 1110 Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time: 1330 Shutesbury, Massachusett. 5.2190 Despired Control Town of Shutesbury 1 Conteguille Road (413) 562-1600 Client Sample 10.7 Description Samuet Evans Jeff Arps Date/Time: bate/Time: Date/Time: Peer OAC. Pace Analytical Quote Name/Number tetinquished by: (signature) dinguished by: (signature Pace Analytical
Work Order# eceived by: (signature) Received by: (signature) Company Name avoice Recipient: Project Location: Project Number: Project Manager: Polect Name. Sampled By: Phone: Page 11 of 12 East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405 www.pacelabs.com

# Log In Back-Sheet

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



Client	Tab				oro.	ugnt to the	attention	of the Cli	ent – T	rue or False			VOTALICINES :
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1	iner (Circle whe	n applicabl	e) Un	P HCI	ниоз	H2SO4	NaOH	Trizr	na	NaS203	Other Pre	servative	
11.	Amber	Plastic											
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February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 11 Cooleyville Rd., Shutesbury, MA.

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B1558

Enclosed are results of analyses for samples as received by the laboratory on February 13, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

### Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/24/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B1558

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 11 Cooleyville Rd., Shutesbury, MA.

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
11 Cooleyville Road 23B1558-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington
Technical Representative

na Watslengton



Project Location: 11 Cooleyville Rd., Shutesbury, M Sample Description: Work Order: 23B1558

Date Received: 2/13/2023

Field Sample #: 11 Cooleyville Road Sampled: 2/9/2023 10:05

Sample ID: 23B1558-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

S	emivo	latile	Organic	Compounds	by -	LC/MS-MS
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								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.67	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorohexanoic acid (PFHxA)	0.91	1.8	0.78	ng/L	1	J	EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.57	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluoroheptanoic acid (PFHpA)	1.0	1.8	0.59	ng/L	1	J	EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorooctanoic acid (PFOA)	2.3	1.8	0.83	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorooctanesulfonic acid (PFOS)	3.2	1.8	0.76	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.78	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.65	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.59	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.57	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.55	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.52	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.45	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.77	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.67	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.72	ng/L	1		EPA 537.1	2/20/23	2/22/23 16:40	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA	•	87.	8	70-130					2/22/23 16:40	
M3HFPO-DA		85.	4	70-130					2/22/23 16:40	

70-130

70-130

89.2

90.7

2/22/23 16:40

2/22/23 16:40



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1558-01 [11 Cooleyville Road]	B331804	285	1.00	02/20/23



#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
atch B331804 - EPA 537.1											
Blank (B331804-BLK1)					Prepared: 02	2/20/23 Anal	yzed: 02/22/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.82	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.60	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	1.8	0.62	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.87	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.80	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.82	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.68	ng/L							
-EtFOSAA (NEtFOSAA)	ND	1.8	0.64	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.62	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.60	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.57	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.55	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.47	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	0.81	ng/L							
IFPO-DA)	•			•							
Cl-PF3OUdS (F53B Major)	ND	1.8	0.70	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.84	ng/L							
3-Dioxa-3H-perfluorononanoic acid DONA)	ND	1.8	0.75	ng/L							
rrogate: 13C-PFHxA	32.5			ng/L	36.8		88.4	70-130			
rrogate: M3HFPO-DA	34.0			ng/L	36.8		92.3	70-130			
rrogate: 13C-PFDA	32.8			ng/L	36.8		89.2	70-130			
ırrogate: D5-NEtFOSAA	134			ng/L	147		90.7	70-130			
CS (B331804-BS1)					Prepared: 02	2/20/23 Anal	yzed: 02/22/2	23			
erfluorobutanesulfonic acid (PFBS)	1.34	1.8	0.69	ng/L	1.60		83.6	50-150			J
erfluorohexanoic acid (PFHxA)	1.32	1.8	0.80	ng/L	1.81		73.0	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.19	1.8	0.59	ng/L	1.65		71.9	50-150			J
erfluoroheptanoic acid (PFHpA)	1.67	1.8	0.61	ng/L	1.81		92.5	50-150			J
erfluorooctanoic acid (PFOA)	1.47	1.8	0.85	ng/L	1.81		81.5	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.66	1.8	0.78	ng/L	1.68		99.1	50-150			J
erfluorononanoic acid (PFNA)	1.41	1.8	0.80	ng/L	1.81		77.7	50-150			J
erfluorodecanoic acid (PFDA)	1.98	1.8	0.66	ng/L	1.81		109	50-150			
-EtFOSAA (NEtFOSAA)	1.57	1.8	0.63	ng/L	1.81		86.9	50-150			J
erfluoroundecanoic acid (PFUnA)	1.65	1.8	0.61	ng/L	1.81		91.0	50-150			J
-MeFOSAA (NMeFOSAA)	1.68	1.8	0.59	ng/L	1.81		92.6	50-150			J
erfluorododecanoic acid (PFDoA)	1.40	1.8	0.56	ng/L	1.81		77.3	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.71	1.8	0.54	ng/L	1.81		94.3	50-150			J
erfluorotetradecanoic acid (PFTA)	1.43	1.8	0.47	ng/L	1.81		79.3	50-150			J
exafluoropropylene oxide dimer acid	1.49	1.8	0.80	ng/L	1.81		82.6	50-150			J
IFPO-DA)											
Cl-PF3OUdS (F53B Major)	1.58	1.8	0.69	ng/L	1.71		92.6	50-150			J
Cl-PF3ONS (F53B Minor)	1.58	1.8	0.82	ng/L	1.69		93.6	50-150			J
8-Dioxa-3H-perfluorononanoic acid DONA)	1.58	1.8	0.74	ng/L	1.71		92.6	50-150			J
urrogate: 13C-PFHxA	34.1			ng/L	36.2		94.2	70-130			
ırrogate: M3HFPO-DA	35.8			ng/L	36.2		98.9	70-130			
urrogate: 13C-PFDA	34.6			ng/L	36.2		95.5	70-130			
urrogate: D5-NEtFOSAA	138			ng/L	145		95.5	70-130			



4,8-Dioxa-3H-perfluorononanoic acid

(ADONA)

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B331804 - EPA 537.1											
LCS Dup (B331804-BSD1)				1	Prepared: 02	2/20/23 Analy	yzed: 02/22/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.66	1.8	0.69	ng/L	1.58		105	50-150	21.5	50	J
Perfluorohexanoic acid (PFHxA)	1.74	1.8	0.79	ng/L	1.78		97.8	50-150	27.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.59	1.8	0.58	ng/L	1.63		97.5	50-150	28.9	50	J
Perfluoroheptanoic acid (PFHpA)	2.14	1.8	0.60	ng/L	1.78		120	50-150	24.4	50	
Perfluorooctanoic acid (PFOA)	1.86	1.8	0.84	ng/L	1.78		105	50-150	23.4	50	
Perfluorooctanesulfonic acid (PFOS)	1.98	1.8	0.77	ng/L	1.66		120	50-150	17.4	50	
Perfluorononanoic acid (PFNA)	1.99	1.8	0.79	ng/L	1.78		111	50-150	34.3	50	
Perfluorodecanoic acid (PFDA)	2.22	1.8	0.66	ng/L	1.78		125	50-150	11.8	50	
N-EtFOSAA (NEtFOSAA)	2.01	1.8	0.62	ng/L	1.78		113	50-150	24.3	50	
Perfluoroundecanoic acid (PFUnA)	1.91	1.8	0.60	ng/L	1.78		107	50-150	14.9	50	
N-MeFOSAA (NMeFOSAA)	1.94	1.8	0.58	ng/L	1.78		109	50-150	14.8	50	
Perfluorododecanoic acid (PFDoA)	1.88	1.8	0.56	ng/L	1.78		105	50-150	29.1	50	
Perfluorotridecanoic acid (PFTrDA)	1.98	1.8	0.53	ng/L	1.78		111	50-150	14.7	50	
Perfluorotetradecanoic acid (PFTA)	1.48	1.8	0.46	ng/L	1.78		83.2	50-150	3.43	50	J
Hexafluoropropylene oxide dimer acid	2.07	1.8	0.79	ng/L	1.78		116	50-150	32.4	50	
(HFPO-DA)			0.60								
11Cl-PF3OUdS (F53B Major)	1.97	1.8	0.68	ng/L	1.68		117	50-150	21.7	50	
9Cl-PF3ONS (F53B Minor)	1.99	1.8	0.81	ng/L	1.66		120	50-150	22.9	50	

ng/L

1.69

123

50-150

26.9

50

1.8 0.73

2.07



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

73B1558

Doc # 381 Rev 2,,06262019

Preservation Codes Para American 8 - Sodium Bisutfate Matrix Codes GW.: Ground Water ( = Sodium Hydroxide WW - Waste Water DW = Drinking Water = Sodiem Microufate . - Sulfuric Acid 4 = Air S = Soit N = Nitric Acid DI = Di Water A a Methanot 51. = Studge SOL - Solid O = Other \_ Page of # = #C 2 Preservation Code # teed responsible for missing samples sample concentration within the Conc Code column Please use the following codes to indicate possible from prepacked coolers H - High; M - Medium; L - Low; C - Clean; B \*Pace Analytical Is not Chromatogram AIHA-LAP, LLC Unknown ANALYSIS REQUESTED Ü freezer? Y / N Cooler? Y / N Glassware in Prepackaged counter Use Only MA MCP Required MCP Certification Form Required CT RCP Required WRTA MA State DW Required RCF Sertification Form Regu East Longmeadow, MA 01026 PFAS VIA 537.1 39 Spruce Street C BACTERIA ENCORE Orthophosphale Sampl BACTERIA PLASTIC YIALS. GLASS Field Filtered PCB ONLY Special Requirements Field Filtered Lab to Filter Lab to fitter School PLASTIC MBTA NON SOXHLET legal cocument that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing GLASS The Chain of Custody is a values your partnership on each project and will try to assist with missing information, but will not be held accountable. information is not the laboratory's responsibility. Pace Analytical Disclaimer: Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD VIALS 0 0 00 Oata Stellvery Conc. Code J.ArpsyiTigheband.com; SEvans@Tigheband.com Municipality https://www.pacelabs.com/ Brownfield Requence Turnar dund Time inferrnation on the Chain of Custody. # GISMd Oue Date: to-Day 3 EXCEL ß 3-Day Ð 4-Day Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMPTORMS 5 Doto-tion Lifeit Regult ements FAS 10-Day (std) D □  $\Box$ PDF oo Government Ensing Date/Time SOS mail To: Federal ax To #: -omnat: Other; -Day 7-Day Day Project Entity 21/22 Other 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury S. S. Date/Time: 330 Date/Time; 1708 5) (15/93 2/13/23 036 Shutesbury, Massachusetts Tawn of Shutesbury Clent Sample ID / Description Phone: 413-525-2332 (413) 562-1600 Samuel Evans Fighe & Bond Fax: 413-525-6405 Jeff Arros 5-2190 Codeville Date/Time: Date:/Time: Date/Time: Pace Analytical Quote Hame/Number wed by: (signatura) telinquished by: (signature) Pace Analytical Refinquished by: (signature) Pace Analytical Work Order# Received by: (signature) (eceived by: (signature) Invoice Recipient: elinquished by: Sulfa Allino A COLONIAL STATES Project Location: Project Manager: Country Project Number: Sampled By: Address: Phone: Page 11 of 12 39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405

www.pacelabs.com

ENV-FRM-ELON-0009V02\_\_\_Sample Receiving Checklist 1-12-2(

# Log In Back-Sheet

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



Table of Contents

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Container (Circle when applicable	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che Ani ID:	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	me D
	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable 1L Amber Plastic	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che Ani ID:	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	me D
Container (Circle when applicable  1L Amber Plastic  500 mL Amber Plastic	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	ne D
Container (Circle when applicable  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  1602 Amber Clear	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable)  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  160z Amber Clear  80z Amber Clear	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	ne D
Container (Circle when applicable  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  1602 Amber Clear  802 Amber Clear  402 Amber Clear	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  1602 Amber Clear  802 Amber Clear  402 Amber Clear  202 Amber Clear	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable 1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Clear Plastic 160z Amber Clear Roz Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	ne D
Container (Circle when applicable)  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  160z Amber Clear  80z Amber Clear  40z Amber Clear  20z Amber Clear  Col/Bacteria  Flashpoint	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	me D
Container (Circle when applicable  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  1602 Amber Clear  802 Amber Clear  402 Amber Clear  202 Amber Clear  Col/Bacteria  Flashpoint  Plastic Bag	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable)  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  160z Amber Clear  802 Amber Clear  402 Amber Clear  20z Amber Clear  Col/Bacteria  Flashpoint  Plastic Bag  SOC Kit	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	ne D
Container (Circle when applicable)  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  160z Amber Clear  80z Amber Clear  40z Amber Clear  20z Amber Clear  Col/Bacteria  Flashpoint  Plastic Bag  SOC Kit  Perchlorate	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable)  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  160z Amber Clear  802 Amber Clear  402 Amber Clear  20z Amber Clear  Col/Bacteria  Flashpoint  Plastic Bag  SOC KIt  Perchlorate  Encore	) UnP	HCI	HNO3	— C	OC Inclu lient roject Il Samp	ded: (Che And ID: les Prope	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir	
Container (Circle when applicable)  1L Amber Plastic  500 mL Amber Plastic  250 mL Amber Plastic  Other Amber Clear Plastic  160z Amber Clear  80z Amber Clear  40z Amber Clear  20z Amber Clear  Col/Bacteria  Flashpoint  Plastic Bag  SOC Kit  Perchlorate		HCI	HNO3	H2SO4	OC Inclu lient roject Il Samp	ded: (Che	alysis 🗖 ; 🗘 er pH: (	Sample Collect	er Name ion Date/Tir cservative	



February 21, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: Shutesbury, Massachusetts 34 Cooleyville

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B1447

Enclosed are results of analyses for samples as received by the laboratory on February 13, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/21/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B1447

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

34 Cooleyville Road 23B1447-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley
Reporting Specialist



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B1447

Date Received: 2/13/2023

Field Sample #: 34 Cooleyville Road

Sampled: 2/9/2023 09:20

99.3

99.5

Sample ID: 23B1447-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

Semivolatile	Organic (	Compounds	hv - I	C/MS_MS

								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.69	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.58	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.61	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorooctanoic acid (PFOA)	ND	1.8	0.84	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.78	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.63	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.61	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.58	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.56	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.53	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.46	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.79	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.69	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.82	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.74	ng/L	1		EPA 537.1	2/15/23	2/20/23 11:15	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		98.	9	70-130					2/20/23 11:15	
M3HFPO-DA		88.	3	70-130					2/20/23 11:15	

70-130

70-130

2/20/23 11:15

2/20/23 11:15



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1447-01 [34 Cooleyville Road]	B331478	278	1.00	02/15/23



Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Satch B331478 - EPA 537.1											
Blank (B331478-BLK1)					Prepared: 02	2/15/23 Anal	vzed: 02/20/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.70	ng/L	Trepureur 02		,2001 02,20,1				
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.81	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.59	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	1.8	0.62	ng/L							
erfluorooctanoic acid (PFOA)	ND ND	1.8	0.86	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND ND	1.8	0.79	ng/L							
erfluorononanoic acid (PFNA)		1.8	0.81	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.67								
EtFOSAA (NEtFOSAA)	ND	1.8	0.63	ng/L							
rfluoroundecanoic acid (PFUnA)	ND	1.8	0.63	ng/L ng/L							
MeFOSAA (NMeFOSAA)	ND	1.8	0.62								
	ND			ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.57	ng/L							
rfluorotridecanoic acid (PFTrDA)	ND	1.8	0.54	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.47	ng/L							
exafluoropropylene oxide dimer acid  (FPO-DA)  (CLIPE201145 (F52D Maior)	ND	1.8	0.80	ng/L							
CI-PF3OUdS (F53B Major)	ND	1.8	0.70	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.83	ng/L							
3-Dioxa-3H-perfluorononanoic acid DONA)	ND	1.8	0.75	ng/L							
rrogate: 13C-PFHxA	33.2			ng/L	36.4		91.1	70-130			
rrogate: M3HFPO-DA	28.5			ng/L	36.4		78.4	70-130			
rrogate: 13C-PFDA	34.3			ng/L	36.4		94.2	70-130			
ırrogate: D5-NEtFOSAA	135			ng/L	146		93.0	70-130			
CS (B331478-BS1)					Prepared: 02	2/15/23 Anal	yzed: 02/20/2	23			
erfluorobutanesulfonic acid (PFBS)	14.6	1.8	0.70	ng/L	16.1		90.1	70-130			
erfluorohexanoic acid (PFHxA)	16.9	1.8	0.81	ng/L	18.2		92.9	70-130			
rfluorohexanesulfonic acid (PFHxS)	14.5	1.8	0.59	ng/L	16.6		87.0	70-130			
rfluoroheptanoic acid (PFHpA)	16.2	1.8	0.62	ng/L	18.2		88.9	70-130			
rfluorooctanoic acid (PFOA)	16.0	1.8	0.86	ng/L	18.2		88.1	70-130			
erfluorooctanesulfonic acid (PFOS)	15.5	1.8	0.79	ng/L	16.9		92.0	70-130			
erfluorononanoic acid (PFNA)	17.1	1.8	0.81	ng/L	18.2		93.9	70-130			
erfluorodecanoic acid (PFDA)	17.3	1.8	0.67	ng/L	18.2		95.2	70-130			
EtFOSAA (NEtFOSAA)	15.9	1.8	0.63	ng/L	18.2		87.3	70-130			
erfluoroundecanoic acid (PFUnA)	16.0	1.8	0.62	ng/L	18.2		87.6	70-130			
-MeFOSAA (NMeFOSAA)	16.2	1.8	0.59	ng/L	18.2		89.0	70-130			
erfluorododecanoic acid (PFDoA)	15.5	1.8	0.57	ng/L	18.2		85.2	70-130			
rfluorotridecanoic acid (PFTrDA)	15.2	1.8	0.54	ng/L	18.2		83.7	70-130			
erfluorotetradecanoic acid (PFTA)		1.8	0.47	ng/L	18.2		84.7	70-130			
exafluoropropylene oxide dimer acid	15.4	1.8	0.80	ng/L	18.2			70-130			
Examuoropropytene oxide dimer acid [FPO-DA] Cl-PF3OUdS (F53B Major)	17.3 16.7	1.8	0.70	ng/L	17.2		95.1 97.0	70-130			
Cl-PF3ONS (F53B Minor)		1.8	0.83	ng/L	17.2		88.4	70-130			
8-Dioxa-3H-perfluorononanoic acid	15.0 14.4	1.8	0.83	ng/L	17.0		83.8	70-130			
ADONA)											
rrogate: 13C-PFHxA	37.3			ng/L	36.4		103	70-130			
rrogate: M3HFPO-DA	31.7			ng/L	36.4		87.2	70-130			
nrrogate: 13C-PFDA	36.8			ng/L	36.4		101	70-130			
numerota, D5 NEtEOCAA	126			/T	1.46		02.7	70.120			

ng/L

146

136

93.7

70-130



#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch B331478 - EPA 537.1

LCS Dup (B331478-BSD1)		Prepared: 02/15/23 Analyzed: 02/20/23									
Perfluorobutanesulfonic acid (PFBS)	13.9	1.8	0.70	ng/L	16.2	86.1	70-130	4.37	30		
Perfluorohexanoic acid (PFHxA)	16.4	1.8	0.81	ng/L	18.2	89.9	70-130	3.08	30		
Perfluorohexanesulfonic acid (PFHxS)	14.3	1.8	0.59	ng/L	16.7	85.7	70-130	1.27	30		
Perfluoroheptanoic acid (PFHpA)	15.6	1.8	0.62	ng/L	18.2	85.4	70-130	3.83	30		
Perfluorooctanoic acid (PFOA)	16.0	1.8	0.86	ng/L	18.2	87.5	70-130	0.544	30		
Perfluorooctanesulfonic acid (PFOS)	15.3	1.8	0.79	ng/L	16.9	90.6	70-130	1.31	30		
Perfluorononanoic acid (PFNA)	16.7	1.8	0.81	ng/L	18.2	91.4	70-130	2.53	30		
Perfluorodecanoic acid (PFDA)	17.0	1.8	0.67	ng/L	18.2	93.0	70-130	2.10	30		
N-EtFOSAA (NEtFOSAA)	16.9	1.8	0.63	ng/L	18.2	92.7	70-130	6.24	30		
Perfluoroundecanoic acid (PFUnA)	17.0	1.8	0.62	ng/L	18.2	93.1	70-130	6.32	30		
N-MeFOSAA (NMeFOSAA)	17.0	1.8	0.59	ng/L	18.2	93.1	70-130	4.67	30		
Perfluorododecanoic acid (PFDoA)	16.9	1.8	0.57	ng/L	18.2	92.7	70-130	8.70	30		
Perfluorotridecanoic acid (PFTrDA)	16.9	1.8	0.54	ng/L	18.2	92.4	70-130	10.1	30		
Perfluorotetradecanoic acid (PFTA)	16.3	1.8	0.47	ng/L	18.2	89.6	70-130	5.76	30		
Hexafluoropropylene oxide dimer acid	17.0	1.8	0.80	ng/L	18.2	93.1	70-130	1.87	30		
(HFPO-DA) 11Cl-PF3OUdS (F53B Major)	17.3	1.8	0.70	ng/L	17.2	100	70-130	3.58	30		
9Cl-PF3ONS (F53B Minor)	15.2	1.8	0.83	ng/L	17.0	89.2	70-130	1.08	30		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	14.1	1.8	0.75	ng/L	17.2	81.7	70-130	2.35	30		
Surrogate: 13C-PFHxA	33.8			ng/L	36.5	92.5	70-130				
Surrogate: M3HFPO-DA	29.0			ng/L	36.5	79.4	70-130				
Surrogate: 13C-PFDA	34.9			ng/L	36.5	95.6	70-130				
Surrogate: D5-NEtFOSAA	137			ng/L	146	93.9	70-130				



MCL

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

Maximum Contaminant Level

No results have been blank subtracted unless specified in the case narrative section.



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

#### EPA 537.1 in Drinking Water

Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

28114

https://www.pacelabs.com/

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- Pace Analytical

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CHAIN OF CUSTODY RECORD

Doc # 381 Rev 2\_D6262019 East Longmeadow, MA 01026 39 Spruce Street

Preservation Codes 8 + Sodlum Bisotfate GW- Ground Water WW = Waste Water K = Sndium Hydroxide OW = Drinking Water Fir Sodium Throsidiste S .. Sulfuric Acid 1 = Alr 5 = Soil N = Nitric Acid DI = Di Water M = Methand SL - Studge SOL . Solid O - Other ö 2 Preservation Code H = FC - Ired Page Please use the following codes to indicate possible sample concentration within the Conc Code column H - High; M - Medium; L - Low; C - Clean; U -Chromatogram AHA-LAP,LLC ANALYSIS REQUESTED above: C) Other Glassware in MA MCP Required MCP Certification Form Required CT RCP Required WRIA MA State DW Required Courter Use O RCP Certification Form Requ F.YEE SIV EAT VIALS GLASS PLASTIC BACTERIA ENCORE O ០០០ alved Metals Samples Drinophosphate Sample GLASS VIALS Field Fittered Field Filtered Special Requirements PCB ONLY Lab to Fitter Lab to Fitter School MWRA MBTA NON SOXHLET legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information on the Chain of Custody. The Chain of Custody is a Disclaimer: Pace Analytical is not responsible for any omitted SOXMLET 0 0 0 0 Onto Calling #83 X65 J. Largs 84 sphebond.com; 50. sans§1. ghebord.com  $\mathcal{C}$ **a a** Municipatity Requested Tamaround Time Brownfield Due Date: Metrox # CHSMd 10 Day 3 EXCEL 3-Day 4-Day ₽ 21.7 Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMPTGRASS Detection Limit Requirements の言う ß PFAS 10-Day (std) ū ф Ending Date/Time Government 06 2c Email To: Format: Fax To #3 Federal Other Day 2-Day Project Entity 34 Cuckeyy, 11e Rond 219/23 Degramme Cate 7 ime oto 53 Southempton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time: 1708 Shutesbury, Massachusetts Date/Time: 03/5 Date (Time: 136 Town of Shutesbury Clean Sample D / Description (413) 562-1600 Samuel Evans Jeff Arps \$-2190 Date/Time: Date/Time: Date/Time: Pace Analytical Quote Name/Number Relinquished by: (signature) Pace Analytical
Work Order# Received by: (signature) Received by: (signature) quished by: (sign invoice Recipient; 100011 Ì Project Location; Project Number: Project Manager: Lab Comments: Sampled By:

Packneyeal

O = Other

responsible for missing samples

freezer? Y / N

from prepacked coolers \*Pace Analytical is not

Cooler? Y / N

Prepackaged

BACTERIA ENCORE

vakes your partnership on each project and will try to assist with information is not the laboratory's responsibility. Pace Analytical

missing information, but will not be held accountable.

PLASTIC

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

ENV-FRM-ELON-0009V02\_Sample Receiving Checklist 1-12-2023

# Log In Back-Sheet

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



Client Tighe and Bor	מ		_					Tru		False
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Container (Circle when applicable)	UnP	НСІ	HNO3	_ C	OC Inclu lient roject	ided: (Che Ani D	alysis 🗹	Sampler f	n Date/Time	
Container (Circle when applicable)  1L Amber Plastic	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear	UnP	НСІ	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC KIt	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC KIt Perchlorate	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC KIt Perchlorate Encore	UnP	HCI	HNO3	_ C	OC Inclu lient roject	And ID:	alysis   Er pH:	Sampler I	n Date/Time	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Klt Perchlorate Encore Frozen	UnP	HCI HCI	HNO3	H2504	OC Inclu lient roject	ded: (Che Ani Dipoles Properties  Trizma	alysis   Er pH:	Sampler I	n Date/Time	

March 7, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 53 Cooleyville Rd. Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2850

Enclosed are results of analyses for samples as received by the laboratory on February 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/7/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2850

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 53 Cooleyville Rd. Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
53 Cooleyville Road 23B2850-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: 53 Cooleyville Rd. Shutesbury, M Sample Description: Work Order: 23B2850

Date Received: 2/27/2023

Field Sample #: 53 Cooleyville Road Sampled: 2/23/2023 13:00

Sample ID: 23B2850-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

Semivolatile Organic	Compounds by	- LC/MS-MS	

Analyte	Results	RL	DL	WT *4	DE	EL (O. 1	Method	Date	Date/Time Analyzed	Amalwat
				Units	DF	Flag/Qual		Prepared	•	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.7	0.69	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.7	0.82	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.7	0.78	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.7	0.87	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorooctanoic acid (PFOA)	ND	1.7	0.90	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.7	0.66	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorononanoic acid (PFNA)	ND	1.7	0.80	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorodecanoic acid (PFDA)	ND	1.7	0.84	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.58	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.66	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.65	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.63	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.64	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.73	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	1.1	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.58	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.71	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.77	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:44	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		76.	2	70-130	<u> </u>				3/6/23 9:44	
M3HFPO-DA		72.	4	70-130					3/6/23 9:44	

70-130

70-130

91.8

93.4

3/6/23 9:44

3/6/23 9:44



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2850-01 [53 Cooleyville Road]	B332536	286	1.00	03/03/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332536 - EPA 537.1											
Blank (B332536-BLK1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	0.82	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.1	0.97	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	0.93	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	2.1	1.0	ng/L							
erfluorooctanoic acid (PFOA)	ND	2.1	1.1	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	2.1	0.79	ng/L							
erfluorononanoic acid (PFNA)	ND	2.1	0.96	ng/L							
erfluorodecanoic acid (PFDA)	ND	2.1	1.0	ng/L							
-EtFOSAA (NEtFOSAA)	ND	2.1	0.69	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	2.1	0.79	ng/L							
-MeFOSAA (NMeFOSAA)	ND	2.1	0.77	ng/L							
erfluorododecanoic acid (PFDoA)	ND	2.1	0.75	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	2.1	0.76	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	2.1	0.87	ng/L							
exafluoropropylene oxide dimer acid	ND	2.1	1.3	ng/L							
IFPO-DA)		2.1	0.60	m ∞ /T							
.CI-PF3OUdS (F53B Major)	ND	2.1	0.69	ng/L							
Cl-PF3ONS (F53B Minor)	ND	2.1 2.1	0.85 0.92	ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	2.1	0.92	ng/L							
urrogate: 13C-PFHxA	38.9			ng/L	41.7		93.4	70-130			
urrogate: M3HFPO-DA	37.7			ng/L	41.7		90.4	70-130			
urrogate: 13C-PFDA	41.5			ng/L	41.7		99.6	70-130			
urrogate: D5-NEtFOSAA	176			ng/L	167		106	70-130			
CS (B332536-BS1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
erfluorobutanesulfonic acid (PFBS)	1.70	1.9	0.75	ng/L	1.70		100	50-150			J
erfluorohexanoic acid (PFHxA)	1.50	1.9	0.90	ng/L	1.91		78.6	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.32	1.9	0.86	ng/L	1.75		75.2	50-150			J
erfluoroheptanoic acid (PFHpA)	1.93	1.9	0.95	ng/L	1.91		101	50-150			
erfluorooctanoic acid (PFOA)	1.59	1.9	0.99	ng/L	1.91		82.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.79	1.9	0.72	ng/L	1.78		100	50-150			J
erfluorononanoic acid (PFNA)	1.57	1.9	0.88	ng/L	1.91		82.0	50-150			J
erfluorodecanoic acid (PFDA)	2.04	1.9	0.92	ng/L	1.91		107	50-150			
-EtFOSAA (NEtFOSAA)	1.88	1.9	0.64	ng/L	1.91		98.1	50-150			J
erfluoroundecanoic acid (PFUnA)	1.82	1.9	0.73	ng/L	1.91		95.2	50-150			J
-MeFOSAA (NMeFOSAA)	1.86	1.9	0.71	ng/L	1.91		97.2	50-150			J
erfluorododecanoic acid (PFDoA)	1.67	1.9	0.69	ng/L	1.91		87.2	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.90	1.9	0.70	ng/L	1.91		99.1	50-150			
erfluorotetradecanoic acid (PFTA)	1.37	1.9	0.80	ng/L	1.91		71.8	50-150			J
exafluoropropylene oxide dimer acid	1.63	1.9	1.2	ng/L	1.91		84.9	50-150			J
HFPO-DA)  Cl-PF3OUdS (F53B Major)	1.50	1.9	0.63	ng/L	1 01		070	50 150			J
CI-PF3ONS (F53B Minor)	1.58	1.9	0.03	ng/L	1.81 1.79		87.8 90.4	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid	1.61	1.9	0.78	ng/L	1.79		90.4 98.3	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid ADONA)	1.78	1.9	0.04	ng/L	1.01		76.3	30-130			J
urrogate: 13C-PFHxA	35.8			ng/L	38.3		93.4	70-130			
nrogate: M3HFPO-DA	34.9			ng/L	38.3		91.2	70-130			
urrogate: 13C-PFDA	36.4			ng/L	38.3		95.1	70-130			
Surrogete: D5 NEtEOS A A	157			ma/I	152		102	70.120			

ng/L

153

103

70-130

157

Surrogate: D5-NEtFOSAA



Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

Surrogate: 13C-PFDA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

				Spike	Source		%REC		RPD		
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B332536 - EPA 537.1											
LCS Dup (B332536-BSD1)					Prepared: 03	3/03/23 Analy	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.52	1.9	0.73	ng/L	1.64		92.4	50-150	11.4	50	J
Perfluorohexanoic acid (PFHxA)	1.35	1.9	0.87	ng/L	1.85		72.8	50-150	11.0	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.29	1.9	0.83	ng/L	1.69		76.1	50-150	2.11	50	J
Perfluoroheptanoic acid (PFHpA)	1.67	1.9	0.92	ng/L	1.85		90.3	50-150	14.3	50	J
Perfluorooctanoic acid (PFOA)	1.52	1.9	0.96	ng/L	1.85		82.1	50-150	4.08	50	J
Perfluorooctanesulfonic acid (PFOS)	1.57	1.9	0.70	ng/L	1.72		91.6	50-150	12.5	50	J
Perfluorononanoic acid (PFNA)	1.40	1.9	0.85	ng/L	1.85		75.8	50-150	11.2	50	J
Perfluorodecanoic acid (PFDA)	2.04	1.9	0.89	ng/L	1.85		110	50-150	0.129	50	
N-EtFOSAA (NEtFOSAA)	1.53	1.9	0.62	ng/L	1.85		82.7	50-150	20.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.60	1.9	0.70	ng/L	1.85		86.6	50-150	12.8	50	J
N-MeFOSAA (NMeFOSAA)	1.66	1.9	0.69	ng/L	1.85		89.8	50-150	11.1	50	J
Perfluorododecanoic acid (PFDoA)	1.32	1.9	0.66	ng/L	1.85		71.0	50-150	23.7	50	J
Perfluorotridecanoic acid (PFTrDA)	1.65	1.9	0.68	ng/L	1.85		89.2	50-150	13.8	50	J
Perfluorotetradecanoic acid (PFTA)	1.26	1.9	0.77	ng/L	1.85		67.8	50-150	9.07	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.57	1.9	1.1	ng/L	1.85		84.8	50-150	3.49	50	J
11Cl-PF3OUdS (F53B Major)	1.45	1.9	0.61	ng/L	1.75		83.0	50-150	8.88	50	J
9Cl-PF3ONS (F53B Minor)	1.64	1.9	0.75	ng/L	1.73		94.9	50-150	1.55	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.58	1.9	0.81	ng/L	1.75		90.5	50-150	11.5	50	J
Surrogate: 13C-PFHxA	34.8			ng/L	37.0		93.9	70-130			

ng/L

ng/L

ng/L

37.0

37.0

148

92.6

94.9

101

70-130

70-130

70-130

34.3

35.2

149



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

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Doc # 381 Rev 2\_06252019

o = Other \_\_\_\_\_\_\_ Preservation Codes B - Sodium Bisutlate X = Sedium Hydroxide GW= Ground Water WW = Waste Water DW = Drinking Water " Sudium Thiosoffate 5 = Suffuric Acid A . Air S .. Soil R = Nitric Acid DI = Di Water M - Methanol St. = Studge SOL = Solid 0 = Other #-#CF હ e keed 2 Preservation Code Page responsible for missing samples from prepacked coolers Please use the following codes to indicate possible sample concentration within the Conc Code column H - High; M - Medium; C - Low; C - Clean: U -\*Pace Analytical is not Chremategram AIMA-LAP,LLC ANALYSIS REQUESTED O freezer? Y / N Cooler? Y / N Glassware in Prepackaged Courier Use Only MA MCP Required MCP Certification Form Required CT RCP Required RCP Certification Forth Required MA State DW Required East Longmeadow, MA 01026 FAS VIA 537. 1 ENCORE 39 Spruce Street BACTERIA BACTERIA PLASTIC ENCORE GLASS VIALS ophasphare Sam Special Requirements PCB ONLY Field Filtered Field Filtered Lab to Filter Lab to Filter School PLASTIC MWRA MBIA X NON SOXHLET legal document that must be complete and accurate and is used to deterraine what analyses the laboratory will perform. Any missing information is not the taboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable. SALIS information on the Chain of Custody. The Chain of Custody is a Disclaimer. Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD VIALS 00 0 0 Conc Code JLARCE Rightband com; Streats Whigheband.com  $\mathcal{C}$ Menicipality Requested Turnaround Time Brownfield # QISMA Due Date: \*Martin Code 3 10-Day ļ۵ 333 3 71.7 3-Day .Day 0 Bili to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMPYCRAB 3 0 ß PFAS 10-Day (std) 🖸 Ø 404 00 Government. Ending Date/Time Email To: Federal Contemitte Road LASAS 1300 Fax To# oppust: Other: Č ·Day ÷Đđy Project Entity +100 Ð Seginaris Oster Tatio 5) Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time: 12 3C Date/Time: /6 1/6 2/22/23 000 Date Time: IVING Shutesbury, Massachusetts Town of Shutesbury Phone: 413-525-2332 Client Sample ID / Description 14131 562-1600 Samuel Evans Fax: 413-525-6405 5-2190 Jeff Arps Date/Time: Date/Time: ate/fine: ate/Time: Sate/Time: ace Analytical Quote Name/Number Relinquished by: (signature) elinguished by: (signature) inquished by: (signature Relinquished by: ssignature Pace Analytical Pace Analytical Work Order# eived by: (signature) Received by: (signature) (eceived by: isignature) eceived by: (signature) nvoice Recipient: Project Location: roject Manager: roject Number: ampled By: Address: Page 11 of 12 sa spruce st.

CNV-FRIVI-ELUIN-0009V02\_Sample Receiving Checklist 1-12-7 Table of Contents

East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405 www.pacelabs.com

# Log In Back-Sheet

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



	Tab PBand	7			pront	to the at	tention of t	he Client -	True or False	•	T EUT EE R	DVARCING SC
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PWSID# (W	/hen Applicable)						COC Reli	nquished			<u> </u>	
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March 7, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 4 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2863

Enclosed are results of analyses for samples as received by the laboratory on February 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

# Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/7/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2863

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 4 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
4 Leverett Road 23B2863-01 Drinking Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: 4 Leverett Road Shutesbury, Mass Sample Description: Work Order: 23B2863

Date Received: 2/27/2023

Field Sample #: 4 Leverett Road Sampled: 2/23/2023 15:00

Sample ID: 23B2863-01
Sample Matrix: Drinking Water

			Semiv	olatile Organi	c Compoun	ds by - LC/	MS-MS				
				MCL/SMCL					Date	Date/Time	
Analyte	Results	RL	DL	MA ORSG	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.85		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorooctanoic acid (PFOA)	2.7	1.8	0.94		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorooctanesulfonic acid (PFOS)	2.4	1.8	0.69		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.84		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.87		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.61		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.69		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.68		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.76		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
11Cl-PF3OUdS (F53B Major)	1.7	1.8	0.60		ng/L	1	J	EPA 537.1	3/3/23	3/6/23 11:47	AMS
9Cl-PF3ONS (F53B Minor)	97	1.8	0.74		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.80		ng/L	1		EPA 537.1	3/3/23	3/6/23 11:47	AMS
Surrogates		% F	Recovery	Recovery	Limits		Flag/Qual				
13C-PFHxA		92.		70-1		•			•	3/6/23 11:47	•
M3HFPO-DA		79.:	5	70-1	30					3/6/23 11:47	
13C-PFDA		92.		70-1						3/6/23 11:47	
D5-NEtFOSAA		96.	7	70-1	30					3/6/23 11:47	



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2863-01 [4 Leverett Road]	B332536	274	1.00	03/03/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332536 - EPA 537.1											
Blank (B332536-BLK1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	0.82	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.1	0.97	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	0.93	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	2.1	1.0	ng/L							
erfluorooctanoic acid (PFOA)	ND	2.1	1.1	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	2.1	0.79	ng/L							
erfluorononanoic acid (PFNA)	ND	2.1	0.96	ng/L							
erfluorodecanoic acid (PFDA)	ND	2.1	1.0	ng/L							
-EtFOSAA (NEtFOSAA)	ND	2.1	0.69	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	2.1	0.79	ng/L							
-MeFOSAA (NMeFOSAA)	ND	2.1	0.77	ng/L							
erfluorododecanoic acid (PFDoA)	ND	2.1	0.75	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	2.1	0.76	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	2.1	0.87	ng/L							
exafluoropropylene oxide dimer acid	ND	2.1	1.3	ng/L							
IFPO-DA)		2.1	0.60	m ∞ /T							
.CI-PF3OUdS (F53B Major)	ND	2.1	0.69	ng/L							
Cl-PF3ONS (F53B Minor)	ND	2.1 2.1	0.85 0.92	ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	2.1	0.92	ng/L							
urrogate: 13C-PFHxA	38.9			ng/L	41.7		93.4	70-130			
urrogate: M3HFPO-DA	37.7			ng/L	41.7		90.4	70-130			
urrogate: 13C-PFDA	41.5			ng/L	41.7		99.6	70-130			
urrogate: D5-NEtFOSAA	176			ng/L	167		106	70-130			
CS (B332536-BS1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
erfluorobutanesulfonic acid (PFBS)	1.70	1.9	0.75	ng/L	1.70		100	50-150			J
erfluorohexanoic acid (PFHxA)	1.50	1.9	0.90	ng/L	1.91		78.6	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.32	1.9	0.86	ng/L	1.75		75.2	50-150			J
erfluoroheptanoic acid (PFHpA)	1.93	1.9	0.95	ng/L	1.91		101	50-150			
erfluorooctanoic acid (PFOA)	1.59	1.9	0.99	ng/L	1.91		82.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.79	1.9	0.72	ng/L	1.78		100	50-150			J
erfluorononanoic acid (PFNA)	1.57	1.9	0.88	ng/L	1.91		82.0	50-150			J
erfluorodecanoic acid (PFDA)	2.04	1.9	0.92	ng/L	1.91		107	50-150			
-EtFOSAA (NEtFOSAA)	1.88	1.9	0.64	ng/L	1.91		98.1	50-150			J
erfluoroundecanoic acid (PFUnA)	1.82	1.9	0.73	ng/L	1.91		95.2	50-150			J
-MeFOSAA (NMeFOSAA)	1.86	1.9	0.71	ng/L	1.91		97.2	50-150			J
erfluorododecanoic acid (PFDoA)	1.67	1.9	0.69	ng/L	1.91		87.2	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.90	1.9	0.70	ng/L	1.91		99.1	50-150			
erfluorotetradecanoic acid (PFTA)	1.37	1.9	0.80	ng/L	1.91		71.8	50-150			J
exafluoropropylene oxide dimer acid	1.63	1.9	1.2	ng/L	1.91		84.9	50-150			J
HFPO-DA)  Cl-PF3OUdS (F53B Major)	1.50	1.9	0.63	ng/L	1 01		070	50 150			J
CI-PF3ONS (F53B Minor)	1.58	1.9	0.03	ng/L	1.81 1.79		87.8 90.4	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid	1.61	1.9	0.78	ng/L	1.79		90.4 98.3	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid ADONA)	1.78	1.9	0.04	ng/L	1.01		76.3	30-130			J
urrogate: 13C-PFHxA	35.8			ng/L	38.3		93.4	70-130			
nrogate: M3HFPO-DA	34.9			ng/L	38.3		91.2	70-130			
urrogate: 13C-PFDA	36.4			ng/L	38.3		95.1	70-130			
Surrogete: D5 NEtEOS A A	157			ma/I	152		102	70.120			

ng/L

153

103

70-130

157

Surrogate: D5-NEtFOSAA



Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

Surrogate: 13C-PFDA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B332536 - EPA 537.1											
LCS Dup (B332536-BSD1)					Prepared: 03	3/03/23 Analy	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.52	1.9	0.73	ng/L	1.64		92.4	50-150	11.4	50	J
Perfluorohexanoic acid (PFHxA)	1.35	1.9	0.87	ng/L	1.85		72.8	50-150	11.0	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.29	1.9	0.83	ng/L	1.69		76.1	50-150	2.11	50	J
Perfluoroheptanoic acid (PFHpA)	1.67	1.9	0.92	ng/L	1.85		90.3	50-150	14.3	50	J
Perfluorooctanoic acid (PFOA)	1.52	1.9	0.96	ng/L	1.85		82.1	50-150	4.08	50	J
Perfluorooctanesulfonic acid (PFOS)	1.57	1.9	0.70	ng/L	1.72		91.6	50-150	12.5	50	J
Perfluorononanoic acid (PFNA)	1.40	1.9	0.85	ng/L	1.85		75.8	50-150	11.2	50	J
Perfluorodecanoic acid (PFDA)	2.04	1.9	0.89	ng/L	1.85		110	50-150	0.129	50	
N-EtFOSAA (NEtFOSAA)	1.53	1.9	0.62	ng/L	1.85		82.7	50-150	20.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.60	1.9	0.70	ng/L	1.85		86.6	50-150	12.8	50	J
N-MeFOSAA (NMeFOSAA)	1.66	1.9	0.69	ng/L	1.85		89.8	50-150	11.1	50	J
Perfluorododecanoic acid (PFDoA)	1.32	1.9	0.66	ng/L	1.85		71.0	50-150	23.7	50	J
Perfluorotridecanoic acid (PFTrDA)	1.65	1.9	0.68	ng/L	1.85		89.2	50-150	13.8	50	J
Perfluorotetradecanoic acid (PFTA)	1.26	1.9	0.77	ng/L	1.85		67.8	50-150	9.07	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.57	1.9	1.1	ng/L	1.85		84.8	50-150	3.49	50	J
11Cl-PF3OUdS (F53B Major)	1.45	1.9	0.61	ng/L	1.75		83.0	50-150	8.88	50	J
9Cl-PF3ONS (F53B Minor)	1.64	1.9	0.75	ng/L	1.73		94.9	50-150	1.55	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.58	1.9	0.81	ng/L	1.75		90.5	50-150	11.5	50	J
Surrogate: 13C-PFHxA	34.8			ng/L	37.0		93.9	70-130			

ng/L

ng/L

ng/L

37.0

37.0

148

92.6

94.9

101

70-130

70-130

70-130

34.3

35.2

149



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
------------	-------	----	------	------	-------

Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

3387863

Phone: 413-525-2332

Pace Analytical

Doc # 381 Rev 2\_06262019

39 Spruce Street

Preservation Codes Pace Assistical 8 = Sodium Bisutfate GW± Ground Water WW - Waste Water X n. Sodium Hydroxide DW = Drinking Water = Sosiam Phosalfate Matrix Codes s = Sutfuric Acid L . Air S = Soil N = Nitric Actd M = Methanol Di = Di Water St. - Skudge SOL = Solid 0 = Other O = Other ď H = HCL 2 Preservation Code » fred Page esponsible for missing samples sample concentration within the Conc Code column Please use the following codes to indicate possible from prepacked coolers H - High: M - Medium; L - Low; C - Clean; U -\*Pace Analytical is not Chromatogram AIMA-LAP,LLC ANALYSIS REQUESTED Other freezer? Y / N Glassware in Cooler? Y / N Prepackaged £J Courfer Use Only MA MCP Required MCP Certification Form Required RCP Certification Form Required M4 State DW Roquired CT RCP Require East Longmeadow, MA 01026 1.YEE AIV SARI ENCORE ១១១ BACTERIA Ived Metals Samples Orthophosphane samples BACTERIA ENCORE PLASTIC VIALS GUSS Field Filtered Field Filtered Lab to Fitter PCB ONL) Lab to Filter PLASTIC School MWRA MBTA NON SOXHLET GLASS legal document that must be complete and accurate and is used to information on the Chain of Custody. The Chain of Custody is a determine what analyses the laboratory will perform. Any missing values your partnership on each project and will try to assist with missing information, but will not be held accountable. information is not the laboratory's responsibility. Pace Analytical Dischalmer. Pace Analytical is not responsible for any omitted SOXHLER CISAIN OF CUSTODY RECORD VIALS 900 00 00 Core Code Asipsothightbond.com; Stransithighetond.com  $\supset$ (10.pay E Municipality Brownfield Due Date: PWS4D# 2 2 3 3 10-Day 3-Day EXCEL 3 ත O 213 Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMPTRAME 0 kg 0 Debection Unit Requirements 9 FAS 10-Day (std) 70, ۵۵ Ending Bate/Time Government email To: 8 FRX TO #; Federal omet Other ģ '-Day Ş Š Project Entity Office i.o 2/23/23 Beginning Date/Time 51 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time // 30 D/2169 2/22/23 070 Shutesbury, Massachusetts Date Times I will Town of Shutesbury (413) 562-1600 Clerk Sample 10 / Description Samuel Evans Fax: 413-525-6405 Jeff Arps 5-2190 4 Leverett Road Date/Time: Date/Time: Date/Time: Date/Time deceived by Signature) Pace Analytical Quote Name/Number cetinquished by (signature) , Ko lelinquished by: (signature) Relinquished by: (signature edinquished by: (signature Pace Analytical Work Order# ceived by: Isignature) Received by: (signature) Received by: (signature) complant Name Invoice Recipient: Project Location: Project Manager. Project Number: Sampled By: Page 11 of 12

op opruce St. East Longmeadow, MA. 01028 P: 413-525-2332

> F:413-525-6405 www.pacelabs.com

ENV-FNIVI-ELON-UUU9VU2\_\_Sample Receiving Checklist 1-12 Table of Contents

# Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Clir



Client	Tighe & Band	1		Di		- erreution	or the cheff	- True or False		PEOPLE AS	
	PFAS Sample	relled	Ízila							True	False
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	ble Package Req				······	Received in Cooler				$\overline{\Sigma}$	
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	ture Method Ct			<u> </u>		Proper i	Media/Co	ntainer Used		X	
	< 6° C Actual Temp			<del></del>		Splitting	Samples	Required			$\overline{\mathbf{X}}$
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*************							oles Prop	oerpH: {	N/A		
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1L 500 ml 250 ml Other	Amber Plastic  Amber Plastic  Amber (Plastic  Amber Clear Plastic	e) UnP	HCI	ноз			Trizma		Other Pre	servative	
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1t 500 mi 250 mi Other 16oz 8oz 4oz 2oz Col/Bac Flashpo Plastic SOC Kit	Amber Plastic  Amber Plastic  Amber Plastic  Amber Clear Plastic  Amber Clear  Amber Clear  Amber Clear  Amber Clear  Amber Clear  Amber Clear  Clear  Companies Clear  Companie	e) UnP	HCI	HNO3			Trizma		Other Pre	servative	
1t 500 mi 250 mi Other 16oz 8oz 4oz 2oz Col/Bac Flashpo Plastic SOC Kit Perchlo Encore	Amber Plastic  Amber Plastic  Amber Plastic  Amber Clear Plastic  Amber Clear  Amber Clear  Amber Clear  Amber Clear  Amber Clear  Amber Clear  Clear  Companies Clear  Companie		HCI	HN03	H2SO4	NaOH	Trizma 2		Other Pre	Servative	

February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 10 Leverett Road, Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2157

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

# Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/24/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2157

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 10 Leverett Road, Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

10 Leverett Road 23B2157-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

Analyte & Samples(s) Qualified:

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

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

Meghan E. Kelley Reporting Specialist



Project Location: 10 Leverett Road, Shutesbury, Ma Sample Description: Work Order: 23B2157

Date Received: 2/17/2023

Field Sample #: 10 Leverett Road Sampled: 2/16/2023 12:00

Sample ID: 23B2157-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

D5-NEtFOSAA

Semivolatile C	Organic Compour	nds by - LC/MS-MS

								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.70	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.83	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.89	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorooctanoic acid (PFOA)	ND	1.8	0.92	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorooctanesulfonic acid (PFOS)	1.4	1.8	0.68	ng/L	1	J	EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.82	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.86	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.59	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.68	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.64	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.65	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.75	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
11Cl-PF3OUdS (F53B Major)	13	1.8	0.59	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
9Cl-PF3ONS (F53B Minor)	330	18	7.3	ng/L	10	D	EPA 537.1	2/21/23	2/23/23 14:15	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.78	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:57	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		83.	8	70-130					2/23/23 12:57	
13C-PFHxA		84.	6	70-130					2/23/23 14:15	
M3HFPO-DA		80.	2	70-130					2/23/23 12:57	
M3HFPO-DA		88.	1	70-130					2/23/23 14:15	
13C-PFDA		88.	6	70-130					2/23/23 12:57	

70-130

70-130

70-130

87.3

94.0

91.9

2/23/23 14:15

2/23/23 12:57

2/23/23 14:15



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2157-01 [10 Leverett Road]	B332208	280	1.00	02/21/23
23B2157-01RE1 [10 Leverett Road]	B332208	280	1.00	02/21/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332208 - EPA 537.1											
Blank (B332208-BLK1)					Prepared: 02	2/21/23 Anal	yzed: 02/23/2	3			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.86	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.95	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.88	ng/L							
-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.66	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
HFPO-DA)		1.0	0.61	/T							
CLPF3OUdS (F53B Major)	ND	1.8	0.61	ng/L ng/L							
CI-PF3ONS (F53B Minor)	ND	1.8 1.8	0.75 0.80	ng/L ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.0	0.80	ng/L							
urrogate: 13C-PFHxA	32.3			ng/L	36.6		88.2	70-130			
urrogate: M3HFPO-DA	33.4			ng/L	36.6		91.2	70-130			
urrogate: 13C-PFDA	33.1			ng/L	36.6		90.4	70-130			
urrogate: D5-NEtFOSAA	137			ng/L	146		93.4	70-130			
CS (B332208-BS1)					Prepared: 02	2/21/23 Anal	yzed: 02/23/2	3			
erfluorobutanesulfonic acid (PFBS)	1.35	1.8	0.72	ng/L	1.62		83.5	50-150			J
erfluorohexanoic acid (PFHxA)	1.29	1.8	0.85	ng/L	1.83		70.8	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.15	1.8	0.82	ng/L	1.67		69.1	50-150			J
erfluoroheptanoic acid (PFHpA)	1.51	1.8	0.91	ng/L	1.83		82.9	50-150			J
erfluorooctanoic acid (PFOA)	1.29	1.8	0.94	ng/L	1.83		70.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.48	1.8	0.69	ng/L	1.69		87.4	50-150			J
erfluorononanoic acid (PFNA)	1.36	1.8	0.84	ng/L	1.83		74.6	50-150			J
erfluorodecanoic acid (PFDA)	1.74	1.8	0.88	ng/L	1.83		95.2	50-150			J
-EtFOSAA (NEtFOSAA)	1.48	1.8	0.61	ng/L	1.83		81.0	50-150			J
erfluoroundecanoic acid (PFUnA)	1.49	1.8	0.69	ng/L	1.83		81.6	50-150			J
-MeFOSAA (NMeFOSAA)	1.48	1.8	0.68	ng/L	1.83		81.1	50-150			J
erfluorododecanoic acid (PFDoA)	1.30	1.8	0.65	ng/L	1.83		71.4	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.66	1.8	0.67	ng/L	1.83		91.2	50-150			J
erfluorotetradecanoic acid (PFTA)	1.41	1.8	0.76	ng/L	1.83		77.0	50-150			J
exafluoropropylene oxide dimer acid  HFPO-DA)	1.66	1.8	1.1	ng/L	1.83		90.8	50-150			J
CLPF3OUdS (F53B Major)	1.37	1.8	0.61	ng/L	1.72		79.5	50-150			J
CI-PF3ONS (F53B Minor) ,8-Dioxa-3H-perfluorononanoic acid	1.36 1.40	1.8 1.8	0.74 0.80	ng/L ng/L	1.70 1.73		80.1 81.3	50-150 50-150			J
ADONA) Surrogate: 13C-PFHxA	31.6			ng/L	36.5		86.6	70-130			
urrogate: M3HFPO-DA	31.8			ng/L	36.5		87.0	70-130			
urrogate: 13C-PFDA	30.9			ng/L	36.5		84.6	70-130			
	30.7			g.L	20.5		00	, 5 150			



Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
		<u> </u>									
Batch B332208 - EPA 537.1											
LCS Dup (B332208-BSD1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.49	1.8	0.72	ng/L	1.62		91.9	50-150	9.55	50	J
Perfluorohexanoic acid (PFHxA)	1.48	1.8	0.85	ng/L	1.83		81.1	50-150	13.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.40	1.8	0.82	ng/L	1.67		83.8	50-150	19.3	50	J
Perfluoroheptanoic acid (PFHpA)	1.88	1.8	0.91	ng/L	1.83		103	50-150	21.4	50	
Perfluorooctanoic acid (PFOA)	1.54	1.8	0.94	ng/L	1.83		84.4	50-150	17.6	50	J
Perfluorooctanesulfonic acid (PFOS)	1.73	1.8	0.69	ng/L	1.70		102	50-150	15.7	50	J
Perfluorononanoic acid (PFNA)	1.54	1.8	0.84	ng/L	1.83		84.2	50-150	12.1	50	J
Perfluorodecanoic acid (PFDA)	2.02	1.8	0.88	ng/L	1.83		110	50-150	14.7	50	
N-EtFOSAA (NEtFOSAA)	1.65	1.8	0.61	ng/L	1.83		90.5	50-150	11.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.79	1.8	0.69	ng/L	1.83		98.0	50-150	18.3	50	J
N-MeFOSAA (NMeFOSAA)	1.69	1.8	0.68	ng/L	1.83		92.6	50-150	13.4	50	J
Perfluorododecanoic acid (PFDoA)	1.54	1.8	0.66	ng/L	1.83		84.2	50-150	16.6	50	J
Perfluorotridecanoic acid (PFTrDA)	1.86	1.8	0.67	ng/L	1.83		102	50-150	11.1	50	
Perfluorotetradecanoic acid (PFTA)	1.32	1.8	0.76	ng/L	1.83		72.3	50-150	6.22	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.58	1.8	1.1	ng/L	1.83		86.5	50-150	4.80	50	J
11Cl-PF3OUdS (F53B Major)	1.72	1.8	0.61	ng/L	1.72		99.6	50-150	22.5	50	J
9Cl-PF3ONS (F53B Minor)	1.69	1.8	0.74	ng/L	1.71		99.3	50-150	21.5	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.76	1.8	0.80	ng/L	1.73		102	50-150	22.5	50	J

ng/L

ng/L

ng/L

ng/L

36.5

36.5

36.5

146

93.0

93.8

91.0

93.6

70-130

70-130

70-130

70-130

34.0

34.3

33.3

137



#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected

RL Reporting Limit
DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

D Sample analyzed at a dilution.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

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Doc # 381 Rev 2\_06262019

https://www.pacelabs.com/

Phone: 413-525-2332

Preservation Codes Pacekthoon B - Sodium Bisulfate WW = Waste Water GW= Ground Water ( = Sedium Hydroxide DW = Brinking Water - Sedium Pacsullate Matrix Codes · Sufferic Acid A = Air S = Sail N - Hitric Acid OI = Di Water St = Studge SOL - Solid 0 = Other 0 = Other ö 2 Preservation Code · Eced ¥ + KL Page responsible for missing samples sample concentration within the Conc Code column Please use the following codes to indicate possible H - High; M - Medium; L - Low; C - Clean; U -\*Pace Analytical is not from prepacked coolers 🗀 Сиопатодгат AMA-LAP,LLC ANALYSIS REQUESTED Other Glassware in freezer? Y / N Prepackaged Cooler? Y / N MA MCP Required MCP Cortification Form Required Courier Use Only CT RCP Required RCP Certification Form Requires MA State DW Required 39 Spruce Street East Longmeadow, MA 01026 PFAS VIZ 537.1 CHCORE SACTERIA BACTERIA ENCORE Orthophosphate Samp PLASTIC VIALS GLASS Field Filtered Field Filtered PCB ONLY Lab to Filter Lab to Filter PLASTIC School MBTA NON SOXHLET GLASS legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing values your partnership on each project and will try to assist with missing information, but will not be held accountable. information on the Chain of Custody. The Chain of Custody is a information is not the laboratory's responsibility. Pace Analytical Disclaimer: Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD YIALS 00 0 0 Gent Code .A 4rpa@Tighebond.com; \Lvany@Tighebond.com Municipality Brownfield Due Date: # QISMd Kent Gede 10-Day EXCE 3 3-Day Ġ + Day Bill to Town of Shutesbury - PO: 57-101490 LLP Like Data Pkg Required: COMP/GRAB Detection Limit Regulements 5 2 2 3 O PFAS 10-Day (std) 🗓 304 ם ם Government Ending Date/Time mail to: 2/1//2 1205 RX TO A: Format: Federal Other φĠ-·bay -Day Ġ Project Entity allo Beginning Date/Time 79 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sclences/ PFAS Sample Collection - Shutesbury Dage (Time; 6 SS Sete/Time: Shutesbury, Massachusetts Date/Time: 2/12/23 o 300 Leverett Kend Town of Shutesbury 25/ 655 (413) 562-1600 Clerk Sample ID / Description Samuel Evans Jeff Arps Fax: 413-525-6405 5-2190 Jate/Time: Date/Time: Date/Time: Jate/Time: 23 0 Pace Analytical Quote Name/Number \* Face Analytical (elinquished by: (signature) Pace Analytical Work Drown Received by: (signature) Received by: (signature) thoughthed by: tsignal Ompany Name Project Location: Involce Recipient: Project Number: Project Manager: Comments: Sampled By: 4ddress: Page 11 of 12 39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405

www.pacelabs.com

EINV-FKIM-ELUN-UUUSVUZ\_Sample Keceiving Checklist 1-12-2 Table of Contents

# Log In Back-Sheet

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



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February 28, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 16 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2160

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/28/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2160

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 16 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
16 Leverett Road-INF	23B2160-01	Ground Water		EPA 537.1	
16 Leverett Road-EFF	23B2160-02	Ground Water		EPA 537.1	



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley Reporting Specialist

Meghan S. Kelley



Project Location: 16 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2160

Date Received: 2/17/2023

Field Sample #: 16 Leverett Road-INF Sampled: 2/16/2023 11:05

Sample ID: 23B2160-01 Sample Matrix: Ground Water

S	emivo	latile	Organic	Compounds	by -	LC/MS-MS
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Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.70	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.83	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.88	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorooctanoic acid (PFOA)	0.92	1.8	0.92	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorooctanesulfonic acid (PFOS)	28	1.8	0.67	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.82	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.85	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.59	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.67	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.64	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.65	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.74	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.59	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.72	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.78	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:02	AMS
Surrogates	<u>'</u>	% F	Recovery	Recovery Limits	·	Flag/Qual			·	
13C-PFHxA		108	3	70-130					2/27/23 9:02	
M3HFPO-DA		102	2	70-130					2/27/23 9:02	

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C-PFHxA	108	70-130		2/27/23 9:02
M3HFPO-DA	102	70-130		2/27/23 9:02
13C-PFDA	110	70-130		2/27/23 9:02
D5-NEtFOSAA	118	70-130		2/27/23 9:02



Project Location: 16 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2160

Date Received: 2/17/2023

Field Sample #: 16 Leverett Road-EFF Sampled: 2/16/2023 11:15

Sample ID: 23B2160-02

13C-PFDA

D5-NEtFOSAA

Sample Matrix: Ground Water										
			Semivol	atile Organic Compoun	ds by - LC/	MS-MS				
								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.74	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.88	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.84	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.93	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorooctanoic acid (PFOA)	ND	1.9	0.97	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorooctanesulfonic acid (PFOS)	0.93	1.9	0.71	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorononanoic acid (PFNA)	ND	1.9	0.86	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorodecanoic acid (PFDA)	ND	1.9	0.90	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.9	0.62	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.71	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.70	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.67	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.68	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.78	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	1.2	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.9	0.62	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.9	0.76	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.82	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:09	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		88.		70-130					2/27/23 9:09	
M3HFPO-DA		85	3	70-130					2/27/23 9:09	

70-130

70-130

107

109

2/27/23 9:09 2/27/23 9:09



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2160-01 [16 Leverett Road-INF]	B332209	281	1.00	02/22/23
23B2160-02 [16 Leverett Road-EFF]	B332209	267	1.00	02/22/23



Surrogate: D5-NEtFOSAA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332209 - EPA 537.1											
Blank (B332209-BLK1)					Prepared: 02	2/22/23 Analy	zed: 02/27/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.85	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	0.94	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	0.87	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
Hexafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
1Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
PCI-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L							
,8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.8	0.80	ng/L							
Surrogate: 13C-PFHxA	33.5			ng/L	36.4		92.0	70-130			
Surrogate: M3HFPO-DA	33.0			ng/L	36.4		90.5	70-130			
Surrogate: 13C-PFDA	34.9			ng/L	36.4		95.9	70-130			
Surrogate: D5-NEtFOSAA	141			ng/L	146		96.8	70-130			
LCS (B332209-BS1)					Prepared: 02	2/22/23 Analy	zed: 02/27/2	23			
Perfluorobutanesulfonic acid (PFBS)	9.40	1.8	0.72	ng/L	8.07		116	70-130			
Perfluorohexanoic acid (PFHxA)	8.56	1.8	0.85	ng/L	9.10		94.1	70-130			
Perfluorohexanesulfonic acid (PFHxS)	7.71	1.8	0.81	ng/L	8.32		92.7	70-130			
Perfluoroheptanoic acid (PFHpA)	10.7	1.8	0.90	ng/L	9.10		118	70-130			
Perfluorooctanoic acid (PFOA)	8.96	1.8	0.94	ng/L	9.10		98.4	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.6	1.8	0.69	ng/L	8.45		125	70-130			
Perfluorononanoic acid (PFNA)	9.71	1.8	0.84	ng/L	9.10		107	70-130			
Perfluorodecanoic acid (PFDA)	11.3	1.8	0.87	ng/L	9.10		124	70-130			
N-EtFOSAA (NEtFOSAA)	11.1	1.8	0.60	ng/L	9.10		122	70-130			
Perfluoroundecanoic acid (PFUnA)	10.8	1.8	0.69	ng/L	9.10		119	70-130			
N-MeFOSAA (NMeFOSAA)	11.3	1.8	0.68	ng/L	9.10		125	70-130			
Perfluorododecanoic acid (PFDoA)	11.1	1.8	0.65	ng/L	9.10		122	70-130			
Perfluorotridecanoic acid (PFTrDA)	11.0	1.8	0.66	ng/L	9.10		120	70-130			
Perfluorotetradecanoic acid (PFTA)	8.43	1.8	0.76	ng/L	9.10		92.7	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.69	1.8	1.1	ng/L	9.10		95.4	70-130			
11Cl-PF3OUdS (F53B Major)	10.4	1.8	0.60	ng/L	8.58		121	70-130			
9Cl-PF3ONS (F53B Minor) 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.5 9.97	1.8 1.8	0.74 0.80	ng/L ng/L	8.49 8.60		123 116	70-130 70-130			
Surrogate: 13C-PFHxA	37.8			ng/L	36.4		104	70-130			
Surrogate: M3HFPO-DA	36.8			ng/L	36.4		101	70-130			
Surrogate: 13C-PFDA	38.6			ng/L	36.4		106	70-130			
٠٠٠٠٠	20.0			0							

146

ng/L

107

70-130

156



Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

	F	Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch B332209 - EPA 537.1										
LCS Dup (B332209-BSD1)	Prepared: 02/22/23 Analyzed: 02/27/23									
Perfluorobutanesulfonic acid (PFBS)	8.78	1.8	0.72	ng/L	8.08	109	70-130	6.85	30	
Perfluorohexanoic acid (PFHxA)	8.03	1.8	0.85	ng/L	9.11	88.1	70-130	6.45	30	
Perfluorohexanesulfonic acid (PFHxS)	6.99	1.8	0.82	ng/L	8.33	83.9	70-130	9.81	30	
Perfluoroheptanoic acid (PFHpA)	10.1	1.8	0.91	ng/L	9.11	111	70-130	5.49	30	
Perfluorooctanoic acid (PFOA)	8.79	1.8	0.94	ng/L	9.11	96.4	70-130	1.96	30	
Perfluorooctanesulfonic acid (PFOS)	9.23	1.8	0.69	ng/L	8.45	109	70-130	13.8	30	
Perfluorononanoic acid (PFNA)	8.98	1.8	0.84	ng/L	9.11	98.6	70-130	7.79	30	
Perfluorodecanoic acid (PFDA)	10.7	1.8	0.87	ng/L	9.11	118	70-130	5.23	30	
N-EtFOSAA (NEtFOSAA)	9.84	1.8	0.60	ng/L	9.11	108	70-130	11.9	30	
Perfluoroundecanoic acid (PFUnA)	10.2	1.8	0.69	ng/L	9.11	112	70-130	5.55	30	
N-MeFOSAA (NMeFOSAA)	9.96	1.8	0.68	ng/L	9.11	109	70-130	12.9	30	
Perfluorododecanoic acid (PFDoA)	10.3	1.8	0.65	ng/L	9.11	113	70-130	7.09	30	
Perfluorotridecanoic acid (PFTrDA)	10.2	1.8	0.66	ng/L	9.11	112	70-130	7.17	30	
Perfluorotetradecanoic acid (PFTA)	8.19	1.8	0.76	ng/L	9.11	89.9	70-130	2.97	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.92	1.8	1.1	ng/L	9.11	86.9	70-130	9.23	30	
11Cl-PF3OUdS (F53B Major)	9.42	1.8	0.60	ng/L	8.59	110	70-130	9.69	30	
9Cl-PF3ONS (F53B Minor)	9.55	1.8	0.74	ng/L	8.50	112	70-130	9.11	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.26	1.8	0.80	ng/L	8.61	108	70-130	7.39	30	

ng/L

ng/L

ng/L

ng/L

36.4

36.4

36.4

146

103

101

105

103

70-130

70-130

70-130

70-130

37.5

37.0

38.2

150



#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected

RL Reporting Limit
DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

**Analyte** Certifications

EPA 537	7.1 ii	ı Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

2310 2160 JX

39 Spruce St. East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405

www.pacelabs.com

ENV-FRIVI-ELUN-DUDYVUZ\_Sample Receiving Unecklist 1-12-21 Table of Contents

Log In Back-Sheet

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



	ighe + Bond								T	rue	Fals
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250 mL	Amber Plastic						<b>-</b>				
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March 1, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 17 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2200

Enclosed are results of analyses for samples as received by the laboratory on February 20, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

# Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REFORT D

REPORT DATE: 3/1/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2200

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 17 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

17 Leverett Road 23B2200-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley Reporting Specialist

Meghan S. Kelley



Project Location: 17 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2200

Date Received: 2/20/2023

Field Sample #: 17 Leverett Road Sampled: 2/17/2023 13:25

Sample ID: 23B2200-01

Sample Matrix: Ground Water										
			Semivol	atile Organic Compoun	ds by - LC/	MS-MS				
								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	1.1	1.8	0.72	ng/L	1	J	EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.85	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.2	1.8	0.81	ng/L	1	J	EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluoroheptanoic acid (PFHpA)	1.6	1.8	0.90	ng/L	1	J	EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorooctanoic acid (PFOA)	4.7	1.8	0.94	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorooctanesulfonic acid (PFOS)	3.5	1.8	0.69	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.87	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:11	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		70.	3	70-130					2/28/23 9:11	
M3HFPO-DA		70.	4	70-130					2/28/23 9:11	

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C-PFHxA	70.3	70-130		2/28/23 9:11
M3HFPO-DA	70.4	70-130		2/28/23 9:11
13C-PFDA	96.8	70-130		2/28/23 9:11
D5-NEtFOSAA	99.4	70-130		2/28/23 9:11



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2200-01 [17 Leverett Road]	B332312	275	1.00	02/27/23



Surrogate: D5-NEtFOSAA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332312 - EPA 537.1											
Blank (B332312-BLK1)					Prepared: 02	2/27/23 Analy	/zed: 02/28/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.84	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.81	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.90	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	0.93	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.68	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	0.83	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	0.86	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.68	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.67	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.75	ng/L							
Hexafluoropropylene oxide dimer acid HFPO-DA)	ND	1.8	1.1	ng/L							
1Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
PCI-PF3ONS (F53B Minor)	ND	1.8	0.73	ng/L							
,8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.8	0.79	ng/L							
Surrogate: 13C-PFHxA	39.2			ng/L	36.1		109	70-130			
Surrogate: M3HFPO-DA	40.0			ng/L	36.1		111	70-130			
Surrogate: 13C-PFDA	37.9			ng/L	36.1		105	70-130			
Surrogate: D5-NEtFOSAA	152			ng/L	144		105	70-130			
LCS (B332312-BS1)					Prepared: 02	2/27/23 Analy	zed: 02/28/2	23			
Perfluorobutanesulfonic acid (PFBS)	15.8	1.8	0.71	ng/L	16.0		98.4	70-130			
Perfluorohexanoic acid (PFHxA)	15.3	1.8	0.84	ng/L	18.1		84.6	70-130			
Perfluorohexanesulfonic acid (PFHxS)	13.6	1.8	0.81	ng/L	16.5		82.2	70-130			
Perfluoroheptanoic acid (PFHpA)	18.9	1.8	0.90	ng/L	18.1		104	70-130			
Perfluorooctanoic acid (PFOA)	16.3	1.8	0.93	ng/L	18.1		90.1	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.8	1.8	0.68	ng/L	16.8		106	70-130			
Perfluorononanoic acid (PFNA)	16.9	1.8	0.83	ng/L	18.1		93.4	70-130			
Perfluorodecanoic acid (PFDA)	19.5	1.8	0.87	ng/L	18.1		108	70-130			
N-EtFOSAA (NEtFOSAA)	18.6	1.8	0.60	ng/L	18.1		103	70-130			
Perfluoroundecanoic acid (PFUnA)	19.0	1.8	0.69	ng/L	18.1		105	70-130			
N-MeFOSAA (NMeFOSAA)	18.9	1.8	0.67	ng/L	18.1		105	70-130			
Perfluorododecanoic acid (PFDoA)	19.7	1.8	0.65	ng/L	18.1		109	70-130			
Perfluorotridecanoic acid (PFTrDA)	19.3	1.8	0.66	ng/L	18.1		107	70-130			
Perfluorotetradecanoic acid (PFTA)	15.2	1.8	0.75	ng/L	18.1		84.3	70-130			
Hexafluoropropylene oxide dimer acid HFPO-DA)	14.0	1.8	1.1	ng/L	18.1		77.3	70-130			
11Cl-PF3OUdS (F53B Major)	17.6	1.8	0.60	ng/L	17.0		103	70-130			
9Cl-PF3ONS (F53B Minor) 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	17.2 17.4	1.8 1.8	0.74 0.79	ng/L ng/L	16.9 17.1		102 102	70-130 70-130			
Surrogate: 13C-PFHxA	37.8			ng/L	36.1		104	70-130			
Surrogate: M3HFPO-DA	37.9			ng/L	36.1		105	70-130			
Surrogate: 13C-PFDA	36.9			ng/L	36.1		102	70-130			
	20.7			0							

145

ng/L

105

70-130

153



Surrogate: D5-NEtFOSAA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

# $Semivolatile\ Organic\ Compounds\ by\ -\ LC/MS-MS\ -\ Quality\ Control$

Analyte Result Limit DL Units Level Result %REC Limits RPD Limit N		]	Reporting			Spike	Source		%REC		RPD		
	Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

LCS Dup (B332312-BSD1)	Prepared: 02/27/23 Analyzed: 02/28/23										
Perfluorobutanesulfonic acid (PFBS)	15.3	1.8	0.71	ng/L	16.0	95.5	70-130	2.89	30		
Perfluorohexanoic acid (PFHxA)	14.9	1.8	0.85	ng/L	18.1	82.5	70-130	2.39	30		
Perfluorohexanesulfonic acid (PFHxS)	13.6	1.8	0.81	ng/L	16.5	82.3	70-130	0.225	30		
Perfluoroheptanoic acid (PFHpA)	18.5	1.8	0.90	ng/L	18.1	102	70-130	1.98	30		
Perfluorooctanoic acid (PFOA)	15.6	1.8	0.94	ng/L	18.1	86.3	70-130	4.23	30		
Perfluorooctanesulfonic acid (PFOS)	17.7	1.8	0.68	ng/L	16.8	106	70-130	0.290	30		
Perfluorononanoic acid (PFNA)	17.0	1.8	0.83	ng/L	18.1	93.7	70-130	0.462	30		
Perfluorodecanoic acid (PFDA)	19.1	1.8	0.87	ng/L	18.1	106	70-130	1.78	30		
N-EtFOSAA (NEtFOSAA)	18.8	1.8	0.60	ng/L	18.1	104	70-130	1.13	30		
Perfluoroundecanoic acid (PFUnA)	18.7	1.8	0.69	ng/L	18.1	103	70-130	1.34	30		
N-MeFOSAA (NMeFOSAA)	19.0	1.8	0.67	ng/L	18.1	105	70-130	0.493	30		
Perfluorododecanoic acid (PFDoA)	19.0	1.8	0.65	ng/L	18.1	105	70-130	3.63	30		
Perfluorotridecanoic acid (PFTrDA)	19.1	1.8	0.66	ng/L	18.1	106	70-130	1.07	30		
Perfluorotetradecanoic acid (PFTA)	15.4	1.8	0.76	ng/L	18.1	85.2	70-130	1.19	30		
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.9	1.8	1.1	ng/L	18.1	71.1	70-130	8.34	30		
11Cl-PF3OUdS (F53B Major)	17.5	1.8	0.60	ng/L	17.1	103	70-130	0.505	30		
9Cl-PF3ONS (F53B Minor)	17.9	1.8	0.74	ng/L	16.9	106	70-130	3.57	30		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	17.0	1.8	0.80	ng/L	17.1	99.7	70-130	2.08	30		
Surrogate: 13C-PFHxA	33.6			ng/L	36.2	92.9	70-130				
Surrogate: M3HFPO-DA	33.7			ng/L	36.2	93.1	70-130				
Surrogate: 13C-PFDA	34.1			ng/L	36.2	94.2	70-130				

ng/L

145

96.4

70-130

140



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

ProceAssiyotak

0 = Other

responsible for missing samples

freezer? Y / N Prepackaged Cooler? Y / N

from prepacked coolers \*Pace Analytical is not

BACTERIA

values your partnership on each project and will try to assist with information is not the laboratory's responsibility. Pace Analytical

Page

11 of 12

missing information, but will not be held accountable

PLASTIC ENCORE

GLASS

1382200

Phone: 413-525-2332

Pace Analytical

Fax: 413-525-6405

https://www.pacelabs.com/

Dec # 381 Rev 2\_06262019

39 Spruce Street

Preservation Codes B - Sodium Bisulfate Matrix Codes GW\* Ground Water WW - Waste Water DW :: Drinking Water X = Sodium Hygnoxide = Sodium Phiosottan 5 - Suffuric Acid A = Air S . Soil N - Nitric Acid M : Methanol Di = Oi Water Page \_\_\_\_ of St = Studge SOL = Solid - Other 2 Preservation Code H » MCL Please use the following codes to indicate possible sample concentration within the Conc Code column H - High; M - Medium; L - Low; C - Clean; U -Chromatogram AMA-LAP, LLC ANALYSIS REQUESTED Other Glassware in Courier Use Only MCP Certification Form Required MA MCP Required CT RCP Required RCP Certification Forth Require M4 State DW Required East Longmeadow, MA 01026 F. YES SIV 2A 99 ENCORE Ved Metals Samples BACTERIA ophophate San Field Filtered Field Filtered PCB ONLY YIALS Lab to Filter Lab to Filter PLASTIC School NON SOXHLET GLASS. legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information on the Chain of Custody. The Chain of Custody is a SOXHLET Disclaimer: Pace Analytical is not responsible for any omitted CHAIN OF CUSTODY RECORD MALS 0 0 0 0 Tayley Taylor 1830 SS Alarys in Tight thanks, com; Several Cityle band, com □ D Municipality Due Date: **Brownfield** For Approval Chapter Ť 10-Day PWSID # EXCE <u>2</u> 3-Oay 4-Day (3) Ö Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: 525 COMPTORAS Ø FAS 10-Day (std) [] 50 Ending Date/Time Sovernment Email To: 2/1/2 1325 ormat ax Jo# Federal 7-Day .Day Ý8Ġ-È Project Entity 53 Southampton Road, Westfield, Massachusetts oller Contact: https://www.pacefabs.com/contact-us/contact-environmental-sciences/ (1) W PFAS Sample Collection - Shutesbury Shutesbury, Massachusetts 4/21/23 CSR To 3-30-32 14:26 3-20-23 Town of Shutesbury 17 leven 4 Rond (413) 562-1600 Client Sample (D.) Description Tiphe & Bond Samuel Evans 5-2190 Jelf Arps Date/Time: Date/Time: Oate/Fime: Date/Time: Date/I'me: Pace Analytical Work Order# Oct by: (signate

Pace Analytical Quote Name/Number (elinquished by: (s/gnature) Received by: (signature) Received by: (signature) Involce Recipient; Project Locations Project Manager: Project Number: Address;

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

ENV-FRM-ELON-0009V02\_Sample Receiving Checklist 1-12-2

# Log In Back-Sheet

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



client Fight and									True	False
Project_ <i>PFAS_SUMP</i>	le collec	tion-	-Shure:	bury					Press.	taise.
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Deliverable Package Req	NA				Receive	d in Coole	<u> </u>	·······	Ш	
Location Shitesbury	MUSS		·····		Custody	Seal: DAT	TET	IME		
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					Client Project	<del>+/-</del> -		•	Name on Date/Ti	ime 🕖
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1L Amber Plastic		HCI	HNO3		roject All Samp	iles Prop	s 🗹 er pH: (	Collection	on Date/Ti	ime Ø
1L Amber Plastic 500 mL Amber Plastic	:	НСІ	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic		HCI	HNO3		roject All Samp	iles Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic		HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic		P HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Rastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear		HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear		P HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria		р НСІ	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Rastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint		HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag		P HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit		HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit Perchlorate		P HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit Perchlorate Encore		HCI	HNO3		roject All Samp	les Prop	s 🗹 er pH: (	Collection	on Date/Ti	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Klt Perchlorate Encore Frozen				H2SO4	NaOH	ID  les Prop	er pH: (	Collectic  N/A   [	ervative	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit Perchlorate Encore		HCI	HNO3	H2SO4	NaOH	ID  les Prop	s 🗹 er pH: (	Collection	on Date/Ti	

February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 20 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2142

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

# Table of Contents

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B332208	7
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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/24/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2142

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 20 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

20 Leverett Road 23B2142-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington
Technical Representative

na Watslengton



Project Location: 20 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2142

Date Received: 2/17/2023

Field Sample #: 20 Leverett Road Sampled: 2/16/2023 10:00

Sample ID: 23B2142-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

Semivolatile Organic Compounds by - LC/MS-MS	

Analyte	Results	RL	DL	Units	DF	Flog/Ougl	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	1.4	1.7	0.68	ng/L	1	Flag/Qual	EPA 537.1	2/21/23	2/23/23 12:14	Amaryst
, ,				· ·		J				
Perfluorohexanoic acid (PFHxA)	6.0	1.7	0.81	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.7	0.77	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluoroheptanoic acid (PFHpA)	11	1.7	0.86	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorooctanoic acid (PFOA)	21	1.7	0.89	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorooctanesulfonic acid (PFOS)	3.1	1.7	0.65	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorononanoic acid (PFNA)	1.1	1.7	0.79	ng/L	1	J	EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorodecanoic acid (PFDA)	ND	1.7	0.83	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.65	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.64	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.62	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.63	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.72	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	1.1	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.70	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.76	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:14	AMS
Surrogates	·	% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		89.	5	70-130					2/23/23 12:14	
M3HFPO-DA		86.	4	70-130					2/23/23 12:14	

70-130

70-130

89.9

94.9

2/23/23 12:14

2/23/23 12:14



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2142-01 [20 Leverett Road]	B332208	290	1.00	02/21/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332208 - EPA 537.1											
Blank (B332208-BLK1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	3			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.86	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.95	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.88	ng/L							
I-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.66	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
HFPO-DA)		1.0	0.61	/T							
CLPF3OUdS (F53B Major)	ND	1.8	0.61	ng/L ng/L							
CI-PF3ONS (F53B Minor)	ND	1.8 1.8	0.75 0.80	ng/L ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.0	0.80	ng/L							
urrogate: 13C-PFHxA	32.3			ng/L	36.6		88.2	70-130			
urrogate: M3HFPO-DA	33.4			ng/L	36.6		91.2	70-130			
urrogate: 13C-PFDA	33.1			ng/L	36.6		90.4	70-130			
urrogate: D5-NEtFOSAA	137			ng/L	146		93.4	70-130			
.CS (B332208-BS1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	3			
erfluorobutanesulfonic acid (PFBS)	1.35	1.8	0.72	ng/L	1.62		83.5	50-150			J
erfluorohexanoic acid (PFHxA)	1.29	1.8	0.85	ng/L	1.83		70.8	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.15	1.8	0.82	ng/L	1.67		69.1	50-150			J
erfluoroheptanoic acid (PFHpA)	1.51	1.8	0.91	ng/L	1.83		82.9	50-150			J
erfluorooctanoic acid (PFOA)	1.29	1.8	0.94	ng/L	1.83		70.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.48	1.8	0.69	ng/L	1.69		87.4	50-150			J
erfluorononanoic acid (PFNA)	1.36	1.8	0.84	ng/L	1.83		74.6	50-150			J
erfluorodecanoic acid (PFDA)	1.74	1.8	0.88	ng/L	1.83		95.2	50-150			J
-EtFOSAA (NEtFOSAA)	1.48	1.8	0.61	ng/L	1.83		81.0	50-150			J
erfluoroundecanoic acid (PFUnA)	1.49	1.8	0.69	ng/L	1.83		81.6	50-150			J
-MeFOSAA (NMeFOSAA)	1.48	1.8	0.68	ng/L	1.83		81.1	50-150			J
erfluorododecanoic acid (PFDoA)	1.30	1.8	0.65	ng/L	1.83		71.4	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.66	1.8	0.67	ng/L	1.83		91.2	50-150			J
erfluorotetradecanoic acid (PFTA)	1.41	1.8	0.76	ng/L	1.83		77.0	50-150			J
exafluoropropylene oxide dimer acid  HFPO-DA)	1.66	1.8	1.1	ng/L	1.83		90.8	50-150			J
1Cl-PF3OUdS (F53B Major)	1.37	1.8	0.61	ng/L	1.72		79.5	50-150			J
CI-PF3ONS (F53B Minor) ,8-Dioxa-3H-perfluorononanoic acid ADONA)	1.36 1.40	1.8 1.8	0.74 0.80	ng/L ng/L	1.70 1.73		80.1 81.3	50-150 50-150			J
Surrogate: 13C-PFHxA	31.6			ng/L	36.5		86.6	70-130			
urrogate: M3HFPO-DA	31.8			ng/L	36.5		87.0	70-130			
urrogate: 13C-PFDA	30.9			ng/L	36.5		84.6	70-130			
<u> </u>				<i>U</i> –							



Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
			DL				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Batch B332208 - EPA 537.1											
LCS Dup (B332208-BSD1)					Prepared: 02	2/21/23 Anal	yzed: 02/23/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.49	1.8	0.72	ng/L	1.62		91.9	50-150	9.55	50	J
Perfluorohexanoic acid (PFHxA)	1.48	1.8	0.85	ng/L	1.83		81.1	50-150	13.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.40	1.8	0.82	ng/L	1.67		83.8	50-150	19.3	50	J
Perfluoroheptanoic acid (PFHpA)	1.88	1.8	0.91	ng/L	1.83		103	50-150	21.4	50	
Perfluorooctanoic acid (PFOA)	1.54	1.8	0.94	ng/L	1.83		84.4	50-150	17.6	50	J
Perfluorooctanesulfonic acid (PFOS)	1.73	1.8	0.69	ng/L	1.70		102	50-150	15.7	50	J
Perfluorononanoic acid (PFNA)	1.54	1.8	0.84	ng/L	1.83		84.2	50-150	12.1	50	J
Perfluorodecanoic acid (PFDA)	2.02	1.8	0.88	ng/L	1.83		110	50-150	14.7	50	
N-EtFOSAA (NEtFOSAA)	1.65	1.8	0.61	ng/L	1.83		90.5	50-150	11.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.79	1.8	0.69	ng/L	1.83		98.0	50-150	18.3	50	J
N-MeFOSAA (NMeFOSAA)	1.69	1.8	0.68	ng/L	1.83		92.6	50-150	13.4	50	J
Perfluorododecanoic acid (PFDoA)	1.54	1.8	0.66	ng/L	1.83		84.2	50-150	16.6	50	J
Perfluorotridecanoic acid (PFTrDA)	1.86	1.8	0.67	ng/L	1.83		102	50-150	11.1	50	
Perfluorotetradecanoic acid (PFTA)	1.32	1.8	0.76	ng/L	1.83		72.3	50-150	6.22	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.58	1.8	1.1	ng/L	1.83		86.5	50-150	4.80	50	J
11Cl-PF3OUdS (F53B Major)	1.72	1.8	0.61	ng/L	1.72		99.6	50-150	22.5	50	J
9Cl-PF3ONS (F53B Minor)	1.69	1.8	0.74	ng/L	1.71		99.3	50-150	21.5	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.76	1.8	0.80	ng/L	1.73		102	50-150	22.5	50	J

ng/L

ng/L

ng/L

ng/L

36.5

36.5

36.5

146

93.0

93.8

91.0

93.6

70-130

70-130

70-130

70-130

34.0

34.3

33.3

137



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

23 621 4C

First 11-353-4693	. 2_06262019	Page of uncom.	ANALYSIS REQUESTED 2 Preservation Code																			Matrix Codes	GW- Ground Water	WW = Waste Water  DW = Drinking Water	A + Air 5 = 50fl		sample concentration within the Conc Code column   SOL - Solid above.	ow; C - Clean; U -	Unknown     =  ced	N = HCL	Other	C Chromatogram	L.1 AHA-LAP,LLC X n. Sodium Hydroxide T n. Sodium Theoretia	Weighting	Glassware in Pace Analytical is not 0 = 0! Water (reezer) Y / N A contonebals for interior complete.	Propackaged from prepacked coolers Assessment
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Phone: 413-525-405  Pacelabs: confcontact-us/contact-environmental-sciences  13 Southampton Road, Westfield, Abssachusetts  13 Southampton Road, Westfield, Abssachusetts  1413,562-1600  15 FAS Sample Collection - Stutesbury  15 Samuel Leans  16 Anno of Stutesbury  17 Samuel Leans  18 Samuel Leans  18 Samuel Leans  19 Samuel Leans  19 Samuel Leans  10 Date/Time:  11 Date/Time:  12 Date/Time:  12 Date/Time:  13 Date/Time:  14 Date/Time:  14 Date/Time:  15 Date/Time:  16 Date/Time:  17 Date/Time:  18 Date/Time:  1	ww.pacelabs.com/	CHAIN OF CUSTODY		D	Due Date:	Preguived		ם		8			om; SÉvansafisétebend.com		Marrin Cont Code Code			***************************************				101490				23		]		D JAMellu #		Municipality	21 3 Protonfield	picymaca marketing at the property of	halytica is not responsive in the Chain of Custody. The Chain of the complete and accural the complete and accurate the complete accurate the complete and accurate the complete and accurate the complete and accurate the complete accurate the complete and accurate the complete accurate the complete and accurate the complete and accurate the complete accurate the complete and accurate the complete accurate the complete accurate the complete and accurate the complete accurate the com	es une secondory miliparion aboratory's responsibility. Fi p on each project and will tr
Phone: 413-523-2332 Fax: 413-525-6405 Fax: 413-525-6405 Titabe & Bond Sisouthampton Road, Westfield, Mass Shuteshory, Massachusetts Shuteshory, Massachusetts Shuteshory Town of Shutesbury Samuel Evan Samuel Evan Calentsample to Descritime: Calentsample to Descritime: Calentsample to Descritime: Date/Time:	https://ww			53 (	PFAS 10-Day (std) 🗓	Alch-Hop				₽D£	Other.	CLP Like Data Pkg Requir	Email To: Andrewington	fax To #;	Ehding Date/Tone	ر دوري						wn of Shutesbury - PO:57-			erion Limit Requirements						intity	overnment		C10)	Discisioner: Yace An information on the Cha legal document that mu	information is not the live year partnership
me / Humber	. 413-525-2332	13-525-6405		ntact-environmental-sciences/	Cighe & Bond	Road, Westfield, Massachusefts	(413) 562-1600	ole Collection - Shutesbury	esbury, Massachusetts	5.2190	Jeff Arps		own of Shutesbury	Samuel Evans		Resid						4		e/Time:	Date/Time:	15%	Date/Time: // TC	250					Date/Time:			
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39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

# Log In Back-Sheet

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



	Tighe + Bond	<u> </u>								True	Fals
Project_	FAS Sample Co	11	Shute	sbury						los.	1 (1)
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March 7, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 25 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2851

Enclosed are results of analyses for samples as received by the laboratory on February 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

# Table of Contents

Sample Summary	3
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23B2851-01	5
Sample Preparation Information	6
QC Data	7
Semivolatile Organic Compounds by - LC/MS-MS	7
B332536	7
Flag/Qualifier Summary	9
Certifications	10
Chain of Custody/Sample Receipt	11



Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/7/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2851

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 25 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
25 Leverett Road 23B2851-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

Analyte & Samples(s) Qualified:

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

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

Lisa A. Worthington
Technical Representative

na Watchington



Project Location: 25 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2851

Date Received: 2/27/2023

Field Sample #: 25 Leverett Road Sampled: 2/23/2023 15:30

Sample ID: 23B2851-01 Sample Matrix: Ground Water

Semivolatile Organic Compounds by	y - I	LC/MS-MS
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Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	17	2.0	0.80	ng/L	1	8 2	EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorohexanoic acid (PFHxA)	62	2.0	0.95	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.6	2.0	0.91	ng/L	1	J	EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluoroheptanoic acid (PFHpA)	160	20	10	ng/L	10	D	EPA 537.1	3/3/23	3/6/23 13:26	AMS
Perfluorooctanoic acid (PFOA)	250	20	11	ng/L	10	D	EPA 537.1	3/3/23	3/6/23 13:26	AMS
Perfluorooctanesulfonic acid (PFOS)	7.3	2.0	0.77	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorononanoic acid (PFNA)	22	2.0	0.94	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorodecanoic acid (PFDA)	ND	2.0	0.98	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
N-EtFOSAA (NEtFOSAA)	ND	2.0	0.68	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.77	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
N-MeFOSAA (NMeFOSAA)	ND	2.0	0.76	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.73	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	0.74	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Perfluorotetradecanoic acid (PFTA)	ND	2.0	0.85	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	1.3	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
11Cl-PF3OUdS (F53B Major)	ND	2.0	0.68	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
9Cl-PF3ONS (F53B Minor)	ND	2.0	0.83	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.90	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:51	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		86.	0	70-130					3/6/23 9:51	
13C-PFHxA		85.	1	70-130					3/6/23 13:26	
MALIERO DA		0.0	_	70.130					2/6/22 0.51	



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2851-01 [25 Leverett Road]	B332536	245	1.00	03/03/23
23B2851-01RE1 [25 Leverett Road]	B332536	245	1.00	03/03/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332536 - EPA 537.1											
Blank (B332536-BLK1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	0.82	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.1	0.97	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	0.93	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	2.1	1.0	ng/L							
erfluorooctanoic acid (PFOA)	ND	2.1	1.1	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	2.1	0.79	ng/L							
erfluorononanoic acid (PFNA)	ND	2.1	0.96	ng/L							
erfluorodecanoic acid (PFDA)	ND	2.1	1.0	ng/L							
-EtFOSAA (NEtFOSAA)	ND	2.1	0.69	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	2.1	0.79	ng/L							
-MeFOSAA (NMeFOSAA)	ND	2.1	0.77	ng/L							
erfluorododecanoic acid (PFDoA)	ND	2.1	0.75	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	2.1	0.76	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	2.1	0.87	ng/L							
exafluoropropylene oxide dimer acid	ND	2.1	1.3	ng/L							
IFPO-DA)		2.1	0.60	m ∞ /T							
.CI-PF3OUdS (F53B Major)	ND	2.1	0.69	ng/L							
Cl-PF3ONS (F53B Minor)	ND	2.1 2.1	0.85 0.92	ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	2.1	0.92	ng/L							
urrogate: 13C-PFHxA	38.9			ng/L	41.7		93.4	70-130			
urrogate: M3HFPO-DA	37.7			ng/L	41.7		90.4	70-130			
urrogate: 13C-PFDA	41.5			ng/L	41.7		99.6	70-130			
urrogate: D5-NEtFOSAA	176			ng/L	167		106	70-130			
CS (B332536-BS1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
erfluorobutanesulfonic acid (PFBS)	1.70	1.9	0.75	ng/L	1.70		100	50-150			J
erfluorohexanoic acid (PFHxA)	1.50	1.9	0.90	ng/L	1.91		78.6	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.32	1.9	0.86	ng/L	1.75		75.2	50-150			J
erfluoroheptanoic acid (PFHpA)	1.93	1.9	0.95	ng/L	1.91		101	50-150			
erfluorooctanoic acid (PFOA)	1.59	1.9	0.99	ng/L	1.91		82.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.79	1.9	0.72	ng/L	1.78		100	50-150			J
erfluorononanoic acid (PFNA)	1.57	1.9	0.88	ng/L	1.91		82.0	50-150			J
erfluorodecanoic acid (PFDA)	2.04	1.9	0.92	ng/L	1.91		107	50-150			
-EtFOSAA (NEtFOSAA)	1.88	1.9	0.64	ng/L	1.91		98.1	50-150			J
erfluoroundecanoic acid (PFUnA)	1.82	1.9	0.73	ng/L	1.91		95.2	50-150			J
-MeFOSAA (NMeFOSAA)	1.86	1.9	0.71	ng/L	1.91		97.2	50-150			J
erfluorododecanoic acid (PFDoA)	1.67	1.9	0.69	ng/L	1.91		87.2	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.90	1.9	0.70	ng/L	1.91		99.1	50-150			
erfluorotetradecanoic acid (PFTA)	1.37	1.9	0.80	ng/L	1.91		71.8	50-150			J
exafluoropropylene oxide dimer acid	1.63	1.9	1.2	ng/L	1.91		84.9	50-150			J
HFPO-DA)  Cl-PF3OUdS (F53B Major)	1.50	1.9	0.63	ng/L	1 01		070	50 150			J
CI-PF3ONS (F53B Minor)	1.58	1.9	0.03	ng/L	1.81 1.79		87.8 90.4	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid	1.61	1.9	0.78	ng/L	1.79		90.4 98.3	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid ADONA)	1.78	1.9	0.04	ng/L	1.01		76.3	30-130			J
urrogate: 13C-PFHxA	35.8			ng/L	38.3		93.4	70-130			
nrogate: M3HFPO-DA	34.9			ng/L	38.3		91.2	70-130			
urrogate: 13C-PFDA	36.4			ng/L	38.3		95.1	70-130			
Surrogete: D5 NEtEOS A A	157			ma/I	152		102	70.120			

ng/L

153

103

70-130

157

Surrogate: D5-NEtFOSAA



Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

Surrogate: 13C-PFDA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Reporting	DL		Spike Jnits Level		%REC	%REC Limits	RPD	RPD Limit	
Analyte	Result	Limit		L Units							Notes
Batch B332536 - EPA 537.1											
LCS Dup (B332536-BSD1)					Prepared: 03	3/03/23 Analy	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.52	1.9	0.73	ng/L	1.64		92.4	50-150	11.4	50	J
Perfluorohexanoic acid (PFHxA)	1.35	1.9	0.87	ng/L	1.85		72.8	50-150	11.0	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.29	1.9	0.83	ng/L	1.69		76.1	50-150	2.11	50	J
Perfluoroheptanoic acid (PFHpA)	1.67	1.9	0.92	ng/L	1.85		90.3	50-150	14.3	50	J
Perfluorooctanoic acid (PFOA)	1.52	1.9	0.96	ng/L	1.85		82.1	50-150	4.08	50	J
Perfluorooctanesulfonic acid (PFOS)	1.57	1.9	0.70	ng/L	1.72		91.6	50-150	12.5	50	J
Perfluorononanoic acid (PFNA)	1.40	1.9	0.85	ng/L	1.85		75.8	50-150	11.2	50	J
Perfluorodecanoic acid (PFDA)	2.04	1.9	0.89	ng/L	1.85		110	50-150	0.129	50	
N-EtFOSAA (NEtFOSAA)	1.53	1.9	0.62	ng/L	1.85		82.7	50-150	20.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.60	1.9	0.70	ng/L	1.85		86.6	50-150	12.8	50	J
N-MeFOSAA (NMeFOSAA)	1.66	1.9	0.69	ng/L	1.85		89.8	50-150	11.1	50	J
Perfluorododecanoic acid (PFDoA)	1.32	1.9	0.66	ng/L	1.85		71.0	50-150	23.7	50	J
Perfluorotridecanoic acid (PFTrDA)	1.65	1.9	0.68	ng/L	1.85		89.2	50-150	13.8	50	J
Perfluorotetradecanoic acid (PFTA)	1.26	1.9	0.77	ng/L	1.85		67.8	50-150	9.07	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.57	1.9	1.1	ng/L	1.85		84.8	50-150	3.49	50	J
11Cl-PF3OUdS (F53B Major)	1.45	1.9	0.61	ng/L	1.75		83.0	50-150	8.88	50	J
9Cl-PF3ONS (F53B Minor)	1.64	1.9	0.75	ng/L	1.73		94.9	50-150	1.55	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.58	1.9	0.81	ng/L	1.75		90.5	50-150	11.5	50	J
Surrogate: 13C-PFHxA	34.8			ng/L	37.0		93.9	70-130			

ng/L

ng/L

ng/L

37.0

37.0

148

92.6

94.9

101

70-130

70-130

70-130

34.3

35.2

149



 $\operatorname{DL}$ 

MCL

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RI	Reporting Limit

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

D Sample analyzed at a dilution.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).

Method Detection Limit

Maximum Contaminant Level



# CERTIFICATIONS

# Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
------------	-------	----	------	------	-------

Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

736287

https://www.pace/abs.com/

Doc # 361 Rev 2\_06262019

Preservation Codes 8 = Sodium Bisulfate Matrix Codes GW= Ground Water X = Sadium Pydroxide WW = Waste Water DW .- Denking Water To Society Remobilisher 5 = Sulfuric Acid # :: Methanol Ot = Di Water N = Mitric Acid A = Air S - Soil 0 = Other \_\_ SOL - Solid St. = Studge O = Other H .. HCL I . Iced ŏ 2 Preservation Code Page responsible for missing samples Please use the following codes to indicate possible sample concentration within the Conc Code column from prepacked coolers H. High; M. Medium; L. Low; C. Clean; U. "Pace Analytical is not Chromatogram AIMA-LAP, LLC ANALYSIS REQUESTED CJ freezer? Y / N Cooler? Y / N Glassware in Prepackaged Courier Use Only MCP Certification Form Required #A MCP Required CT RCP Required RCP Certification Form Required WRTA MA State DW Required East Longmeadow, MtA 01026 PEAS VIE 537.1 ENCORE C 39 Spruce Street BACTERIA RACTERIA PLASTIC ENCORE GLASS VIALS Orthophosphare Samp Special Requirements PCB ONLY Field Filtered Field Filtered Lab to fitter tab to Filter School MWRA VIALS | GLASS | PLASTIC MBTA NON SOXHLET legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing values your partnership on each project and will try to assist with missing information, but will not be held accountable. information is not the laboratory's responsibility. Pace Analytical information on the Chain of Custody. The Chain of Custody is a Disclaimer: Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD 0 0 0 0 Carried State Cam Code A.Aspekt spiedrand.com; Stvonskil iphebond.com ح Municipality ₽ Reginested Turnaround Time Browmfield ₽WSID # Due Date: **1** 3 b 3 10-Day EXCEL Z 3-Day Bill to Town of Shutesbury - PO:57-101490 CLP Like Data Pkg Required: COMPICENT 380 Detection Little Requiremen 3G4 PFAS 10-Day (std) 🗔 C) C o o Government 1330 Ending Date/Time meil To: Federal ax To #: ormat: Other: Š -Day ·Day 7. Day Project Entity -5 one 2/23/23 Beginning OnterTime 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time: 1930 2/27/5 Date/Time: 1445 Date/Time: 2/27/13 0300 Date/Time: 11.42 Shutesbury, Massachusetts 25 leverett Pard Town of Shutesbury Phone: 413-575-2332 Client Sample ID / Dexcription (413) 562-1600 Samuel Evans Tighe & Bond Jeff Arps Fax: 413-525-6405 Date/Time: atc/Time. Date/Time: Date/Time 5.2190 dature) [ [ 6 Pace Analytical Quote Name/Number etinguished by: (signature) Higuished by: (Signature) elifiquished by: (signature) Relinquished by: (signature) Pace Amalytical " Pace Analytical Work Order# Received by: (signature) Received by: (signature) eceived by: (signature) econved by: (sta 3 Company Number nvoice Recipient: Project Location: Project Manager: Project Number: archect fame ampled By: Address: Phone: Page 11 of 12 pa apruce St.

ENV-FRIVE-ELUIY-0009V02\_Sample Receiving Checklist 1-12-2 Table of Contents

East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405 www.pacelabs.com

# Log In Back-Sheet

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



Client	ghe 8 Band	<del></del>		~					Tr	ue	False
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Minle				-						1	

March 7, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2853

Enclosed are results of analyses for samples as received by the laboratory on February 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/7/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2853

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
Field Blank 23B2853-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B2853

Date Received: 2/27/2023

Field Sample #: Field Blank

Sampled: 2/23/2023 15:35

Sample ID: 23B2853-01
Sample Matrix: Ground Wate

D5-NEtFOSAA

Sample Matrix: Ground Water										
			Semivol	latile Organic Compoun	ds by - LC/	MS-MS				
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.74	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.88	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.84	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.93	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorooctanoic acid (PFOA)	ND	1.9	0.97	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.71	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorononanoic acid (PFNA)	ND	1.9	0.87	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorodecanoic acid (PFDA)	ND	1.9	0.90	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.9	0.62	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.71	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.70	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.67	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.69	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.78	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	1.2	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.9	0.62	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.9	0.77	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.83	ng/L	1		EPA 537.1	3/3/23	3/6/23 9:58	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual			-	
13C-PFHxA		102		70-130					3/6/23 9:58	
M3HFPO-DA		99.		70-130					3/6/23 9:58	
13C-PFDA		100	)	70-130					3/6/23 9:58	

70-130

108

3/6/23 9:58



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2853-01 [Field Blank]	B332536	266	1.00	03/03/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332536 - EPA 537.1											
Blank (B332536-BLK1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	0.82	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.1	0.97	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	0.93	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	2.1	1.0	ng/L							
erfluorooctanoic acid (PFOA)	ND	2.1	1.1	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	2.1	0.79	ng/L							
erfluorononanoic acid (PFNA)	ND	2.1	0.96	ng/L							
erfluorodecanoic acid (PFDA)	ND	2.1	1.0	ng/L							
-EtFOSAA (NEtFOSAA)	ND	2.1	0.69	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	2.1	0.79	ng/L							
-MeFOSAA (NMeFOSAA)	ND	2.1	0.77	ng/L							
erfluorododecanoic acid (PFDoA)	ND	2.1	0.75	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	2.1	0.76	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	2.1	0.87	ng/L							
exafluoropropylene oxide dimer acid	ND	2.1	1.3	ng/L							
IFPO-DA)		2.1	0.60	m ∞ /T							
.CI-PF3OUdS (F53B Major)	ND	2.1	0.69	ng/L							
Cl-PF3ONS (F53B Minor)	ND	2.1 2.1	0.85 0.92	ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	2.1	0.92	ng/L							
urrogate: 13C-PFHxA	38.9			ng/L	41.7		93.4	70-130			
urrogate: M3HFPO-DA	37.7			ng/L	41.7		90.4	70-130			
urrogate: 13C-PFDA	41.5			ng/L	41.7		99.6	70-130			
urrogate: D5-NEtFOSAA	176			ng/L	167		106	70-130			
CS (B332536-BS1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
erfluorobutanesulfonic acid (PFBS)	1.70	1.9	0.75	ng/L	1.70		100	50-150			J
erfluorohexanoic acid (PFHxA)	1.50	1.9	0.90	ng/L	1.91		78.6	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.32	1.9	0.86	ng/L	1.75		75.2	50-150			J
erfluoroheptanoic acid (PFHpA)	1.93	1.9	0.95	ng/L	1.91		101	50-150			
erfluorooctanoic acid (PFOA)	1.59	1.9	0.99	ng/L	1.91		82.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.79	1.9	0.72	ng/L	1.78		100	50-150			J
erfluorononanoic acid (PFNA)	1.57	1.9	0.88	ng/L	1.91		82.0	50-150			J
erfluorodecanoic acid (PFDA)	2.04	1.9	0.92	ng/L	1.91		107	50-150			
-EtFOSAA (NEtFOSAA)	1.88	1.9	0.64	ng/L	1.91		98.1	50-150			J
erfluoroundecanoic acid (PFUnA)	1.82	1.9	0.73	ng/L	1.91		95.2	50-150			J
-MeFOSAA (NMeFOSAA)	1.86	1.9	0.71	ng/L	1.91		97.2	50-150			J
erfluorododecanoic acid (PFDoA)	1.67	1.9	0.69	ng/L	1.91		87.2	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.90	1.9	0.70	ng/L	1.91		99.1	50-150			
erfluorotetradecanoic acid (PFTA)	1.37	1.9	0.80	ng/L	1.91		71.8	50-150			J
exafluoropropylene oxide dimer acid	1.63	1.9	1.2	ng/L	1.91		84.9	50-150			J
HFPO-DA)  Cl-PF3OUdS (F53B Major)	1.50	1.9	0.63	ng/L	1 01		070	50 150			J
CI-PF3ONS (F53B Minor)	1.58	1.9	0.03	ng/L	1.81 1.79		87.8 90.4	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid	1.61	1.9	0.78	ng/L	1.79		90.4 98.3	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid ADONA)	1.78	1.9	0.04	ng/L	1.01		76.3	30-130			J
urrogate: 13C-PFHxA	35.8			ng/L	38.3		93.4	70-130			
nrogate: M3HFPO-DA	34.9			ng/L	38.3		91.2	70-130			
urrogate: 13C-PFDA	36.4			ng/L	38.3		95.1	70-130			
Surrogete: D5 NEtEOS A A	157			ma/I	152		102	70.120			

ng/L

153

103

70-130

157

Surrogate: D5-NEtFOSAA



Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

Surrogate: 13C-PFDA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B332536 - EPA 537.1											
LCS Dup (B332536-BSD1)					Prepared: 03	3/03/23 Analy	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.52	1.9	0.73	ng/L	1.64		92.4	50-150	11.4	50	J
Perfluorohexanoic acid (PFHxA)	1.35	1.9	0.87	ng/L	1.85		72.8	50-150	11.0	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.29	1.9	0.83	ng/L	1.69		76.1	50-150	2.11	50	J
Perfluoroheptanoic acid (PFHpA)	1.67	1.9	0.92	ng/L	1.85		90.3	50-150	14.3	50	J
Perfluorooctanoic acid (PFOA)	1.52	1.9	0.96	ng/L	1.85		82.1	50-150	4.08	50	J
Perfluorooctanesulfonic acid (PFOS)	1.57	1.9	0.70	ng/L	1.72		91.6	50-150	12.5	50	J
Perfluorononanoic acid (PFNA)	1.40	1.9	0.85	ng/L	1.85		75.8	50-150	11.2	50	J
Perfluorodecanoic acid (PFDA)	2.04	1.9	0.89	ng/L	1.85		110	50-150	0.129	50	
N-EtFOSAA (NEtFOSAA)	1.53	1.9	0.62	ng/L	1.85		82.7	50-150	20.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.60	1.9	0.70	ng/L	1.85		86.6	50-150	12.8	50	J
N-MeFOSAA (NMeFOSAA)	1.66	1.9	0.69	ng/L	1.85		89.8	50-150	11.1	50	J
Perfluorododecanoic acid (PFDoA)	1.32	1.9	0.66	ng/L	1.85		71.0	50-150	23.7	50	J
Perfluorotridecanoic acid (PFTrDA)	1.65	1.9	0.68	ng/L	1.85		89.2	50-150	13.8	50	J
Perfluorotetradecanoic acid (PFTA)	1.26	1.9	0.77	ng/L	1.85		67.8	50-150	9.07	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.57	1.9	1.1	ng/L	1.85		84.8	50-150	3.49	50	J
11Cl-PF3OUdS (F53B Major)	1.45	1.9	0.61	ng/L	1.75		83.0	50-150	8.88	50	J
9Cl-PF3ONS (F53B Minor)	1.64	1.9	0.75	ng/L	1.73		94.9	50-150	1.55	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.58	1.9	0.81	ng/L	1.75		90.5	50-150	11.5	50	J
Surrogate: 13C-PFHxA	34.8			ng/L	37.0		93.9	70-130			

ng/L

ng/L

ng/L

37.0

37.0

148

92.6

94.9

101

70-130

70-130

70-130

34.3

35.2

149



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

ANALYSIS REQUESTED Doc # 381 Rev 7\_06262019 39 Spruce Street East Longmeadow, IMA 01026 7-Day E (0-Day E (0-Day E) Private filtered 335B7355 https://www.pacelabs.com/ CHAIN OF CUSTODY RECORD

Page \_\_\_\_of 2 Preservation Code

Phone: 413-525-2332 Fax: 413-525-6405

Pace Analytical

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Control   Cont	Project Manager:	Jeff Arps		Other:				WANTED STREET						
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East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405

www.pacelabs.com

ENV-FRIVE-ELUIV-0009V02\_Sample Receiving Checklist 1-1. Table of Contents

# Log In Back-Sheet

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



Client	Tight 8 Ban	1			] b	rought to t	he attent	ian c	of the Cl	ient	tatement will – True or False	be	PEO	PLE ADVANCIN
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	Proper Headspace	UnP	HCI		МеОн	Bisis	lfate	Di	<u> </u>		Sacrif- :	1000		
Vials						- 5.50		441	<u>'                                    </u>	1 []	iosulfate	Sulfuric	Other	

March 1, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 29 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2204

Enclosed are results of analyses for samples as received by the laboratory on February 20, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

# Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/1/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

#### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2204

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 29 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

29 Leverett Road 23B2204-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley Reporting Specialist

Meghan S. Kelley



Project Location: 29 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2204

Date Received: 2/20/2023

Field Sample #: 29 Leverett Road Sampled: 2/17/2023 10:25

Sample ID: 23B2204-01 Sample Matrix: Ground Water

			Semivolatile	Organic Compound	ds by - LC/	MS-MS				
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	0.81	1.8	0.73	ng/L	1	J	EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorohexanoic acid (PFHxA)	1.1	1.8	0.86	ng/L	1	J	EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.83	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.92	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorooctanoic acid (PFOA)	2.7	1.8	0.95	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorooctanesulfonic acid (PFOS)	2.5	1.8	0.70	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.85	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.88	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.70	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.69	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.77	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.61	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.75	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS
4,8-Dioxa-3H-perfluorononanoic acid	ND	1.8	0.81	ng/L	1		EPA 537.1	2/27/23	2/28/23 9:54	AMS

(ADONA)		_		
Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C-PFHxA	79.5	70-130		2/28/23 9:54
M3HFPO-DA	77.3	70-130		2/28/23 9:54
13C-PFDA	94.0	70-130		2/28/23 9:54
D5-NEtFOSAA	101	70-130		2/28/23 9:54



# **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2204-01 [29 Leverett Road]	B332312	271	1.00	02/27/23



Surrogate: D5-NEtFOSAA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332312 - EPA 537.1											
Blank (B332312-BLK1)					Prepared: 02	2/27/23 Analy	/zed: 02/28/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.84	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.81	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.90	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	0.93	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.68	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	0.83	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	0.86	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.68	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.67	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.75	ng/L							
Hexafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
PCI-PF3ONS (F53B Minor) 4,8-Dioxa-3H-perfluorononanoic acid ADONA)	ND ND	1.8 1.8	0.73 0.79	ng/L ng/L							
·	20.2			n o/I	26.1		100	70 120			
Surrogate: 13C-PFHxA	39.2 40.0			ng/L	36.1 36.1		109 111	70-130 70-130			
Surrogate: M3HFPO-DA Surrogate: 13C-PFDA	37.9			ng/L ng/L	36.1		105	70-130			
Surrogate: D5-NEtFOSAA	152			ng/L	144		105	70-130			
LCS (B332312-BS1)					Prepared: 02	2/27/23 Analy	zed: 02/28/2	23			
Perfluorobutanesulfonic acid (PFBS)	15.8	1.8	0.71	ng/L	16.0		98.4	70-130			
Perfluorohexanoic acid (PFHxA)	15.3	1.8	0.84	ng/L	18.1		84.6	70-130			
Perfluorohexanesulfonic acid (PFHxS)	13.6	1.8	0.81	ng/L	16.5		82.2	70-130			
Perfluoroheptanoic acid (PFHpA)	18.9	1.8	0.90	ng/L	18.1		104	70-130			
Perfluorooctanoic acid (PFOA)	16.3	1.8	0.93	ng/L	18.1		90.1	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.8	1.8	0.68	ng/L	16.8		106	70-130			
Perfluorononanoic acid (PFNA)	16.9	1.8	0.83	ng/L	18.1		93.4	70-130			
Perfluorodecanoic acid (PFDA)	19.5	1.8	0.87	ng/L	18.1		108	70-130			
N-EtFOSAA (NEtFOSAA)	18.6	1.8	0.60	ng/L	18.1		103	70-130			
Perfluoroundecanoic acid (PFUnA)	19.0	1.8	0.69	ng/L	18.1		105	70-130			
N-MeFOSAA (NMeFOSAA)	18.9	1.8	0.67	ng/L	18.1		105	70-130			
Perfluorododecanoic acid (PFDoA)	19.7	1.8	0.65	ng/L	18.1		109	70-130			
Perfluorotridecanoic acid (PFTrDA)	19.3	1.8	0.66	ng/L	18.1		107	70-130			
Perfluorotetradecanoic acid (PFTA)	15.2	1.8	0.75	ng/L	18.1		84.3	70-130			
Hexafluoropropylene oxide dimer acid HFPO-DA)	14.0	1.8	1.1	ng/L	18.1		77.3	70-130			
11Cl-PF3OUdS (F53B Major)	17.6	1.8	0.60	ng/L	17.0		103	70-130			
9Cl-PF3ONS (F53B Minor) 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	17.2 17.4	1.8 1.8	0.74 0.79	ng/L ng/L	16.9 17.1		102 102	70-130 70-130			
Surrogate: 13C-PFHxA	37.8			ng/L	36.1		104	70-130			
Surrogate: M3HFPO-DA	37.9			ng/L	36.1		105	70-130			
Surrogate: 13C-PFDA	36.9			ng/L	36.1		102	70-130			
				-							

145

ng/L

105

70-130

153



Surrogate: D5-NEtFOSAA

# 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

# $Semivolatile\ Organic\ Compounds\ by\ -\ LC/MS-MS\ -\ Quality\ Control$

Analyte Result Limit DL Units Level Result %REC Limits RPD Limit N		]	Reporting			Spike	Source		%REC		RPD		
	Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

LCS Dup (B332312-BSD1)		Prepared: 02/27/23 Analyzed: 02/28/23								
Perfluorobutanesulfonic acid (PFBS)	15.3	1.8	0.71	ng/L	16.0	95.5	70-130	2.89	30	
Perfluorohexanoic acid (PFHxA)	14.9	1.8	0.85	ng/L	18.1	82.5	70-130	2.39	30	
Perfluorohexanesulfonic acid (PFHxS)	13.6	1.8	0.81	ng/L	16.5	82.3	70-130	0.225	30	
Perfluoroheptanoic acid (PFHpA)	18.5	1.8	0.90	ng/L	18.1	102	70-130	1.98	30	
Perfluorooctanoic acid (PFOA)	15.6	1.8	0.94	ng/L	18.1	86.3	70-130	4.23	30	
Perfluorooctanesulfonic acid (PFOS)	17.7	1.8	0.68	ng/L	16.8	106	70-130	0.290	30	
Perfluorononanoic acid (PFNA)	17.0	1.8	0.83	ng/L	18.1	93.7	70-130	0.462	30	
Perfluorodecanoic acid (PFDA)	19.1	1.8	0.87	ng/L	18.1	106	70-130	1.78	30	
N-EtFOSAA (NEtFOSAA)	18.8	1.8	0.60	ng/L	18.1	104	70-130	1.13	30	
Perfluoroundecanoic acid (PFUnA)	18.7	1.8	0.69	ng/L	18.1	103	70-130	1.34	30	
N-MeFOSAA (NMeFOSAA)	19.0	1.8	0.67	ng/L	18.1	105	70-130	0.493	30	
Perfluorododecanoic acid (PFDoA)	19.0	1.8	0.65	ng/L	18.1	105	70-130	3.63	30	
Perfluorotridecanoic acid (PFTrDA)	19.1	1.8	0.66	ng/L	18.1	106	70-130	1.07	30	
Perfluorotetradecanoic acid (PFTA)	15.4	1.8	0.76	ng/L	18.1	85.2	70-130	1.19	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.9	1.8	1.1	ng/L	18.1	71.1	70-130	8.34	30	
11Cl-PF3OUdS (F53B Major)	17.5	1.8	0.60	ng/L	17.1	103	70-130	0.505	30	
9Cl-PF3ONS (F53B Minor)	17.9	1.8	0.74	ng/L	16.9	106	70-130	3.57	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	17.0	1.8	0.80	ng/L	17.1	99.7	70-130	2.08	30	
Surrogate: 13C-PFHxA	33.6			ng/L	36.2	92.9	70-130			
Surrogate: M3HFPO-DA	33.7			ng/L	36.2	93.1	70-130			
Surrogate: 13C-PFDA	34.1			ng/L	36.2	94.2	70-130			

ng/L

145

96.4

70-130

140



#### FLAG/QUALIFIER SUMMARY

*	QC result is	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



# CERTIFICATIONS

# Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

Phone: 413-525-2332

Pace Analytical

Fax: 413-525-6405

https://www.paceiabs.com/

39 Spruce Street

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 2\_06262019 East Longmeadow, MA 01026

Table of Contents Preservation Codes Matrix Codes GW+ Ground Water WW = Waste Water DW = Drinking Water B - Sodium Bisulfate X = Sestium Rydroxid \*\* Sodium Thiosalfate - Suffuric Acid : Air 5 = So# N + Hitric Acid 5 H :: Methanol Di :: Di Waler 2 Preservation Code St. .. Słudgo SOL - Solid o - Other 0 = Other R = MCL - Iced Please use the following codes to indicate possible sample concentration within the Conc Code column responsible for missing samples from prepacked coolers H - High: M - Medium; L - Low: C - Clear; D -"Pace Analytical is not Chromatogram AIHA-LAP,LLC ANALYSIS REQUESTED ОП Glassware in freezer? Y / N Copler? Y / N Prepackaged MCP Cortification Form Required CT RCP Required RCP Certification Farm Required Courier Use Only MA MCP Required Mk State DW Required F.SEE SIV EAR EMCORE folved Alekals samples BACTERIA Orthophosphate Samp Fletd Filtered Field Filtered Lab to Filter PCB ONL) Lab to Fitter ENCORE BACTERIA PLASTIC GLASS VIALS PLASTIC School NON SOXHLET GLASS SOXHLET legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing The Chain of Custody is a information is not the faboratory's responsibility. Pace Analytical Values your partnership on each project and will try to assist with Disclaimer: Pace Analytical is not responsible for any omitted WALS 0 0 00 missing information, but will not be held accountable. A.A.rpushinghebond.com; Shvans@71gliebend.com Due Date: 10-Day Municipality EXCE Brownfield 3-Day <u>5</u> 4-0ay # OFSMA information on the Chain of Custody. I þ Bill to Town of Shutesbury . PO: 57-101490 Requested Turna 2 CLP Like Data Pkg Required: COMPTORAL 3000 C FAS 10-Day (std) [] 3 Detection Limit Regulrenents ģ Describing Endoss Date/ Hing Date/ Time mail To: Format: ax To #: 529/82/61/2 бочеттен Other 7 Bay ·Ūay 2-Day Federat ČÝ. Project Entity 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Shutesbury, Massachusetts 140 2 - 30 37 2-30-23 2/2423 183 Town of Shutesbury (413) 562-1600 Clent Sample ID / Description Tighe & Bond Santael Evans 29 Levert Rend Jeff Arps 5-2190 Date/Firne Date/Time: Date/Fine: Date/Time: Pace Analytical Quote Name/Number Pace Analytical With Dident inquistred by: (signature Refinquished by: (signature Received by: (signature) Received by: (signature) Invoice Recipient: Project Location; guerry where Project Manager: Project Number; sampted By: Address; Page 11 of 12

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

ENV-FRM-ELON-0009V02\_Sample Receiving Checklist 1-12

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client.



Table of Contents

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1L 500 m 250 m	Amber Plastic L Amber Plastic L Amber Plastic	le) Ui	пР НСІ	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serion Co.
1L 500 m 250 m Other	Amber Plastic L Amber Plastic L Amber Plastic Amber Clear Plastic	le) Ui	nP HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Prince Statement
1L 500 m 250 m Other 16oz	Amber Plastic L Amber Plastic L Amber Plastic Amber Clear Plastic Amber Clear	le) Ui	nP HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Prince Junior
11 500 m 250 m Other 16oz 8oz	Amber Plastic L Amber Plastic L Amber Plastic Amber Clear Plastic Amber Clear Amber Clear	ie) Ui	P HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serious Serious
1L 500 m 250 m Other 16oz 8oz 4oz	Amber Plastic L Amber Plastic L Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear	le) Ui	ъъ нсі	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serious Serious
1L 500 m 250 m Other 16oz 8oz 4oz 2oz	Amber Plastic L Amber Plastic L Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear	le) U	P HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serious Serious
11 500 m 250 m Other 16oz 8oz 4oz 2oz Col/Ba	Amber Plastic L Amber Plastic L Amber Plastic L Amber Clear Plastic Amber Clear	le) Ui	nP HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serious Serious
11 500 m 250 m Other 160z 80z 40z 20z Col/Ba Flashpo	Amber Plastic L Amber Plastic L Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear Amber Clear Clear	le) U	P HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Prince Junior
11 500 m 250 m Other 16oz 8oz 4oz 2oz Col/Ba	Amber Plastic L Amber Plastic L Amber Plastic L Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear	ie) Ui	nP HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serious Serious
500 m 250 m Other 16oz 8oz 4oz 2oz Col/Ba Flashpe	Amber Plastic L Amber Plastic L Amber Plastic L Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear Clear Amber Clear	le) Ui	P HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Serious Serious
11 500 m 250 m Other 16oz 8oz 4oz 2oz Col/Ba Flashpo Plastic 50C Ktt	Amber Plastic L Amber Plastic L Amber Plastic L Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear Clear Amber Clear	ie) Ui	nP HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Prince Junior
11 500 m 250 m Other 16oz 8oz 4oz 2oz Col/Ba Flashpo Plastic GOC Kh	Amber Plastic L Amber Plastic L Amber Plastic L Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear Clear Amber Clear	le) Ui	nP HCI	HNO3		Project All Samp	oles Prop	er pH: (	Collec	tion Date/Ti	Prince Statement
500 m 250 m Other 16oz 8oz 4oz 2oz Col/Ba Flashpe Plastic 50C Kh	Amber Plastic L Amber Plastic L Amber Plastic L Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear Clear Amber Clear	le) Ui	P HCI	HNO3		Project All Samp	Diles Prop	er pH: (	Collec	tion Date/Ti	Subsection of the same of the

February 28, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: Shutesbury, Massachusetts 35 Leverett Rd

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2172

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/28/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2172

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Shutesbury, Massachusetts

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
35 Leverett Road-INF	23B2172-01	Ground Water		EPA 537.1	
35 Leverett Road-EFF	23B2172-02	Ground Water		EPA 537.1	



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley Reporting Specialist

Meghan S. Kelley



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B2172

Date Received: 2/17/2023

Field Sample #: 35 Leverett Road-INF

Sampled: 2/16/2023 14:35

Sample ID: 23B2172-01
Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS										
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	2.4	1.7	0.67	ng/L	1	8 (	EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorohexanoic acid (PFHxA)	5.4	1.7	0.80	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.98	1.7	0.76	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluoroheptanoic acid (PFHpA)	3.6	1.7	0.85	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorooctanoic acid (PFOA)	9.1	1.7	0.88	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorooctanesulfonic acid (PFOS)	6.2	1.7	0.64	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorononanoic acid (PFNA)	ND	1.7	0.78	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorodecanoic acid (PFDA)	ND	1.7	0.82	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.65	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.63	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.61	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.62	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.71	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	1.0	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.56	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.69	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.75	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:15	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		100	5	70-130					2/27/23 10:15	
M3HFPO-DA		10	I	70-130					2/27/23 10:15	
13C-PFDA		111	l	70-130					2/27/23 10:15	
D5-NEtFOSAA		114	1	70-130					2/27/23 10:15	



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B2172

Date Received: 2/17/2023

Field Sample #: 35 Leverett Road-EFF

Sampled: 2/16/2023 14:40

Sample ID: 23B2172-02 Sample Matrix: Ground Water

Sample Matrix. Ground water			Semivol	atile Organic Compoun						
								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.7	0.67	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorohexanoic acid (PFHxA)	1.2	1.7	0.80	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.7	0.77	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.7	0.85	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorooctanoic acid (PFOA)	ND	1.7	0.89	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.7	0.65	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorononanoic acid (PFNA)	ND	1.7	0.79	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorodecanoic acid (PFDA)	ND	1.7	0.82	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.65	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.64	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.61	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.62	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.72	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	1.1	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.70	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.75	ng/L	1		EPA 537.1	2/22/23	2/27/23 10:38	AMS
Surrogates		% R	ecovery	Recovery Limits		Flag/Qual				
13C-PFHxA		109		70-130					2/27/23 10:38	
M3HFPO-DA		109	)	70-130					2/27/23 10:38	
13C-PFDA		112	!	70-130					2/27/23 10:38	
D5-NEtFOSAA		115	i	70-130					2/27/23 10:38	



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2172-01 [35 Leverett Road-INF] 23B2172-02 [35 Leverett Road-EFF]	B332209 B332209	294 292	1.00 1.00	02/22/23 02/22/23
2322172 02 [30 Develou Roua El I ]	2332207	2,2	1.00	V2/22/23



Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332209 - EPA 537.1											
Blank (B332209-BLK1)					Prepared: 02	2/22/23 Analy	zed: 02/27/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.85	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	0.94	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	0.87	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
Hexafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
1Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
PCI-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L							
,8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.8	0.80	ng/L							
Surrogate: 13C-PFHxA	33.5			ng/L	36.4		92.0	70-130			
Surrogate: M3HFPO-DA	33.0			ng/L	36.4		90.5	70-130			
Surrogate: 13C-PFDA	34.9			ng/L	36.4		95.9	70-130			
Surrogate: D5-NEtFOSAA	141			ng/L	146		96.8	70-130			
LCS (B332209-BS1)					Prepared: 02	2/22/23 Analy	zed: 02/27/2	23			
Perfluorobutanesulfonic acid (PFBS)	9.40	1.8	0.72	ng/L	8.07		116	70-130			
Perfluorohexanoic acid (PFHxA)	8.56	1.8	0.85	ng/L	9.10		94.1	70-130			
Perfluorohexanesulfonic acid (PFHxS)	7.71	1.8	0.81	ng/L	8.32		92.7	70-130			
Perfluoroheptanoic acid (PFHpA)	10.7	1.8	0.90	ng/L	9.10		118	70-130			
Perfluorooctanoic acid (PFOA)	8.96	1.8	0.94	ng/L	9.10		98.4	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.6	1.8	0.69	ng/L	8.45		125	70-130			
Perfluorononanoic acid (PFNA)	9.71	1.8	0.84	ng/L	9.10		107	70-130			
Perfluorodecanoic acid (PFDA)	11.3	1.8	0.87	ng/L	9.10		124	70-130			
N-EtFOSAA (NEtFOSAA)	11.1	1.8	0.60	ng/L	9.10		122	70-130			
Perfluoroundecanoic acid (PFUnA)	10.8	1.8	0.69	ng/L	9.10		119	70-130			
N-MeFOSAA (NMeFOSAA)	11.3	1.8	0.68	ng/L	9.10		125	70-130			
Perfluorododecanoic acid (PFDoA)	11.1	1.8	0.65	ng/L	9.10		122	70-130			
Perfluorotridecanoic acid (PFTrDA)	11.0	1.8	0.66	ng/L	9.10		120	70-130			
Perfluorotetradecanoic acid (PFTA)	8.43	1.8	0.76	ng/L	9.10		92.7	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.69	1.8	1.1	ng/L	9.10		95.4	70-130			
11Cl-PF3OUdS (F53B Major)	10.4	1.8	0.60	ng/L	8.58		121	70-130			
9Cl-PF3ONS (F53B Minor) 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.5 9.97	1.8 1.8	0.74 0.80	ng/L ng/L	8.49 8.60		123 116	70-130 70-130			
Surrogate: 13C-PFHxA	37.8			ng/L	36.4		104	70-130			
Surrogate: M3HFPO-DA	36.8			ng/L	36.4		101	70-130			
Surrogate: 13C-PFDA	38.6			ng/L	36.4		106	70-130			
٠٠٠٠٠	20.0			0							

146

ng/L

107

70-130

156



Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

	F	Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch B332209 - EPA 537.1									
LCS Dup (B332209-BSD1)				I	Prepared: 02/22/2	3 Analyzed: 02/27/	23		
Perfluorobutanesulfonic acid (PFBS)	8.78	1.8	0.72	ng/L	8.08	109	70-130	6.85	30
Perfluorohexanoic acid (PFHxA)	8.03	1.8	0.85	ng/L	9.11	88.1	70-130	6.45	30
Perfluorohexanesulfonic acid (PFHxS)	6.99	1.8	0.82	ng/L	8.33	83.9	70-130	9.81	30
Perfluoroheptanoic acid (PFHpA)	10.1	1.8	0.91	ng/L	9.11	111	70-130	5.49	30
Perfluorooctanoic acid (PFOA)	8.79	1.8	0.94	ng/L	9.11	96.4	70-130	1.96	30
Perfluorooctanesulfonic acid (PFOS)	9.23	1.8	0.69	ng/L	8.45	109	70-130	13.8	30
Perfluorononanoic acid (PFNA)	8.98	1.8	0.84	ng/L	9.11	98.6	70-130	7.79	30
Perfluorodecanoic acid (PFDA)	10.7	1.8	0.87	ng/L	9.11	118	70-130	5.23	30
N-EtFOSAA (NEtFOSAA)	9.84	1.8	0.60	ng/L	9.11	108	70-130	11.9	30
Perfluoroundecanoic acid (PFUnA)	10.2	1.8	0.69	ng/L	9.11	112	70-130	5.55	30
N-MeFOSAA (NMeFOSAA)	9.96	1.8	0.68	ng/L	9.11	109	70-130	12.9	30
Perfluorododecanoic acid (PFDoA)	10.3	1.8	0.65	ng/L	9.11	113	70-130	7.09	30
Perfluorotridecanoic acid (PFTrDA)	10.2	1.8	0.66	ng/L	9.11	112	70-130	7.17	30
Perfluorotetradecanoic acid (PFTA)	8.19	1.8	0.76	ng/L	9.11	89.9	70-130	2.97	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.92	1.8	1.1	ng/L	9.11	86.9	70-130	9.23	30
11Cl-PF3OUdS (F53B Major)	9.42	1.8	0.60	ng/L	8.59	110	70-130	9.69	30
9Cl-PF3ONS (F53B Minor)	9.55	1.8	0.74	ng/L	8.50	112	70-130	9.11	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.26	1.8	0.80	ng/L	8.61	108	70-130	7.39	30

ng/L

ng/L

ng/L

ng/L

36.4

36.4

36.4

146

103

101

105

103

70-130

70-130

70-130

70-130

37.5

37.0

38.2

150



#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected

RL Reporting Limit
DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



#### CERTIFICATIONS

#### Certified Analyses included in this Report

Analyte Certifications

EPA 537	7.1 ii	ı Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

230212/X

Doc # 381 Rev 2\_06262019

39 Spruce Street

https://www.pacelabs.com

Phone: 413-525-2332

Face Analytical

Preservation Codes Pace Arelytical 3 » Sodium Bisulfate WW - Waste Water ( = Sodium Hydroxide GW= Ground Water **DW** ~ Deinking Water = Sodwin Thiosulfate Matrix Codes Suffuric Acid 4 . Air 5 = Soil N - Mitric Actd 4 = tkethanot Di = Di Water SL » Skudge SOL = Solid # Other a - Other ? Preservation Code = fced # = HCL responsible for missing semples from prepacked coolers Please use the following codes to indicate possible sample concentration within the Conc Code rolumn H - High; M - Medium; L - Low; C - Clean; U -\*Pace Analytical is not C Chromatogram AMA-LAP, LLC ANALYSIS REQUESTED Other Prepackaged Cooler? Y / N freezer? Y / N Glassware in Courier Use Only MCP Certification Form Required CT RCP Required WRIA MA State DW Required RCP Certification Form Requ East Longmeadow, MA 01026 1. TEE SIV ZARR X ENCORE O BACTERIA Orthophosphate Samp PLASTIC BACTERIA GLASS ENCORE Feld Fittered PCB ONLY Field Fillered Lab to filter Lab to Fifter PLASTK School MWRA MBTA ¥ NON SOXHLET OLASS. legal document that must be complete and accurate and is used to determine what analyses the latoratory will perform. Any missing information on the Chain of Custody. The Chain of Custody is a values your parinership on each project and will fry to assist with missing information, but will not be held accountable. information is not the taboratory's responsibility. Pace Analytical Disclaimer: Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD VIALS 0 0 00 Data Delivery Six Code J. Srpn. 87 ighe bond com, 5E wans (37 ighe bond. com  $\supset$ 0 0 Municipality Brownfield Due Date: # OISMd Rush Approval Required A Pes to-Day EXCEL 3-Day 4-Day 3 3 21.5 C ß Bill to Town of Shutesbury - PO:57-101490 CLP Like Data Pkg Required: COMPTERME و ک Ò PFAS 10-Day (std) 🗀 Š Ending Date/Time Government Email To: 21/6/23 1435 5455 ax To #: Federal Format: νed. ·Day Other; · Day Project Entity - auto Þ 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ **,** PFAS Sample Collection - Shutesbury CASO 82/1/19 Shutesbury, Massachusetts 450 1640 35 Leveret-Rend-Int 35 cevered Rond- FA Town of Shutesbury Clean Sample To / Description (413) 562-1600 Fax: 413-525-6405 Jeff Arps 5-2190 2/17/23 | Date/Time: Date/Time: Date/Time: Date/Time Pace Analytical Quote Name/Number Sed by: (signature) letinquished by: (signature) Relinquished by: (signature) Pace analytical Received by: (signature) Received by: Isignature) etved 6y: (signatura Work Orders elingujshed by: (signg A) (signatus Combany Name Ourest Invoice Recipient: Project Location: Project Manager: Project Number: sampled By: Address: Page 12 of 13

# 39 Spruce St. East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405

www.pacelabs.com

ENV-FRM-ELUN-0009V02\_Sample Receiving LineCklist 1-12-20 Table of Contents

# Log In Back-Sheet

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



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February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 37 Leverett Rd, Shutesbury, MA

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B1533

Enclosed are results of analyses for samples as received by the laboratory on February 13, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 2/24/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B1533

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 37 Leverett Rd, Shutesbury, MA

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

37 Leverett Road 23B1533-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington
Technical Representative

na Watslengton



Analyte

Perfluorobutanesulfonic acid (PFBS)

Perfluorohexanesulfonic acid (PFHxS)

Perfluorohexanoic acid (PFHxA)

Perfluoroheptanoic acid (PFHpA)

Perfluorooctanesulfonic acid (PFOS)

Perfluorooctanoic acid (PFOA)

Perfluorononanoic acid (PFNA)

Perfluorodecanoic acid (PFDA)

Perfluoroundecanoic acid (PFUnA)

Perfluorododecanoic acid (PFDoA)

Perfluorotridecanoic acid (PFTrDA)

Perfluorotetradecanoic acid (PFTA)

11Cl-PF3OUdS (F53B Major)

9Cl-PF3ONS (F53B Minor)

Hexafluoropropylene oxide dimer acid

4,8-Dioxa-3H-perfluorononanoic acid

N-EtFOSAA (NEtFOSAA)

N-MeFOSAA (NMeFOSAA)

(HFPO-DA)

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 37 Leverett Rd, Shutesbury, MA Sample Description: Work Order: 23B1533

Date Received: 2/13/2023

Field Sample #: 37 Leverett Road Sampled: 2/9/2023 09:50

Results

ND

3.4

0.77

1.7

5.9

5.8

ND

1.7

1.7

1.7

1.7

0.75

0.65

0.78

0.70

Sample ID: 23B1533-01
Sample Matrix: Ground Water

	Semivolatile Organic Compounds by - LC/MS-MS							
						Date	Date/Time	
RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
1.7	0.66	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.76	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.55	ng/L	1	J	EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.58	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.80	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.74	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.76	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.63	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.59	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.58	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.56	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.53	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.51	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS
1.7	0.44	ng/L	1		EPA 537.1	2/20/23	2/22/23 15:29	AMS

EPA 537.1

EPA 537.1

EPA 537.1

EPA 537.1

2/20/23

2/20/23

2/20/23

2/20/23

2/22/23 15:29

2/22/23 15:29

2/22/23 15:29

2/22/23 15:29

AMS

AMS

AMS

AMS

(ADONA)				
Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C-PFHxA	83.0	70-130		2/22/23 15:29
M3HFPO-DA	73.4	70-130		2/22/23 15:29
13C-PFDA	82.5	70-130		2/22/23 15:29
D5-NEtFOSAA	89.7	70-130		2/22/23 15:29

ng/L

ng/L

ng/L

ng/L



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1533-01 [37 Leverett Road]	B331804	293	1.00	02/20/23



#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
atch B331804 - EPA 537.1											
Blank (B331804-BLK1)					Prepared: 02	2/20/23 Anal	yzed: 02/22/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.82	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.60	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	1.8	0.62	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.87	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.80	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.82	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.68	ng/L							
-EtFOSAA (NEtFOSAA)	ND	1.8	0.64	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.62	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.60	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.57	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.55	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.47	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	0.81	ng/L							
IFPO-DA)	•			•							
Cl-PF3OUdS (F53B Major)	ND	1.8	0.70	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.84	ng/L							
3-Dioxa-3H-perfluorononanoic acid DONA)	ND	1.8	0.75	ng/L							
rrogate: 13C-PFHxA	32.5			ng/L	36.8		88.4	70-130			
rrogate: M3HFPO-DA	34.0			ng/L	36.8		92.3	70-130			
rrogate: 13C-PFDA	32.8			ng/L	36.8		89.2	70-130			
ırrogate: D5-NEtFOSAA	134			ng/L	147		90.7	70-130			
CS (B331804-BS1)					Prepared: 02	2/20/23 Anal	yzed: 02/22/2	23			
erfluorobutanesulfonic acid (PFBS)	1.34	1.8	0.69	ng/L	1.60		83.6	50-150			J
erfluorohexanoic acid (PFHxA)	1.32	1.8	0.80	ng/L	1.81		73.0	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.19	1.8	0.59	ng/L	1.65		71.9	50-150			J
erfluoroheptanoic acid (PFHpA)	1.67	1.8	0.61	ng/L	1.81		92.5	50-150			J
erfluorooctanoic acid (PFOA)	1.47	1.8	0.85	ng/L	1.81		81.5	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.66	1.8	0.78	ng/L	1.68		99.1	50-150			J
erfluorononanoic acid (PFNA)	1.41	1.8	0.80	ng/L	1.81		77.7	50-150			J
erfluorodecanoic acid (PFDA)	1.98	1.8	0.66	ng/L	1.81		109	50-150			
-EtFOSAA (NEtFOSAA)	1.57	1.8	0.63	ng/L	1.81		86.9	50-150			J
erfluoroundecanoic acid (PFUnA)	1.65	1.8	0.61	ng/L	1.81		91.0	50-150			J
-MeFOSAA (NMeFOSAA)	1.68	1.8	0.59	ng/L	1.81		92.6	50-150			J
erfluorododecanoic acid (PFDoA)	1.40	1.8	0.56	ng/L	1.81		77.3	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.71	1.8	0.54	ng/L	1.81		94.3	50-150			J
erfluorotetradecanoic acid (PFTA)	1.43	1.8	0.47	ng/L	1.81		79.3	50-150			J
exafluoropropylene oxide dimer acid	1.49	1.8	0.80	ng/L	1.81		82.6	50-150			J
IFPO-DA)											
Cl-PF3OUdS (F53B Major)	1.58	1.8	0.69	ng/L	1.71		92.6	50-150			J
Cl-PF3ONS (F53B Minor)	1.58	1.8	0.82	ng/L	1.69		93.6	50-150			J
8-Dioxa-3H-perfluorononanoic acid DONA)	1.58	1.8	0.74	ng/L	1.71		92.6	50-150			J
urrogate: 13C-PFHxA	34.1			ng/L	36.2		94.2	70-130			
ırrogate: M3HFPO-DA	35.8			ng/L	36.2		98.9	70-130			
urrogate: 13C-PFDA	34.6			ng/L	36.2		95.5	70-130			
urrogate: D5-NEtFOSAA	138			ng/L	145		95.5	70-130			



4,8-Dioxa-3H-perfluorononanoic acid

(ADONA)

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B331804 - EPA 537.1											
LCS Dup (B331804-BSD1)				1	Prepared: 02	2/20/23 Analy	yzed: 02/22/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.66	1.8	0.69	ng/L	1.58		105	50-150	21.5	50	J
Perfluorohexanoic acid (PFHxA)	1.74	1.8	0.79	ng/L	1.78		97.8	50-150	27.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.59	1.8	0.58	ng/L	1.63		97.5	50-150	28.9	50	J
Perfluoroheptanoic acid (PFHpA)	2.14	1.8	0.60	ng/L	1.78		120	50-150	24.4	50	
Perfluorooctanoic acid (PFOA)	1.86	1.8	0.84	ng/L	1.78		105	50-150	23.4	50	
Perfluorooctanesulfonic acid (PFOS)	1.98	1.8	0.77	ng/L	1.66		120	50-150	17.4	50	
Perfluorononanoic acid (PFNA)	1.99	1.8	0.79	ng/L	1.78		111	50-150	34.3	50	
Perfluorodecanoic acid (PFDA)	2.22	1.8	0.66	ng/L	1.78		125	50-150	11.8	50	
N-EtFOSAA (NEtFOSAA)	2.01	1.8	0.62	ng/L	1.78		113	50-150	24.3	50	
Perfluoroundecanoic acid (PFUnA)	1.91	1.8	0.60	ng/L	1.78		107	50-150	14.9	50	
N-MeFOSAA (NMeFOSAA)	1.94	1.8	0.58	ng/L	1.78		109	50-150	14.8	50	
Perfluorododecanoic acid (PFDoA)	1.88	1.8	0.56	ng/L	1.78		105	50-150	29.1	50	
Perfluorotridecanoic acid (PFTrDA)	1.98	1.8	0.53	ng/L	1.78		111	50-150	14.7	50	
Perfluorotetradecanoic acid (PFTA)	1.48	1.8	0.46	ng/L	1.78		83.2	50-150	3.43	50	J
Hexafluoropropylene oxide dimer acid	2.07	1.8	0.79	ng/L	1.78		116	50-150	32.4	50	
(HFPO-DA)			0.60								
11Cl-PF3OUdS (F53B Major)	1.97	1.8	0.68	ng/L	1.68		117	50-150	21.7	50	
9Cl-PF3ONS (F53B Minor)	1.99	1.8	0.81	ng/L	1.66		120	50-150	22.9	50	

ng/L

1.69

123

50-150

26.9

50

1.8 0.73

2.07



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



#### CERTIFICATIONS

#### Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

2381533

Doc # 381 Rev 2\_06262019

39 Spruce Street

Phone: 413-525-2332

Pace Analytical

Fax: 413-525-6405

Preservation Codes sodiam Bisulfate WW = Waste Water GW = Ground Water DW = Prinking Water Sodkum Нуфголіфе = 50dium Phocostate Matrix Codes \* Sulfuric Acid = Air S = Sail N . Nikric Acid DI = Di Water M = Methanol \$L - Studge SOL = Solid Ď D. Other 2 Preservation Code N = HCL · ted Page Please use the following codes to indicate possible sample concentration within the Conc Code column H - High; M - Medium; L - Low; C - Clean; U -\*Pace Analytical is not Chromatogram AIHA-LAP, LLC ANALYSIS REQUESTED 00 Other freezer? Y / N Gassware in ₽ MA MCP Required CT RCP Required RCP Certification Form Required MA State DW Required East Longmeadow, MA 01026 F. SER SIN SARA O 8ACTERIA Dissolved Metals Sampler Orthophosphate Sam GLASS Field Filtered Field Filtered PCB ONLY Lab to Filter Lab to Fitter PLASTIC School MWRA MBTA NON SOXHLET VIÁLS GLASS legal document that must be complete and accurate and is used to information on the Chain of Custody. The Chain of Custody is a Disclaimer: Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD 00 0 0 Sax Code RAPASTighebood.com; SEvans@Tighebood.com C Municipality Pediterrad rumandum drifme © 10 Day EXCEL G Due Date: Brownfield Mathy Code # QISMd 3 3 3-Day 4-Day 213 N 0 Date/Time: Bill to Town of Shutosbury - PO:57-101490 CLP Like Data Pkg Required: COMP/GRAB Petertiön uimit Requicements 21/23 0950 GmJ Part App PFAS 10-Day (std) PD 보다 Ending Dates Time Government. Email To: ormat ax To #; Federa! Other: -Day .Day Project Entity Beginning Restrate John 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Shutesbury, Massachusetts S(3/8) 30 Date Time Dag Town of Shuteshiry (413) 562-1500 Cirent Sample ID / Description Samuel Evaps 37 General Ford Jeff Arps 222 5-2190 Date/Time: Date/Time: Date/Time: Pace Analytical Quoto Name/Mumber d by (signature) Relinquished by: (signature Pace Analytical (eceived by: (signature) Work Ordery Received by: (signature) invoice Recipient: Project Mine Project Location: Project Manager: Project Number: Retifiquished by: Sampled By:

Table of Contents

D - Other

responsible for missing samples

from prepacked coolers

Prepackaged Cooler? Y / N

BACTERIA

PLASTIC ENCORE

determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with

Page 11 of 12

missing information, but will not be held accountable.

East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405 www.pacelabs.com

# Log in Back-Sheet Table of Contents

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

	Pace.
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,	PEOPLE ABVANCING SCIENC

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February 21, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: Shutesbury, Massachusetts

60 Leverett Rd

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B1451

Enclosed are results of analyses for samples as received by the laboratory on February 13, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/21/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B1451

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

60 Leverett Road 23B1451-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley
Reporting Specialist



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B1451

Date Received: 2/13/2023

Field Sample #: 60 Leverett Road

Sampled: 2/9/2023 08:30

100

95.1

Sample ID: 23B1451-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

Comivalatila	Organia	Compounde	by - LC/MS-MS

								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.7	0.66	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.7	0.76	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.7	0.56	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.7	0.58	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorooctanoic acid (PFOA)	ND	1.7	0.81	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.7	0.74	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorononanoic acid (PFNA)	ND	1.7	0.76	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorodecanoic acid (PFDA)	ND	1.7	0.63	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.60	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.58	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.56	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.54	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.51	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.44	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	0.76	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.66	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.78	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.70	ng/L	1		EPA 537.1	2/15/23	2/20/23 14:36	AMS
Surrogates		% R	ecovery	Recovery Limits		Flag/Qual				
13C-PFHxA	•	108	1	70-130	•				2/20/23 14:36	
M3HFPO-DA		94.5	5	70-130					2/20/23 14:36	

70-130

70-130

2/20/23 14:36

2/20/23 14:36



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1451-01 [60 Leverett Road]	B331478	291	1.00	02/15/23



Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Satch B331478 - EPA 537.1											
Blank (B331478-BLK1)					Prepared: 02	2/15/23 Anal	vzed: 02/20/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.70	ng/L	Trepureur 02		,2001 02,20,1				
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.81	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.59	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	1.8	0.62	ng/L							
erfluorooctanoic acid (PFOA)	ND ND	1.8	0.86	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND ND	1.8	0.79	ng/L							
erfluorononanoic acid (PFNA)		1.8	0.81	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.67	ng/L							
	ND										
EtFOSAA (NEtFOSAA) rfluoroundecanoic acid (PFUnA)	ND	1.8 1.8	0.63	ng/L ng/L							
MeFOSAA (NMeFOSAA)	ND	1.8	0.62								
	ND			ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.57	ng/L							
rfluorotridecanoic acid (PFTrDA)	ND	1.8	0.54	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.47	ng/L							
exafluoropropylene oxide dimer acid  (FPO-DA)	ND	1.8	0.80	ng/L							
CI-PF3OUdS (F53B Major)	ND	1.8	0.70	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.83	ng/L							
3-Dioxa-3H-perfluorononanoic acid DONA)	ND	1.8	0.75	ng/L							
rrogate: 13C-PFHxA	33.2			ng/L	36.4		91.1	70-130			
rrogate: M3HFPO-DA	28.5			ng/L	36.4		78.4	70-130			
rrogate: 13C-PFDA	34.3			ng/L	36.4		94.2	70-130			
ırrogate: D5-NEtFOSAA	135			ng/L	146		93.0	70-130			
CS (B331478-BS1)					Prepared: 02	2/15/23 Anal	yzed: 02/20/2	23			
erfluorobutanesulfonic acid (PFBS)	14.6	1.8	0.70	ng/L	16.1		90.1	70-130			
erfluorohexanoic acid (PFHxA)	16.9	1.8	0.81	ng/L	18.2		92.9	70-130			
rfluorohexanesulfonic acid (PFHxS)	14.5	1.8	0.59	ng/L	16.6		87.0	70-130			
rfluoroheptanoic acid (PFHpA)	16.2	1.8	0.62	ng/L	18.2		88.9	70-130			
rfluorooctanoic acid (PFOA)	16.0	1.8	0.86	ng/L	18.2		88.1	70-130			
erfluorooctanesulfonic acid (PFOS)	15.5	1.8	0.79	ng/L	16.9		92.0	70-130			
erfluorononanoic acid (PFNA)	17.1	1.8	0.81	ng/L	18.2		93.9	70-130			
erfluorodecanoic acid (PFDA)	17.3	1.8	0.67	ng/L	18.2		95.2	70-130			
EtFOSAA (NEtFOSAA)	15.9	1.8	0.63	ng/L	18.2		87.3	70-130			
erfluoroundecanoic acid (PFUnA)	16.0	1.8	0.62	ng/L	18.2		87.6	70-130			
-MeFOSAA (NMeFOSAA)	16.2	1.8	0.59	ng/L	18.2		89.0	70-130			
rfluorododecanoic acid (PFDoA)	15.5	1.8	0.57	ng/L	18.2		85.2	70-130			
erfluorotridecanoic acid (PFTrDA)	15.2	1.8	0.54	ng/L	18.2		83.7	70-130			
erfluorotetradecanoic acid (PFTA)		1.8	0.47	ng/L	18.2		84.7	70-130			
exafluoropropylene oxide dimer acid	15.4	1.8	0.80	ng/L	18.2						
Examuoropropytene oxide diffier acid [FPO-DA] Cl-PF3OUdS (F53B Major)	17.3 16.7	1.8	0.70	ng/L	17.2		95.1 97.0	70-130 70-130			
Cl-PF3ONS (F53B Minor)		1.8	0.83	ng/L	17.2		88.4	70-130			
8-Dioxa-3H-perfluorononanoic acid	15.0 14.4	1.8	0.83	ng/L	17.0		83.8	70-130			
ADONA)											
rrogate: 13C-PFHxA	37.3			ng/L	36.4		103	70-130			
rrogate: M3HFPO-DA	31.7			ng/L	36.4		87.2	70-130			
rrogate: 13C-PFDA	36.8			ng/L	36.4		101	70-130			
numerosta, D5 NEtEOCAA	126			/T	1.46		02.7	70.120			

ng/L

146

136

93.7

70-130



#### QUALITY CONTROL

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

		Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch B331478 - EPA 537.1

LCS Dup (B331478-BSD1)				]	Prepared: 02/15/2	23 Analyzed: 02/20/	23		
Perfluorobutanesulfonic acid (PFBS)	13.9	1.8	0.70	ng/L	16.2	86.1	70-130	4.37	30
Perfluorohexanoic acid (PFHxA)	16.4	1.8	0.81	ng/L	18.2	89.9	70-130	3.08	30
Perfluorohexanesulfonic acid (PFHxS)	14.3	1.8	0.59	ng/L	16.7	85.7	70-130	1.27	30
Perfluoroheptanoic acid (PFHpA)	15.6	1.8	0.62	ng/L	18.2	85.4	70-130	3.83	30
Perfluorooctanoic acid (PFOA)	16.0	1.8	0.86	ng/L	18.2	87.5	70-130	0.544	30
Perfluorooctanesulfonic acid (PFOS)	15.3	1.8	0.79	ng/L	16.9	90.6	70-130	1.31	30
Perfluorononanoic acid (PFNA)	16.7	1.8	0.81	ng/L	18.2	91.4	70-130	2.53	30
Perfluorodecanoic acid (PFDA)	17.0	1.8	0.67	ng/L	18.2	93.0	70-130	2.10	30
N-EtFOSAA (NEtFOSAA)	16.9	1.8	0.63	ng/L	18.2	92.7	70-130	6.24	30
Perfluoroundecanoic acid (PFUnA)	17.0	1.8	0.62	ng/L	18.2	93.1	70-130	6.32	30
N-MeFOSAA (NMeFOSAA)	17.0	1.8	0.59	ng/L	18.2	93.1	70-130	4.67	30
Perfluorododecanoic acid (PFDoA)	16.9	1.8	0.57	ng/L	18.2	92.7	70-130	8.70	30
Perfluorotridecanoic acid (PFTrDA)	16.9	1.8	0.54	ng/L	18.2	92.4	70-130	10.1	30
Perfluorotetradecanoic acid (PFTA)	16.3	1.8	0.47	ng/L	18.2	89.6	70-130	5.76	30
Hexafluoropropylene oxide dimer acid	17.0	1.8	0.80	ng/L	18.2	93.1	70-130	1.87	30
(HFPO-DA) 11Cl-PF3OUdS (F53B Major)	17.3	1.8	0.70	ng/L	17.2	100	70-130	3.58	30
9Cl-PF3ONS (F53B Minor)	15.2	1.8	0.83	ng/L	17.0	89.2	70-130	1.08	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	14.1	1.8	0.75	ng/L	17.2	81.7	70-130	2.35	30
Surrogate: 13C-PFHxA	33.8			ng/L	36.5	92.5	70-130		
Surrogate: M3HFPO-DA	29.0			ng/L	36.5	79.4	70-130		
Surrogate: 13C-PFDA	34.9			ng/L	36.5	95.6	70-130		
Surrogate: D5-NEtFOSAA	137			ng/L	146	93.9	70-130		



MCL

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

Maximum Contaminant Level

No results have been blank subtracted unless specified in the case narrative section.



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

#### EPA 537.1 in Drinking Water

Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

2381451

Hips://www.pacelebs.com/

Phone: 413-525-2332

Pace Analytical

Fax: 413-525-6405

CHAIN OF CUSTODY RECORD

39 Spruce Street

East Longmeadow, MA 01026

Doc # 381 Rev 2, 06262019

Preservation Codes Pace Amplical = Sodium Bistellate GW= Ground Water WW = Waste Water " Sodiam Hydroxide DW n Drinking Water \* Society Phiosulfate Matrix Codes . \* Suffuric Acid 1 = Air S = Soil N ≈ Mitric A⊡d M = Methanot DI = Di Water St. - Studge SOL = Solid Page \_\_\_\_of O = Other o .. Other 2 Preservation Code H = #CE : Iced Please use the following codes to indicate possible sample concentration within the Lonc Code column responsible for missing samples H - High; M - Medium; L - Low; C - Clean; U -Pace Analytical is not from prepacked cookers Chromatogram AMA-LAP, LLC AMALYSIS REQUESTED Other Prepackaged Cooler? Y / N freezer? Y / N Glassware in MCP Certification Form Required Courier Use Only MA MCP Required RCP Certification Forth Required CT RCP Required WRTA M. State DW Required FIXER BIN SATE ENCORE ENCORE Physiciae Metals Samples BACTERIA Pophosphate Samp GLASS BACTERIA PLASTIC Field Filtered YEALS Field Filtered PCB ONL) Lab to Filter Lab to Fitter Special Requirements PLASTIC School MWRA META NON SOXHLET CONF. COME VIALS | GLASS legal document that must be complete and accurate and is used to Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a determine what analyses the laboratory will perform. Any missing values your partnership on each project and will try to assist with missing information, but will not be held accountable. infermation is not the laboratory's responsibility. Pade Analytical SOXHLET 00 0 0 Data Deliver A. Apple @ Tight-benduram; SEvense Tighelond.com > ជា ជា Requested Turnar outst Time Municipality Brownfield Due Date: Bush approval Required # CHSMAd to-Day ي 3 EXCEL 3-Day 4-Day Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMP/GRAB Defaction Lindt Requirements 000 [5] FAS 10-Day (std) 🖰 £0£ Englise State/Tens Coverhment Email To: 2/9/22 0850 Pax to #: format; Federaí Other 7-Cay Çed. 2-Day Š Project Entity Beginning UnterTime e III 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time: BI Shutesbury, Massachusetts Date (7.3) 13 13 14 13/13/92 108 چ ک Town of Shutesbury (413) 562-1600 Clear Salgife for Description Samuel Evans Ticke & Bond Jeff Arps 5-2190 Date/Time: Date/Time: Date/Time: Leverett 1 Theo Sec Pace Analytical Quote Name/Number うくで eseripany Nakna quished by: (signature) elinquished by: (signature Pace Analytical Work Order# Received by: (signature) Received by: (signature) Invaice Recipient: Project Location: Project Number: Project Manager Molecular Name Lab Comments: Sampled By:

# 39 Spruce St. East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405 www.pacelabs.com

ENV-FRM-ELON-0009V02\_Sample Receiving Checklist 1-12-2023

# Log In Back-Sheet

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



Container (Circle when applicable  11		HCI	HNO3	H2SO4	NaOH	Trizma  2  Di	er pH: (	Other Pres	Other	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC KIt Perchlorate Encore	UnP	HCI	HNO3			Trizma		Other Pres	servative	
1L Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC KIt Perchlorate	UnP	HCI	HNO3			Trizma		Other Pres	servative	
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February 27, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 87 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2159

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

## Table of Contents

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Semivolatile Organic Compounds by - LC/MS-MS	7
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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/27/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2159

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 87 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

87 Leverett Road 23B2159-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley Reporting Specialist

Meghan S. Kelley



Project Location: 87 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2159

Date Received: 2/17/2023

Field Sample #: 87 Leverett Road Sampled: 2/16/2023 10:45

Sample ID: 23B2159-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

Sample Matrix: Ground Water										
			Semivol	atile Organic Compoun	ds by - LC/	MS-MS				
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.7	0.68	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.7	0.81	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.7	0.77	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.7	0.86	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorooctanoic acid (PFOA)	1.2	1.7	0.89	ng/L	1	J	EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorooctanesulfonic acid (PFOS)	0.86	1.7	0.65	ng/L	1	J	EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorononanoic acid (PFNA)	ND	1.7	0.80	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorodecanoic acid (PFDA)	ND	1.7	0.83	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.66	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.64	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.62	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.63	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.72	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	1.1	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.57	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.70	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.76	ng/L	1		EPA 537.1	2/22/23	2/24/23 11:50	JR2
Surrogates	•	% F	Recovery	Recovery Limits	•	Flag/Qual		•		
13C-PFHxA		93.		70-130					2/24/23 11:50	
M3HFPO-DA		84.	2	70-130					2/24/23 11:50	

70-130

70-130

93.4

95.7

2/24/23 11:50

2/24/23 11:50



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2159-01 [87 Leverett Road]	B332311	289	1.00	02/22/23



Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332311 - EPA 537.1											
Blank (B332311-BLK1)					Prepared: 02	2/22/23 Anal	yzed: 02/24/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.85	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	0.94	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.87	ng/L							
I-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
lexafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
HFPO-DA)											
1Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L							
,8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.8	0.80	ng/L							
urrogate: 13C-PFHxA	40.4			ng/L	36.5		111	70-130			
urrogate: M3HFPO-DA	39.3			ng/L	36.5		108	70-130			
urrogate: 13C-PFDA	40.8			ng/L	36.5		112	70-130			
urrogate: D5-NEtFOSAA	160			ng/L	146		109	70-130			
.CS (B332311-BS1)					Prepared: 02	2/22/23 Anal	yzed: 02/24/2	23			
erfluorobutanesulfonic acid (PFBS)	16.8	1.8	0.72	ng/L	16.2		103	70-130			
erfluorohexanoic acid (PFHxA)	18.5	1.8	0.85	ng/L	18.3		102	70-130			
erfluorohexanesulfonic acid (PFHxS)	17.5	1.8	0.82	ng/L	16.7		105	70-130			
erfluoroheptanoic acid (PFHpA)	19.8	1.8	0.91	ng/L	18.3		109	70-130			
erfluorooctanoic acid (PFOA)	18.6	1.8	0.94	ng/L	18.3		102	70-130			
erfluorooctanesulfonic acid (PFOS)	16.5	1.8	0.69	ng/L	16.9		97.4	70-130			
erfluorononanoic acid (PFNA)	18.0	1.8	0.84	ng/L	18.3		98.4	70-130			
Perfluorodecanoic acid (PFDA)	17.8	1.8	0.88	ng/L	18.3		97.7	70-130			
I-EtFOSAA (NEtFOSAA)	17.2	1.8	0.61	ng/L	18.3		94.2	70-130			
erfluoroundecanoic acid (PFUnA)	18.5	1.8	0.69	ng/L	18.3		101	70-130			
I-MeFOSAA (NMeFOSAA)	18.2	1.8	0.68	ng/L	18.3		99.7	70-130			
erfluorododecanoic acid (PFDoA)	18.4	1.8	0.65	ng/L	18.3		101	70-130			
erfluorotridecanoic acid (PFTrDA)	18.3	1.8	0.67	ng/L	18.3		100	70-130			
erfluorotetradecanoic acid (PFTA)	18.4	1.8	0.76	ng/L	18.3		101	70-130			
Iexafluoropropylene oxide dimer acid	16.0	1.8	1.1	ng/L	18.3		87.6	70-130			
HFPO-DA) 1Cl-PF3OUdS (F53B Major)	18.3	1.8	0.61	ng/L	17.2		106	70-130			
Cl-PF3ONS (F53B Minor)	17.4	1.8	0.74	ng/L	17.0		102	70-130			
,8-Dioxa-3H-perfluorononanoic acid ADONA)	18.2	1.8	0.80	ng/L	17.3		105	70-130			
Surrogate: 13C-PFHxA	40.3			ng/L	36.5		110	70-130			
urrogate: M3HFPO-DA	40.9			ng/L	36.5		112	70-130			
urrogate: 13C-PFDA	36.4			ng/L	36.5		99.6	70-130			
Surrogate: D5 NEtEOS A A	112			ma/I	146		00.8	70 120			

ng/L

146

99.8

70-130

146



Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

	F	Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

LCS Dup (B332311-BSD1)				]	Prepared: 02/22/23	Analyzed: 02/24	/23		
Perfluorobutanesulfonic acid (PFBS)	16.2	1.8	0.72	ng/L	16.2	100	70-130	3.47	30
Perfluorohexanoic acid (PFHxA)	17.5	1.8	0.85	ng/L	18.2	95.8	70-130	5.97	30
Perfluorohexanesulfonic acid (PFHxS)	16.0	1.8	0.82	ng/L	16.7	96.2	70-130	9.12	30
Perfluoroheptanoic acid (PFHpA)	17.4	1.8	0.91	ng/L	18.2	95.4	70-130	13.2	30
Perfluorooctanoic acid (PFOA)	17.0	1.8	0.94	ng/L	18.2	93.4	70-130	8.78	30
Perfluorooctanesulfonic acid (PFOS)	16.2	1.8	0.69	ng/L	16.9	95.6	70-130	2.10	30
Perfluorononanoic acid (PFNA)	16.7	1.8	0.84	ng/L	18.2	91.7	70-130	7.35	30
Perfluorodecanoic acid (PFDA)	17.9	1.8	0.87	ng/L	18.2	98.4	70-130	0.475	30
N-EtFOSAA (NEtFOSAA)	19.7	1.8	0.60	ng/L	18.2	108	70-130	13.4	30
Perfluoroundecanoic acid (PFUnA)	18.1	1.8	0.69	ng/L	18.2	99.4	70-130	1.99	30
N-MeFOSAA (NMeFOSAA)	19.2	1.8	0.68	ng/L	18.2	105	70-130	5.31	30
Perfluorododecanoic acid (PFDoA)	18.1	1.8	0.65	ng/L	18.2	99.6	70-130	1.14	30
Perfluorotridecanoic acid (PFTrDA)	18.5	1.8	0.66	ng/L	18.2	102	70-130	1.54	30
Perfluorotetradecanoic acid (PFTA)	18.7	1.8	0.76	ng/L	18.2	103	70-130	1.93	30
Hexafluoropropylene oxide dimer acid (HFPO-DA)	15.1	1.8	1.1	ng/L	18.2	82.9	70-130	5.64	30
11Cl-PF3OUdS (F53B Major)	19.1	1.8	0.60	ng/L	17.2	111	70-130	4.44	30
9Cl-PF3ONS (F53B Minor)	17.4	1.8	0.74	ng/L	17.0	102	70-130	0.326	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	16.2	1.8	0.80	ng/L	17.2	94.0	70-130	11.5	30
Surrogate: 13C-PFHxA	32.6			ng/L	36.4	89.4	70-130		
Surrogate: M3HFPO-DA	31.3			ng/L	36.4	86.0	70-130		
Surrogate: 13C-PFDA	33.1			ng/L	36.4	90.8	70-130		

ng/L

146

98.4

70-130

143



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

2382159 JA

Doc # 381 Rev 2\_06262019

39 Sprace Street

https://www.pacelabs.com/

Phone: 413-525-2332

Preservation Codes B + Sodium Bisulfate Matrix Codes Gw. Ground Water WW = Waste Water DW = Orinking Water ( = Sodium Hydroxide 🕻 = Sodium Tenosattare 5 = Sufferic Acid A = Air S = Soil N = Nitric Acid M - Methanol DI = Di Water SL = Studge SOL = Solid D :: Other ŏ 0 - Other 2 Preservation Code H - FICE = kced Page responsible for missing samples Please use the following codes to indicate possible sample concentration within the Conc Code column M - High; M - Medium; E - Low; C - Clean; U from prepacked coolers "Pace Analytical is not Chromatogram AIHA-LAP, LLC ANALYSIS REQUESTED Other Glassware in freezer? Y / N Prepackaged Cooler? Y / N 0 Courier Use Only MCP Centification Form Required MA MCP Required CT RCP Required WRTA MA State DW Required RCP Certification Form Requi East Longmeadow, MA 01026 PEAS VIA 337.1 X ENCOPE O BACTERIA PLASTIC ENCORE BACTERIA VIALS GLASS Orthophiscahlate Sam Field Fittered Fletd Filtered Special Requirements Lab to fitter PCB ONL) Lab to Fifter PLASTIC School MBTA NON SOXHLET legat occurrent that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing GLASS information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable. The Chain of Custody is a Disclaimer: Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD VIALS 000 0 0 00 Data belivery Cone Code Starparit ighobond zom: Stransörtighobond zom Municipatity Brownfield Requessed Turnaround Time g ag Cogs ₩SID# Due Date: information on the Chain of Custody 3 1G-Day 4-Day 3-Day EXCER Ŋ O <u>~</u> ø Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMP/GRAB Detection Limit Requirements 9220 Rush Appro O FAS 10-Day (std) Ē 둹 Government Ending Statement Email To: 24/6/23/1645 Fax To #; Federal **Sormat**: Other: -Day 2-Day Š Project Entity Cull 53 Southampton Road, Westfield, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Shutesbury, Massachusetts CRUERA ROND 16/1me. //2/23 a&v 17/23 1655 Town of Shutesbury Client Sample 10 / Description 1413) 562-1600 Tighe & Bond Samuel Evans Fax: 413-525-6405 Jeff Arps 5.7190 Date/Time: Date/Time; Date/Time: Date /Time: ate/Time: N () () Pace Analytical Quote Name/Mumber Pace Analytical\* Relinquished by: (signature) Inquished by: (signature) Hinguished by: (signibura Pace analytical Received by: (signature) Received by: (signature) (signa : Isignatur Invoice Recipient: Project Location: Project Manager: Superny Albert Project Number: Project Name Sampled By: Address: Page 11 of 12 39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405

www.pacelabs.com

EIVV-FKIVI-ELUIN-UUUSVUZ\_sample keceiving unecklist 1-12-20 Table of Contents

## Log In Back-Sheet

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



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February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 91 Leverett Rd. Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2128

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

## Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 2/24/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2128

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 91 Leverett Rd. Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
91 Leverett Road 23B2128-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: 91 Leverett Rd. Shutesbury, Mass Sample Description: Work Order: 23B2128

Date Received: 2/17/2023

Field Sample #: 91 Leverett Road

Sampled: 2/16/2023 14:20

Sample ID: 23B2128-01
Sample Matrix: Ground Water

			Semivol	atile Organic Compoun	ds by - LC/	MS-MS				
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.76	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.91	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.87	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.96	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorooctanoic acid (PFOA)	ND	1.9	1.0	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.73	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorononanoic acid (PFNA)	ND	1.9	0.89	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorodecanoic acid (PFDA)	ND	1.9	0.93	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.9	0.64	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.74	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.72	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.70	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.71	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.81	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	1.2	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.9	0.64	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.9	0.79	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.85	ng/L	1		EPA 537.1	2/21/23	2/23/23 11:10	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		97.		70-130					2/23/23 11:10	
M3HFPO-DA		96.		70-130					2/23/23 11:10	
13C-PFDA		97.		70-130					2/23/23 11:10	
D5-NEtFOSAA		102	2	70-130					2/23/23 11:10	



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2128-01 [91 Leverett Road]	B332208	258	1.00	02/21/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332208 - EPA 537.1											
Blank (B332208-BLK1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	3			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.86	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.95	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.88	ng/L							
I-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.66	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
HFPO-DA)		1.0	0.61	/T							
CLPF3OUdS (F53B Major)	ND	1.8	0.61	ng/L ng/L							
CI-PF3ONS (F53B Minor)	ND	1.8 1.8	0.75 0.80	ng/L ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.0	0.80	ng/L							
urrogate: 13C-PFHxA	32.3			ng/L	36.6		88.2	70-130			
urrogate: M3HFPO-DA	33.4			ng/L	36.6		91.2	70-130			
urrogate: 13C-PFDA	33.1			ng/L	36.6		90.4	70-130			
urrogate: D5-NEtFOSAA	137			ng/L	146		93.4	70-130			
.CS (B332208-BS1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	3			
erfluorobutanesulfonic acid (PFBS)	1.35	1.8	0.72	ng/L	1.62		83.5	50-150			J
erfluorohexanoic acid (PFHxA)	1.29	1.8	0.85	ng/L	1.83		70.8	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.15	1.8	0.82	ng/L	1.67		69.1	50-150			J
erfluoroheptanoic acid (PFHpA)	1.51	1.8	0.91	ng/L	1.83		82.9	50-150			J
erfluorooctanoic acid (PFOA)	1.29	1.8	0.94	ng/L	1.83		70.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.48	1.8	0.69	ng/L	1.69		87.4	50-150			J
erfluorononanoic acid (PFNA)	1.36	1.8	0.84	ng/L	1.83		74.6	50-150			J
erfluorodecanoic acid (PFDA)	1.74	1.8	0.88	ng/L	1.83		95.2	50-150			J
-EtFOSAA (NEtFOSAA)	1.48	1.8	0.61	ng/L	1.83		81.0	50-150			J
erfluoroundecanoic acid (PFUnA)	1.49	1.8	0.69	ng/L	1.83		81.6	50-150			J
-MeFOSAA (NMeFOSAA)	1.48	1.8	0.68	ng/L	1.83		81.1	50-150			J
erfluorododecanoic acid (PFDoA)	1.30	1.8	0.65	ng/L	1.83		71.4	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.66	1.8	0.67	ng/L	1.83		91.2	50-150			J
erfluorotetradecanoic acid (PFTA)	1.41	1.8	0.76	ng/L	1.83		77.0	50-150			J
exafluoropropylene oxide dimer acid  HFPO-DA)	1.66	1.8	1.1	ng/L	1.83		90.8	50-150			J
1Cl-PF3OUdS (F53B Major)	1.37	1.8	0.61	ng/L	1.72		79.5	50-150			J
CI-PF3ONS (F53B Minor) ,8-Dioxa-3H-perfluorononanoic acid ADONA)	1.36 1.40	1.8 1.8	0.74 0.80	ng/L ng/L	1.70 1.73		80.1 81.3	50-150 50-150			J
Surrogate: 13C-PFHxA	31.6			ng/L	36.5		86.6	70-130			
urrogate: M3HFPO-DA	31.8			ng/L	36.5		87.0	70-130			
urrogate: 13C-PFDA	30.9			ng/L	36.5		84.6	70-130			
<u> </u>				<i>U</i> –							



Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
			DL				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Batch B332208 - EPA 537.1											
LCS Dup (B332208-BSD1)					Prepared: 02	2/21/23 Anal	yzed: 02/23/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.49	1.8	0.72	ng/L	1.62		91.9	50-150	9.55	50	J
Perfluorohexanoic acid (PFHxA)	1.48	1.8	0.85	ng/L	1.83		81.1	50-150	13.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.40	1.8	0.82	ng/L	1.67		83.8	50-150	19.3	50	J
Perfluoroheptanoic acid (PFHpA)	1.88	1.8	0.91	ng/L	1.83		103	50-150	21.4	50	
Perfluorooctanoic acid (PFOA)	1.54	1.8	0.94	ng/L	1.83		84.4	50-150	17.6	50	J
Perfluorooctanesulfonic acid (PFOS)	1.73	1.8	0.69	ng/L	1.70		102	50-150	15.7	50	J
Perfluorononanoic acid (PFNA)	1.54	1.8	0.84	ng/L	1.83		84.2	50-150	12.1	50	J
Perfluorodecanoic acid (PFDA)	2.02	1.8	0.88	ng/L	1.83		110	50-150	14.7	50	
N-EtFOSAA (NEtFOSAA)	1.65	1.8	0.61	ng/L	1.83		90.5	50-150	11.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.79	1.8	0.69	ng/L	1.83		98.0	50-150	18.3	50	J
N-MeFOSAA (NMeFOSAA)	1.69	1.8	0.68	ng/L	1.83		92.6	50-150	13.4	50	J
Perfluorododecanoic acid (PFDoA)	1.54	1.8	0.66	ng/L	1.83		84.2	50-150	16.6	50	J
Perfluorotridecanoic acid (PFTrDA)	1.86	1.8	0.67	ng/L	1.83		102	50-150	11.1	50	
Perfluorotetradecanoic acid (PFTA)	1.32	1.8	0.76	ng/L	1.83		72.3	50-150	6.22	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.58	1.8	1.1	ng/L	1.83		86.5	50-150	4.80	50	J
11Cl-PF3OUdS (F53B Major)	1.72	1.8	0.61	ng/L	1.72		99.6	50-150	22.5	50	J
9Cl-PF3ONS (F53B Minor)	1.69	1.8	0.74	ng/L	1.71		99.3	50-150	21.5	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.76	1.8	0.80	ng/L	1.73		102	50-150	22.5	50	J

ng/L

ng/L

ng/L

ng/L

36.5

36.5

36.5

146

93.0

93.8

91.0

93.6

70-130

70-130

70-130

70-130

34.0

34.3

33.3

137



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

2362128

	Page of	/ Preservation Code																		Matrix Codes	GW- Ground Water	WW - Waste Water DW = Drinking Water	A - Air 5 - Soil	SL = Studge	SOL = Solid		Preservation Codes	H: H	N - Nitric Acid	S = Sutfuric Acid	8 = Sodium Bisulfate	A * Sodium Hydroxide	M - Methanol	Dt ≃ Dt Water	0 - Other	Paratribusa		
06262019	ANALYCIC DECISION																							Please use the following codes to indicate possible	sample concentration within the Conc Code column	above:	n - Fight, M - Medium; L - Eow; C · Clean; U · Uoknovm			Other				Glassware in The Control of the Cont	ž.	Prepackaged from prepacked coolers		
39 Spruce Street Doc # 381 Rev 2_06262019	JRD East Longmeadow, MA 01026 Ebitsilosterasiles amater		Lab to Filter	Ophosphate Samples	Field Filtered	Lab to Filter		PCB ONLY	]	0		O	PLASTIC BACTERIA ENCORE AS	×									lirements				N.C. Certification Form Reguered	MA State DW Required		T ATRIAL T		O	Courier Use Only	WALS Glas	***************************************	Marian Control Marian Control	ENCORE	
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	Requested T	7-Day	PFAS 10-E			2-Day	setts	Format: PDF 🖸	Other	CLP Like Data Pkg Required:	Email To:	'	Beginning Exting Controlled	4 41/12 Gray						Bill to Town of Shutesbury - PO:57	-	τ.	Desection Limit Requirements	4.4						wemment	Federal	C) AND	Disclamer: Pace Ana	legal document that must	determine what analyses	certain solucion de la more partireration de la contraction de la	Prioring Bridge	
Phone: 413-525-2332 Fax: 413-525-6405		Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/	Tighe & Bond	53 Southampton Road, Westfield, Massachusetts	(413) 562-1600	PFAS Sample Collection - Shutesbury	Shutesbury, Massachusetts	5.2190	Jeff Arps	umber	Town of Shutesbury	Samuel Evans	Client Sangle D. r Description	" " Coverett Por						Oate/fine:		> 2/11/12 (4	Date/Time:	- 4/1/d> 165	4.5 2/14/62 1, CC	- 1 Date/Time		Date/Time:	Cate / Time		Date/Time:							
Pace Analytical		Contact: https://www.pace	Company Marins	Address.	Prone;	Project Name	Project Location;	Project Number:	Project Manager:	Pace Anatytical Quote Namc/Number	Invoice Recipient:	Sampled By:	Pace Analytical Work Order#							Sansar J. Color	tecerved of pignature!	X	letinguished by: (signature)	eceived by (signature)		clinquished by: (signature)		received by: (signature)	(olinquished by: (signature)		(eceived by: (signalune)		D Commence	age		<u> 1 o</u>	f 1	2

. ....... ENV-FRIVI-ELON-UUUSVUZ\_\_Sample Receiving Checklist 1-12-2 Table of Contents

East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405 www.pacelabs.com

# Log In Back-Sheet

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



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March 7, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 14 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2995

Enclosed are results of analyses for samples as received by the laboratory on February 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/7/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2995

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 14 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB
94 Leverett Road 23B2995-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: 14 Leverett Road Shutesbury, Ma Sample Description: Work Order: 23B2995

Date Received: 2/27/2023

Field Sample #: 94 Leverett Road Sampled: 2/23/2023 12:40

Sample ID: 23B2995-01
Sample Matrix: Ground Water

D5-NEtFOSAA

Semivolatile C	Organic Compour	nds by - LC/MS-MS

Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L	1	riag/Quai	EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.84	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.81	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.90	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorooctanoic acid (PFOA)	ND	1.8	0.93	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorooctanesulfonic acid (PFOS)	2.4	1.8	0.68	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.83	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.87	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.67	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.75	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.79	ng/L	1		EPA 537.1	3/1/23	3/3/23 11:23	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		85.4	4	70-130					3/3/23 11:23	
M3HFPO-DA		81.4	4	70-130					3/3/23 11:23	
13C-PFDA		99.	2	70-130					3/3/23 11:23	

70-130

99.8

3/3/23 11:23



#### **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2995-01 [94 Leverett Road]	B332936	277	1.00	03/01/23



Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
, mary to	Result	Pillit	DL	Omis	LCVCI	Result	/UKEC	Limits	M D	Limit	110105
Batch B332936 - EPA 537.1											
Blank (B332936-BLK1)					Prepared: 03	3/01/23 Analy	yzed: 03/03/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.71	ng/L							
erfluorohexanoic acid (PFHxA)	ND	1.8	0.84	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.81	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	1.8	0.90	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.93	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.68	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.83	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.86	ng/L							
-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.68	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.67	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.75	ng/L							
exafluoropropylene oxide dimer acid HFPO-DA)	ND	1.8	1.1	ng/L							
Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
Cl-PF3ONS (F53B Minor)	ND	1.8	0.73	ng/L							
8-Dioxa-3H-perfluorononanoic acid DONA)	ND	1.8	0.79	ng/L							
urrogate: 13C-PFHxA	35.8			ng/L	36.1		99.3	70-130			
nrogate: M3HFPO-DA	36.2			ng/L	36.1		100	70-130			
nrrogate: 13C-PFDA	30.5			ng/L	36.1		84.5	70-130			
irrogate: D5-NEtFOSAA	105			ng/L	144		72.5	70-130			
CS (B332936-BS1)					Prepared: 03	3/01/23 Analy	yzed: 03/03/2	23			
erfluorobutanesulfonic acid (PFBS)	16.2	1.8	0.71	ng/L	15.9		102	70-130			
erfluorohexanoic acid (PFHxA)	14.2	1.8	0.84	ng/L	18.0		79.2	70-130			
erfluorohexanesulfonic acid (PFHxS)	12.6	1.8	0.80	ng/L	16.4		76.5	70-130			
erfluoroheptanoic acid (PFHpA)	17.5	1.8	0.89	ng/L	18.0		97.5	70-130			
erfluorooctanoic acid (PFOA)	14.6	1.8	0.93	ng/L	18.0		81.4	70-130			
erfluorooctanesulfonic acid (PFOS)	17.0	1.8	0.68	ng/L	16.7		102	70-130			
erfluorononanoic acid (PFNA)	15.5	1.8	0.83	ng/L	18.0		86.2	70-130			
erfluorodecanoic acid (PFDA)	18.3	1.8	0.86	ng/L	18.0		102	70-130			
-EtFOSAA (NEtFOSAA)	18.3	1.8	0.60	ng/L	18.0		102	70-130			
erfluoroundecanoic acid (PFUnA)	18.4	1.8	0.68	ng/L	18.0		102	70-130			
-MeFOSAA (NMeFOSAA)	18.6	1.8	0.67	ng/L	18.0		103	70-130			
erfluorododecanoic acid (PFDoA)	18.6	1.8	0.64	ng/L	18.0		103	70-130			
erfluorotridecanoic acid (PFTrDA)	18.4	1.8	0.66	ng/L	18.0		103	70-130			
erfluorotetradecanoic acid (PFTA)	15.5	1.8	0.75	ng/L	18.0		86.0	70-130			
exafluoropropylene oxide dimer acid IFPO-DA)	13.4	1.8	1.1	ng/L	18.0		74.4	70-130			
CI-PF3OUdS (F53B Major)	17.3	1.8	0.60	ng/L	16.9		102	70-130			
Cl-PF3ONS (F53B Minor)	17.2	1.8	0.73	ng/L	16.8		103	70-130			
8-Dioxa-3H-perfluorononanoic acid ADONA)	16.5	1.8	0.79	ng/L	17.0		97.3	70-130			
urrogate: 13C-PFHxA	34.6			ng/L	35.9		96.1	70-130			
rrogate: M3HFPO-DA	35.9			ng/L	35.9		99.9	70-130			
urrogate: 13C-PFDA	35.6			ng/L	35.9		99.0	70-130			
uma acta, D5 NEtEOCAA	1.17			/T	1.4.4		102	70 120			

144

ng/L

103

70-130

147



Batch B332936 - EPA 537.1

4,8-Dioxa-3H-perfluorononanoic acid

(ADONA)

Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

	F	Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

LCS Dup (B332936-BSD1)		Prepared: 03/01/23 Analyzed: 03/03/23								
Perfluorobutanesulfonic acid (PFBS)	14.3	1.8	0.71	ng/L	16.0	89.7	70-130	12.5	30	
Perfluorohexanoic acid (PFHxA)	12.8	1.8	0.84	ng/L	18.0	71.3	70-130	10.4	30	
Perfluorohexanesulfonic acid (PFHxS)	11.6	1.8	0.81	ng/L	16.4	70.8	70-130	7.56	30	
Perfluoroheptanoic acid (PFHpA)	16.2	1.8	0.89	ng/L	18.0	89.9	70-130	8.02	30	
Perfluorooctanoic acid (PFOA)	13.9	1.8	0.93	ng/L	18.0	77.4	70-130	4.96	30	
Perfluorooctanesulfonic acid (PFOS)	15.9	1.8	0.68	ng/L	16.7	95.5	70-130	6.46	30	
Perfluorononanoic acid (PFNA)	14.6	1.8	0.83	ng/L	18.0	81.4	70-130	5.65	30	
Perfluorodecanoic acid (PFDA)	17.7	1.8	0.86	ng/L	18.0	98.7	70-130	2.90	30	
N-EtFOSAA (NEtFOSAA)	16.4	1.8	0.60	ng/L	18.0	91.2	70-130	11.1	30	
Perfluoroundecanoic acid (PFUnA)	17.6	1.8	0.68	ng/L	18.0	98.0	70-130	4.04	30	
N-MeFOSAA (NMeFOSAA)	16.8	1.8	0.67	ng/L	18.0	93.4	70-130	10.0	30	
Perfluorododecanoic acid (PFDoA)	17.9	1.8	0.64	ng/L	18.0	99.5	70-130	3.78	30	
Perfluorotridecanoic acid (PFTrDA)	18.6	1.8	0.66	ng/L	18.0	103	70-130	0.751	30	
Perfluorotetradecanoic acid (PFTA)	14.8	1.8	0.75	ng/L	18.0	82.1	70-130	4.48	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.6	1.8	1.1	ng/L	18.0	70.3	70-130	5.55	30	
11Cl-PF3OUdS (F53B Major)	16.4	1.8	0.60	ng/L	17.0	96.4	70-130	5.40	30	
9Cl-PF3ONS (F53B Minor)	15.7	1.8	0.73	ng/L	16.8	93.8	70-130	8.74	30	

1.8

15.3

30.2

30.6

32.6

133

0.79

ng/L

ng/L

ng/L

ng/L

ng/L

17.0

36.0

36.0

36.0

144

89.9

84.0

85.2

90.6

92.3

70-130

70-130

70-130

70-130

70-130

7.86

30



#### FLAG/QUALIFIER SUMMARY

*	OC result is outside of established lim	its.
---	---	------

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.



#### CERTIFICATIONS

#### Certified Analyses included in this Report

**Analyte** Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

35639995 COM

Phone: 413-525-2332

Pace Analytical

Duc # 381 Rev 2\_06262019

39 Spruce Street

Preservation Codes Pace Aranfacai 8 × Sodium Bisutfate 🕻 = Sodium Mydsoxide GW= Ground Water WW .. Waste Water DW = Orioking Water \* Sodium Thiosulfate Matrix Codes S » Sutfuric Acid A > Air S = Soit N = Hitric Acid M = Methanol DI :: Ol Water St. = Sludge 50L = 50lid O . Other 0 = Other ö H+#C 2 Preservation Code = {ced Page ... esponsible for missing samples from prepacked coolers sample concentration within the Conc Code column Please use the following codes to indicate possible H - High; M - Medium; L - Low; C - Clean; U -"Pace Analytical is not Chromatogram AHA-LAP,LLC ANALYSIS REQUESTED 200 freezer? Y / N Glassware in Prepackaged Cooler? Y / N MCP Cerilfication Form Required Courier Use Only CT RCP Required
RCP Certification Form Required WRTA MA State DW Reguired East Longmeadow, MA 01026 FIZES BIN SATE a BACTERIA. Disserved Metals Samples GLASS BACTERIA Orthophosphare Simp ENCORE PLASTIC Special Requirements VIALS Field Fittered Field Fittered PCB ONLY Lab to Filter Lab to Filter PLASTIC School MBTA × NON SOXHLET GLASS legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information on the Chain of Custody. The Chain of Custody is a values your partnership on each project and will try to assist with information is not the taboratory's responsibility. Pace Analytical Disclaimer: Pace Analytical is not responsible for any omitted SOXHLE CHAIN OF CUSTODY RECORD missing information, but will not be held accountable. VIALS 00 0 0 Conc. Code J. Ampsier ignebond.com; Sevansier ignebend.com C Municipatity Reguested Talmaround Time Brownfield Due Date: Rush-Approval Required See See # Q35Md 10-0ay <u>3</u> EXCEL J-Day (3) 4-Day Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMP/GPAB Date-Hon Link Requirements 93.0 7-Day 🖸 🖸 PFAS 10-Day (std) 🗋 **(3)** ១១ 304 Sovernatent Ending Date/Time 2/23/23 1240 Email To: Fax to #3 Federal ormat. Other: -Day 7-Day ¿-Day Ğ Project Entity 13.6 case Beginning Date/Time 53 Southampton Road, Westfield, Massachuserts Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date (Time: 16 7) Shutesbury, Massachusetts Date/Time: (03) Date/Time: 72:42 20 ES/2016 Town of Shutesbury (413) 562-1600 Client Sample R. / Description sold c Samuel Evans Microsoft Reno Fax: 413-525-6405 Jeff Arrps 5-2190 Date/Time: Date/Time: Date/Time: Date/Time Park Pace Analytical Quote Name/Number Retinguished by: (Aginature) tetinguished by: (signature) telinquished by: (signature) Pace Analytical Work Order elinguished by: (signay, ceived by: (signature) Received by: (signature) eceived by: Lignature! (eceived by: (signature) invoice Recipient: Project Location: Project Manager: Project. Number: Company Name Toller Time Sampled By: Address: Page 11 of 12 ENV-FRM-ELON-0009V02\_\_Sample Receiving Checklist 1-12-20

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

# Log In Back-Sheet

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



Client Tighe 8 12 and							True	False
Project PFAS Sample Collect	toin						X	
MCP/RCP Required MA MCP			<u>Re</u>	ceived o	<u>n Ice</u>	<u></u>	<u> </u>	<u> </u>
Deliverable Package Req.			<u>Re</u>	ceived in	Cooler	- h		نيا
Location Shutesbury, MA			<u>Cı</u>	ıstody <u>Se</u>	al: DATE	TIM		
PWSID# (When Applicable)			<u>C</u>	OC Reling	uished		<u>y</u>	
Arrival Method:				DC/Samp	les Labels	Agree		
Courier Fed Ex Walk In O	ьП		Α.	I Samples	s in Good (	Condition	X	
Received By / Date / Time $\frac{2 \cdot 27 - 23}{2}$			-		•	thin Holding	Time 🔯	
Back-Sheet By / Date / Time 2-28-2	7 13	1775			ough Volu		X	
Tomporature Mathed (150)	Ħ	3			dia/Conta		X	
Temp	4,6							X
Rush Samples: Yes / No Notify					imples Red	Jairea		
Short Hold: Yes /No Notify			14	IS/MSD				
330) (310) (3.7)			I	ip Blanks		,	<u> </u>	
Notes regarding Samples/CO	<u>C outsi</u>	de of SOP:	<u>L</u>	b to Filte	ers			
				OC Legibl	e		X	
						eck all inclu	ded)	-
				_		· ·		Married Street
I.				::	سم ا	abicie X	Sampler Name	
					_	alysis 🎗	Sampler Name	
				lient roject	_		Sampler Name Collection Date/Tir	ne 🗵
			P	roject <b>C</b>	ID:		Collection Date/Tir	me 🗵
			P	roject <b>C</b>	ID:		Collection Date/Tir	me 🗵
Container (Circle when applicable)	JnP   +	ICI HNO3	P	roject <b>C</b>	ID:		Collection Date/Tir	me 🗵
Container (Circle when applicable)  11 Amber Plastic	JnP   H	ICI HNO3	P	roject <b>C</b>	les Prop	s 🔽	Collection Date/Tir	ne 🗵
11 Amber Plastic 500 mL Amber Plastic	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic	JnP   +	ICI HNO3	P	roject <b>C</b>	les Prop	s 🔽	Collection Date/Tir	ne 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic	JnP H	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	ne 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria	JnP F	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag	JnP +	BCI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit Perchlorate	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 160z Amber Clear 80z Amber Clear 40z Amber Clear 20z Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit Perchlorate Encore	JnP +	ICI HNO3	P	roject <b>C</b>	les Prope	s 🔽	Collection Date/Tir	me 🗵
11 Amber Plastic 500 mL Amber Plastic 250 mL Amber Plastic Other Amber Clear Plastic 16oz Amber Clear 8oz Amber Clear 4oz Amber Clear 2oz Amber Clear Col/Bacteria Flashpoint Plastic Bag SOC Kit Perchlorate			H2504	roject <b>C</b>	les Prope	s 🔽	Other Preservative	me 🗵

March 7, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 105 Leverett Rd, Shutesbury, MA

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2988

Enclosed are results of analyses for samples as received by the laboratory on February 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

## Table of Contents

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

REPORT DATE: 3/7/2023

PURCHASE ORDER NUMBER: 57-101490

PROJECT NUMBER: S-2190

#### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2988

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 105 Leverett Rd, Shutesbury, MA

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

105 Leverett Road 23B2988-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: 105 Leverett Rd, Shutesbury, MA Sample Description: Work Order: 23B2988

Date Received: 2/27/2023

Field Sample #: 105 Leverett Road Sampled: 2/23/2023 14:10

Sample ID: 23B2988-01
Sample Matrix: Ground Water

13C-PFDA

D5-NEtFOSAA

								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	1.6	1.8	0.71	ng/L	1	J	EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorohexanoic acid (PFHxA)	1.4	1.8	0.85	ng/L	1	J	EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.81	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.90	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorooctanoic acid (PFOA)	1.8	1.8	0.94	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorooctanesulfonic acid (PFOS)	0.76	1.8	0.69	ng/L	1	J	EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.83	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.87	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.60	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.67	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.65	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.66	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.80	ng/L	1		EPA 537.1	3/3/23	3/6/23 10:48	AMS
Surrogates		% I	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		94.	8	70-130					3/6/23 10:48	
M3HFPO-DA		85.	1	70-130					3/6/23 10:48	

70-130

70-130

93.8

94.5

3/6/23 10:48

3/6/23 10:48



## **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2988-01 [105 Leverett Road]	B332536	276	1.00	03/03/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332536 - EPA 537.1											
Blank (B332536-BLK1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	0.82	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.1	0.97	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	0.93	ng/L							
erfluoroheptanoic acid (PFHpA)	ND	2.1	1.0	ng/L							
erfluorooctanoic acid (PFOA)	ND	2.1	1.1	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	2.1	0.79	ng/L							
erfluorononanoic acid (PFNA)	ND	2.1	0.96	ng/L							
erfluorodecanoic acid (PFDA)	ND	2.1	1.0	ng/L							
-EtFOSAA (NEtFOSAA)	ND	2.1	0.69	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	2.1	0.79	ng/L							
-MeFOSAA (NMeFOSAA)	ND	2.1	0.77	ng/L							
erfluorododecanoic acid (PFDoA)	ND	2.1	0.75	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	2.1	0.76	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	2.1	0.87	ng/L							
exafluoropropylene oxide dimer acid	ND	2.1	1.3	ng/L							
IFPO-DA)		2.1	0.60	m ∞ /T							
.CI-PF3OUdS (F53B Major)	ND	2.1	0.69	ng/L							
Cl-PF3ONS (F53B Minor)	ND	2.1 2.1	0.85 0.92	ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	2.1	0.92	ng/L							
urrogate: 13C-PFHxA	38.9			ng/L	41.7		93.4	70-130			
urrogate: M3HFPO-DA	37.7			ng/L	41.7		90.4	70-130			
urrogate: 13C-PFDA	41.5			ng/L	41.7		99.6	70-130			
urrogate: D5-NEtFOSAA	176			ng/L	167		106	70-130			
CS (B332536-BS1)					Prepared: 03	3/03/23 Anal	yzed: 03/06/2	23			
erfluorobutanesulfonic acid (PFBS)	1.70	1.9	0.75	ng/L	1.70		100	50-150			J
erfluorohexanoic acid (PFHxA)	1.50	1.9	0.90	ng/L	1.91		78.6	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.32	1.9	0.86	ng/L	1.75		75.2	50-150			J
erfluoroheptanoic acid (PFHpA)	1.93	1.9	0.95	ng/L	1.91		101	50-150			
erfluorooctanoic acid (PFOA)	1.59	1.9	0.99	ng/L	1.91		82.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.79	1.9	0.72	ng/L	1.78		100	50-150			J
erfluorononanoic acid (PFNA)	1.57	1.9	0.88	ng/L	1.91		82.0	50-150			J
erfluorodecanoic acid (PFDA)	2.04	1.9	0.92	ng/L	1.91		107	50-150			
-EtFOSAA (NEtFOSAA)	1.88	1.9	0.64	ng/L	1.91		98.1	50-150			J
erfluoroundecanoic acid (PFUnA)	1.82	1.9	0.73	ng/L	1.91		95.2	50-150			J
-MeFOSAA (NMeFOSAA)	1.86	1.9	0.71	ng/L	1.91		97.2	50-150			J
erfluorododecanoic acid (PFDoA)	1.67	1.9	0.69	ng/L	1.91		87.2	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.90	1.9	0.70	ng/L	1.91		99.1	50-150			
erfluorotetradecanoic acid (PFTA)	1.37	1.9	0.80	ng/L	1.91		71.8	50-150			J
exafluoropropylene oxide dimer acid	1.63	1.9	1.2	ng/L	1.91		84.9	50-150			J
HFPO-DA)  Cl-PF3OUdS (F53B Major)	1.50	1.9	0.63	ng/L	1 01		070	50 150			J
CI-PF3ONS (F53B Minor)	1.58	1.9	0.03	ng/L	1.81 1.79		87.8 90.4	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid	1.61	1.9	0.78	ng/L	1.79		90.4 98.3	50-150 50-150			J
8-Dioxa-3H-perfluorononanoic acid ADONA)	1.78	1.9	0.04	ng/L	1.01		76.3	30-130			J
urrogate: 13C-PFHxA	35.8			ng/L	38.3		93.4	70-130			
nrogate: M3HFPO-DA	34.9			ng/L	38.3		91.2	70-130			
urrogate: 13C-PFDA	36.4			ng/L	38.3		95.1	70-130			
Surrogete: D5 NEtEOS A A	157			ma/I	152		102	70.120			

ng/L

153

103

70-130

157

Surrogate: D5-NEtFOSAA



Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

Surrogate: 13C-PFDA

## 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

		Spike		Source		%REC		RPD			
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B332536 - EPA 537.1											
LCS Dup (B332536-BSD1)					Prepared: 03	3/03/23 Analy	yzed: 03/06/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.52	1.9	0.73	ng/L	1.64		92.4	50-150	11.4	50	J
Perfluorohexanoic acid (PFHxA)	1.35	1.9	0.87	ng/L	1.85		72.8	50-150	11.0	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.29	1.9	0.83	ng/L	1.69		76.1	50-150	2.11	50	J
Perfluoroheptanoic acid (PFHpA)	1.67	1.9	0.92	ng/L	1.85		90.3	50-150	14.3	50	J
Perfluorooctanoic acid (PFOA)	1.52	1.9	0.96	ng/L	1.85		82.1	50-150	4.08	50	J
Perfluorooctanesulfonic acid (PFOS)	1.57	1.9	0.70	ng/L	1.72		91.6	50-150	12.5	50	J
Perfluorononanoic acid (PFNA)	1.40	1.9	0.85	ng/L	1.85		75.8	50-150	11.2	50	J
Perfluorodecanoic acid (PFDA)	2.04	1.9	0.89	ng/L	1.85		110	50-150	0.129	50	
N-EtFOSAA (NEtFOSAA)	1.53	1.9	0.62	ng/L	1.85		82.7	50-150	20.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.60	1.9	0.70	ng/L	1.85		86.6	50-150	12.8	50	J
N-MeFOSAA (NMeFOSAA)	1.66	1.9	0.69	ng/L	1.85		89.8	50-150	11.1	50	J
Perfluorododecanoic acid (PFDoA)	1.32	1.9	0.66	ng/L	1.85		71.0	50-150	23.7	50	J
Perfluorotridecanoic acid (PFTrDA)	1.65	1.9	0.68	ng/L	1.85		89.2	50-150	13.8	50	J
Perfluorotetradecanoic acid (PFTA)	1.26	1.9	0.77	ng/L	1.85		67.8	50-150	9.07	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.57	1.9	1.1	ng/L	1.85		84.8	50-150	3.49	50	J
11Cl-PF3OUdS (F53B Major)	1.45	1.9	0.61	ng/L	1.75		83.0	50-150	8.88	50	J
9Cl-PF3ONS (F53B Minor)	1.64	1.9	0.75	ng/L	1.73		94.9	50-150	1.55	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.58	1.9	0.81	ng/L	1.75		90.5	50-150	11.5	50	J
Surrogate: 13C-PFHxA	34.8			ng/L	37.0		93.9	70-130			

ng/L

ng/L

ng/L

37.0

37.0

148

92.6

94.9

101

70-130

70-130

70-130

34.3

35.2

149



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
------------	-------	----	------	------	-------

Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

33182488

Doc # 381 Rev 2, 06262019

39 Spruce Street

Preservation Codes 9 - Sodium Bisutfate Matrix Codes GW:: Ground Water WW = Waste Water X = Sodiem Hydroxide DW - Orinking Water " » Soekum Thinsulfat 5 .. Sulfunic Acid N = Hitric Acid A = Air S = Soff DI = D) Water M - Methanol St. - Studge SOL - Solid o : Other 0 = Other Page \_\_\_\_ of H- HCL 2 Preservation Cade o Ked responsible for missing samples sample concentration within the Conc Code column Please use the following codes to indicate possible "Pane Analytical is not from prepacked coolers H - High; M - Medfum; L - Low; C - Clean; U Chromatogram JTT-VHIY ANALYSIS REQUESTED Other Glassware in freezer? Y / N Prepackaged Cooler? Y / N Courter Use Only MA MCP Required MCP Certification Form Required CT RCP Required MA State DW Required RCP Certification Forth Requi East Longmeadow, MA 01926 1. TEC BIY BATE ENCORE O IJ BACTERIA BACTERIA Orthophosphate Sampl ENCORE GLASS. PLASTIC Field Filtered Field Filtered PCB ONLY Lab to Filter Lab to Fitter Schoof PLASTIC MWRA MBTA × NON SOXHLET legat document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing VIALS GLASS values your partnership on each project and will try to assist with information on the Chein of Custody. The Chain of Custody is a information is not the laboratory's responsibility. Pace Analytical Disclaimer: Pace Analytical is not responsible for any emitted SOXHLET CHAIN OF CUSTORY RECORD missing information, but will not be held accountable. 0 0 00 Conc Code 表Arps@Tighebond.com; SEvans@Tighebond.com Municipality Brownfleld Requested Turnaround Time Due Date: ž se Ces PWS4D # 10-Day え り EXCEL 3-Day Ō ₽ 4-Day [] Bill to Town of Shutesbury - PO: 57-101490 CLP Like Data Pkg Required: COMP/GRAB 5,2 FAS 10-Day (std) O D. 404 ៨០ Government Ending Ente? Time Imail Fe: 2/23/2 14/0 Federal ax To #: Format; Day 7-Day -Day Project Entity online Beginning Onte/Time 53 Southampton Road, Westfield, Massachusetts Costact: https://www.pacelabs.com/costact-us/contact-environmental-sciences/ PFAS Sample Collection - Shutesbury Date/Time: /642 2/2/18 094 Date/Time: J.C. Date/Time: (23. Shuteshury, Massachusetts Lesarth Rend Town of Shutesbury 2616 2 4/50/43 (413) 562-1600 Clent Sample 10 / Description Thehe & Rond Samuel Evains Fax: 413-525-6405 Jeff Arps \$-2190 Date/Time: Date/Time: 100 جور ح Pace Analytical Quote Name/Number eceived by: (signature) (frquished by: (signature) (efinquished by: (signature) Retinquished by: (signature Pare Assaytical Work Order# アインを (ecceived by: (signature) Received by: (signature) Received by: (signature) telingwished by: (signs STATE OF Invoice Recipiont: Project Location: Comments Project Number: Project Manager Sampled By: Address: Phone:

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Pace Analytical

Phone: 413-525-2332

ap aprace at. East Longmeadow, MA. 01028 P: 413-525-2332 F:413-525-6405

www.pacelabs.com

ENV-TRIVI-ELUIV-0009V02\_Sample Receiving Checklist 1-12-

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## Log In Back-Sheet

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False statement will be



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February 28, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: Shutesbury, Massachusetts 113 Leverett Rd

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2165

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

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Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER: 57-101490

REPORT DATE: 2/28/2023

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2165

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

113 Leverett Road 23B2165-01 Ground Water EPA 537.1



#### CASE NARRATIVE SUMMARY

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

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

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

Meghan E. Kelley Reporting Specialist

Meghan S. Kelley



Project Location: Shutesbury, Massachusetts Sample Description: Work Order: 23B2165

Date Received: 2/17/2023

Field Sample #: 113 Leverett Road Sampled: 2/16/2023 10:30

Sample ID: 23B2165-01 Sample Matrix: Ground Water

Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	1.6	1.8	0.70	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.83	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.80	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.88	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorooctanoic acid (PFOA)	1.5	1.8	0.92	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorooctanesulfonic acid (PFOS)	1.6	1.8	0.67	ng/L	1	J	EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.82	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.85	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.59	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.67	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.64	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.65	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.74	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.59	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.72	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.78	ng/L	1		EPA 537.1	2/22/23	2/27/23 9:38	AMS
Surrogates	<u>'</u>	% F	Recovery	Recovery Limits	·	Flag/Qual			·	
13C-PFHxA		110	*	70-130					2/27/23 9:38	
M3HFPO-DA		109	9	70-130					2/27/23 9:38	

Surrogates	% Recovery	Recovery Limits	Flag/Qual	_
13C-PFHxA	116	70-130		2/27/23 9:38
M3HFPO-DA	109	70-130		2/27/23 9:38
13C-PFDA	119	70-130		2/27/23 9:38
D5-NEtFOSAA	124	70-130		2/27/23 9:38



## **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2165-01 [113 Leverett Road]	B332209	281	1.00	02/22/23



Surrogate: D5-NEtFOSAA

## 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332209 - EPA 537.1											
Blank (B332209-BLK1)					Prepared: 02	2/22/23 Analy	yzed: 02/27/2	23			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
erfluorohexanoic acid (PFHxA)	ND ND	1.8	0.85	ng/L							
erfluorohexanesulfonic acid (PFHxS)	ND ND	1.8	0.82	ng/L							
erfluoroheptanoic acid (PFHpA)	ND ND	1.8	0.91	ng/L							
erfluorooctanoic acid (PFOA)	ND ND	1.8	0.94	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND ND	1.8	0.69	ng/L							
erfluorononanoic acid (PFNA)	ND ND	1.8	0.84	ng/L							
erfluorodecanoic acid (PFDA)	ND ND	1.8	0.87	ng/L							
-EtFOSAA (NEtFOSAA)		1.8	0.60	ng/L							
erfluoroundecanoic acid (PFUnA)	ND ND	1.8	0.69	ng/L							
MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
rfluorododecanoic acid (PFDoA)	ND	1.8	0.68								
rfluorododecanoic acid (PFDoA) rfluorotridecanoic acid (PFTrDA)	ND			ng/L							
	ND	1.8	0.66	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
exafluoropropylene oxide dimer acid IFPO-DA) Cl-PF3OUdS (F53B Major)	ND	1.8	0.60	ng/L							
CI-PF3ONS (F53B Minor)	ND	1.8	0.74	ng/L							
8-Dioxa-3H-perfluorononanoic acid	ND ND	1.8	0.74	ng/L ng/L							
ADONA)	22.5			OT.	26.1		02.0	70.120			
irrogate: 13C-PFHxA	33.5			ng/L	36.4		92.0	70-130			
irrogate: M3HFPO-DA	33.0			ng/L	36.4		90.5	70-130			
rrogate: 13C-PFDA	34.9			ng/L	36.4		95.9	70-130			
ırrogate: D5-NEtFOSAA	141			ng/L	146		96.8	70-130			
CS (B332209-BS1)						2/22/23 Analy	yzed: 02/27/2	23			
erfluorobutanesulfonic acid (PFBS)	9.40	1.8	0.72	ng/L	8.07		116	70-130			
erfluorohexanoic acid (PFHxA)	8.56	1.8	0.85	ng/L	9.10		94.1	70-130			
erfluorohexanesulfonic acid (PFHxS)	7.71	1.8	0.81	ng/L	8.32		92.7	70-130			
erfluoroheptanoic acid (PFHpA)	10.7	1.8	0.90	ng/L	9.10		118	70-130			
erfluorooctanoic acid (PFOA)	8.96	1.8	0.94	ng/L	9.10		98.4	70-130			
erfluorooctanesulfonic acid (PFOS)	10.6	1.8	0.69	ng/L	8.45		125	70-130			
erfluorononanoic acid (PFNA)	9.71	1.8	0.84	ng/L	9.10		107	70-130			
erfluorodecanoic acid (PFDA)	11.3	1.8	0.87	ng/L	9.10		124	70-130			
EtFOSAA (NEtFOSAA)	11.1	1.8	0.60	ng/L	9.10		122	70-130			
erfluoroundecanoic acid (PFUnA)	10.8	1.8	0.69	ng/L	9.10		119	70-130			
-MeFOSAA (NMeFOSAA)	11.3	1.8	0.68	ng/L	9.10		125	70-130			
erfluorododecanoic acid (PFDoA)	11.1	1.8	0.65	ng/L	9.10		122	70-130			
erfluorotridecanoic acid (PFTrDA)	11.0	1.8	0.66	ng/L	9.10		120	70-130			
rfluorotetradecanoic acid (PFTA)	8.43	1.8	0.76	ng/L	9.10		92.7	70-130			
exafluoropropylene oxide dimer acid	8.69	1.8	1.1	ng/L	9.10		95.4	70-130			
(FPO-DA) Cl-PF3OUdS (F53B Major)	10.4	1.8	0.60	ng/L	8.58		121	70-130			
Cl-PF3ONS (F53B Minor)	10.5	1.8	0.74	ng/L	8.49		123	70-130			
8-Dioxa-3H-perfluorononanoic acid	9.97	1.8	0.80	ng/L	8.60		116	70-130			
	37.8			na/I	36.4		104	70-130			
rrogate: 13C-PFHxA	36.8			ng/L			104	70-130 70-130			
urrogate: M3HFPO-DA				ng/L	36.4 36.4		101	70-130 70-130			
urrogate: 13C-PFDA	38.6			ng/L	36.4		106	70-130			

ng/L

146

156

107

70-130



Batch B332209 - EPA 537.1

## 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

	I	Reporting			Spike	Source		%REC		RPD	
Analyte	Result	Limit	DL	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

LCS Dup (B332209-BSD1)	Prepared: 02/22/23 Analyzed: 02/27/23									
Perfluorobutanesulfonic acid (PFBS)	8.78	1.8	0.72	ng/L	8.08	109	70-130	6.85	30	
Perfluorohexanoic acid (PFHxA)	8.03	1.8	0.85	ng/L	9.11	88.1	70-130	6.45	30	
Perfluorohexanesulfonic acid (PFHxS)	6.99	1.8	0.82	ng/L	8.33	83.9	70-130	9.81	30	
Perfluoroheptanoic acid (PFHpA)	10.1	1.8	0.91	ng/L	9.11	111	70-130	5.49	30	
Perfluorooctanoic acid (PFOA)	8.79	1.8	0.94	ng/L	9.11	96.4	70-130	1.96	30	
Perfluorooctanesulfonic acid (PFOS)	9.23	1.8	0.69	ng/L	8.45	109	70-130	13.8	30	
Perfluorononanoic acid (PFNA)	8.98	1.8	0.84	ng/L	9.11	98.6	70-130	7.79	30	
Perfluorodecanoic acid (PFDA)	10.7	1.8	0.87	ng/L	9.11	118	70-130	5.23	30	
N-EtFOSAA (NEtFOSAA)	9.84	1.8	0.60	ng/L	9.11	108	70-130	11.9	30	
Perfluoroundecanoic acid (PFUnA)	10.2	1.8	0.69	ng/L	9.11	112	70-130	5.55	30	
N-MeFOSAA (NMeFOSAA)	9.96	1.8	0.68	ng/L	9.11	109	70-130	12.9	30	

Permuoroocianoic acid (PFOA)	8.79	1.8	0.94	ng/L	9.11	96.4	70-130	1.96	30	
Perfluorooctanesulfonic acid (PFOS)	9.23	1.8	0.69	ng/L	8.45	109	70-130	13.8	30	
Perfluorononanoic acid (PFNA)	8.98	1.8	0.84	ng/L	9.11	98.6	70-130	7.79	30	
Perfluorodecanoic acid (PFDA)	10.7	1.8	0.87	ng/L	9.11	118	70-130	5.23	30	
N-EtFOSAA (NEtFOSAA)	9.84	1.8	0.60	ng/L	9.11	108	70-130	11.9	30	
Perfluoroundecanoic acid (PFUnA)	10.2	1.8	0.69	ng/L	9.11	112	70-130	5.55	30	
N-MeFOSAA (NMeFOSAA)	9.96	1.8	0.68	ng/L	9.11	109	70-130	12.9	30	
Perfluorododecanoic acid (PFDoA)	10.3	1.8	0.65	ng/L	9.11	113	70-130	7.09	30	
Perfluorotridecanoic acid (PFTrDA)	10.2	1.8	0.66	ng/L	9.11	112	70-130	7.17	30	
Perfluorotetradecanoic acid (PFTA)	8.19	1.8	0.76	ng/L	9.11	89.9	70-130	2.97	30	
Hexafluoropropylene oxide dimer acid	7.92	1.8	1.1	ng/L	9.11	86.9	70-130	9.23	30	
(HFPO-DA) 11Cl-PF3OUdS (F53B Major)	9.42	1.8	0.60	ng/L	8.59	110	70-130	9.69	30	
9Cl-PF3ONS (F53B Minor)	9.55	1.8	0.74	ng/L	8.50	112	70-130	9.11	30	
4,8-Dioxa-3H-perfluorononanoic acid	9.26	1.8	0.80	ng/L	8.61	108	70-130	7.39	30	
(ADONA)										
Surrogate: 13C-PFHxA	37.5			ng/L	36.4	103	70-130			
Surrogate: M3HFPO-DA	37.0			ng/L	36.4	101	70-130			
Surrogate: 13C-PFDA	38.2			ng/L	36.4	105	70-130			
Surrogate: D5-NEtFOSAA	150			ng/L	146	103	70-130			



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

\$202165 \*

Doc # 381 Rev 2\_06262019

39 Spruce Street

filtps://www.pacelabs.com/

Phone: 413-525-2332

Pace Analytical \*

Preservation Codes Pace Ambridge Matrix Codes GW= Ground Water 3 = Sodium Bisulfate WW = Waste Water DW - Orinking Water - Sodium Hydroxid = Sochum Thiopollate Sulfuric Acid 1 = Air S = Soil N - Nitric Acid M :: Methanol DI = (3) Water SOL - Solid St. : Studge 0 = Other 0 - Other 2 Preservation Code » Iced H= HC responsible for missing samples from prepacked coolers Please use the following codes to indicate possible sample concentration within the Conc Code column H · High; M · Medium; L · Low; C · Clean; U · "Pace Analytical is not Chromatogram AHA-LAP, LLC ANALYSIS REQUESTED Other Glassware in freezer? Y / N Prepackaged Cooler? Y / N Courier Use Only MA MCP Required MCP Certification Form Required CT RCP Required WRTA Me. State DW Required RCP Certification Form Requi East tongmeadow, MA 01026 PFA5 VIN 537.1 X ENCORE BACTERIA Orfophosphare Samp BACTERIA PLASTIC ENCORE GLASS Field Filtered Special Requirements Field Filtered PCB ONLY Lab to Filter Lab to Filter VIALS GLASS PLASTIC School MWRA MBTA X NON SOXHLET segal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing vakues your partnership on each project and will try to assist with missing information, but will not be held accountable information on the Chain of Custody. The Chain of Custody is a information is not the laboratory's responsibility. Pace Analytical Discisimen. Pace Analytical is not responsible for any omitted SOXHLET CHAIN OF CUSTODY RECORD ه د ه 00 0 0 Come Code J. Arys 93 spectrond com; Stv ans 97 sphebond, com Municipality Brownfield Medit state Turnaryaniti Tim Oue Date: Rush-Approval Required # QISMd Manny S S 19-Day EXCEL 3-Day 4-Day (3) Bill to Town of Shutesbury - PO:57-101490 CLP Like Data Phg Required: COMP / CRASS 5.20 Detection Civil Requirements Ď PFAS 10-Day (std) [5] POF o o Government Ending Date/Time Email To: 2/16/13/1030 Fax To#; Format: Federal Other 7-Day t-Day Day Ç Project Entity 33. Other Beginning Date:13 mr 53 Southampton Road, Westfleid, Massachusetts Contact: https://www.pacelabs.com/contact-us/contact-environmentai-sciences/ PFAS Sample Collection · Shutesbury CALTIME: 0500 Shutesbury, Massachusetts Read Town of Shutesbury Date/Time: Calent Sample 4D 7 Description (413) 562-1600 Samuel Evans Fight & Bond Fax: 413-525-6405 Jeff Arps 5-2190 Date/Time: 23 Date/Time: Date/Time: Date/Fime: 13 Ceveret Pace Analytical Quote Hame/Number elvegoy: (signature) Relinquished by: (signature ed by: (signature ed by: (signature Pate Ansiytkal Work Order# Received by: (signature) Received by: (signature) מניניני ceived in (signatu invoke Recipient: Project Location: Project Number: Project Manager: Polect Name Sampled By: Address: Page 11 of 12 39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

ENV-FRIM-ELON-UUU9VUZ\_\_Sample Receiving Unecklist 1-12-. Table of Contents

## Log In Back-Sheet

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



1L 500 mL 250 mL	Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear		HCI	HNO3	H2SO4	NaOH	Trizma  2	,	Sampler Collection  N/A  Other Press  Sulfuric	on Date/Tim	
1L 500 mL 250 mL Other 16oz 8oz 4oz 2oz Col/Bac Flashpo Plastic SOC Kit Perchio Encore	Amber Plastic Amber Plastic Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear	b) UnP	HCI	HNO3		Project	oles Prop	os 🛭	Collection N/A	on Date/Tim	
1L 500 mL 250 mL Other 16oz 8oz 4oz 2oz Col/Bac Flashpo Plastic SOC Kit Perchio	Amber Plastic Amber Plastic Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Clear Amber Clear	UnP	HCI	HNO3		Project	oles Prop	os 🛭	Collection N/A	on Date/Tim	
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1L 500 mL 250 mL Other 16oz 8oz 4oz 2oz Col/Bac	Amber Plastic Amber Plastic Amber Plastic Amber Clear Plastic Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear Amber Clear	b) UnP	HCI	HNO3		Project	oles Prop	os 🛭	Collection N/A	on Date/Tim	
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1L 500 mL 250 mL Other 1602	Amber Plastic Amber Plastic Amber Plastic Amber Clear Plastic Amber Clear	e) UnP	HCI	HNO3		Project	oles Prop	os 🛭	Collection N/A	on Date/Tim	
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February 24, 2023

Jeff Arps Tighe & Bond 53 Southampton Road Westfield, MA 01085

Project Location: 117 Leverett Road Shutesbury, Massachusetts

Client Job Number: Project Number: S-2190

Laboratory Work Order Number: 23B2148

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica L. Hoffman Project Manager

## Table of Contents

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B332208	7
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REPORT DATE: 2/24/2023



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Tighe & Bond 53 Southampton Road Westfield, MA 01085 ATTN: Jeff Arps

PURCHASE ORDER NUMBER:

57-101490

PROJECT NUMBER: S-2190

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B2148

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 117 Leverett Road Shutesbury, Massachusetts

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB EPA 537.1 117 Leverett Road 23B2148-01 Ground Water



#### CASE NARRATIVE SUMMARY

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

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

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

Lisa A. Worthington Technical Representative

na Watslengton



Project Location: 117 Leverett Road Shutesbury, M Sample Description: Work Order: 23B2148

Date Received: 2/17/2023

Field Sample #: 117 Leverett Road Sampled: 2/16/2023 10:25

Sample ID: 23B2148-01
Sample Matrix: Ground Water

S	emivo	latile	Organic	Compounds	by -	LC/MS-MS
---	-------	--------	---------	-----------	------	----------

								Date	Date/Time	
Analyte	Results	RL	DL	Units	DF	Flag/Qual	Method	Prepared	Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.69	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.82	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.79	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.87	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorooctanoic acid (PFOA)	ND	1.8	0.91	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.66	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.81	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.84	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.58	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.67	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.65	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.63	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.64	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.73	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	1.1	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.58	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.72	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.77	ng/L	1		EPA 537.1	2/21/23	2/23/23 12:28	AMS
Surrogates		% F	Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		98.	7	70-130	•				2/23/23 12:28	•
M3HFPO-DA		96.	4	70-130					2/23/23 12:28	



## **Sample Extraction Data**

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B2148-01 [117 Leverett Road]	B332208	285	1.00	02/21/23



#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B332208 - EPA 537.1											
Blank (B332208-BLK1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	3			
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.72	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.86	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.82	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.91	ng/L							
erfluorooctanoic acid (PFOA)	ND	1.8	0.95	ng/L							
erfluorooctanesulfonic acid (PFOS)	ND	1.8	0.69	ng/L							
erfluorononanoic acid (PFNA)	ND	1.8	0.84	ng/L							
erfluorodecanoic acid (PFDA)	ND	1.8	0.88	ng/L							
I-EtFOSAA (NEtFOSAA)	ND	1.8	0.61	ng/L							
erfluoroundecanoic acid (PFUnA)	ND	1.8	0.69	ng/L							
-MeFOSAA (NMeFOSAA)	ND	1.8	0.68	ng/L							
erfluorododecanoic acid (PFDoA)	ND	1.8	0.66	ng/L							
erfluorotridecanoic acid (PFTrDA)	ND	1.8	0.67	ng/L							
erfluorotetradecanoic acid (PFTA)	ND	1.8	0.76	ng/L							
exafluoropropylene oxide dimer acid	ND	1.8	1.1	ng/L							
HFPO-DA)		1.0	0.61	/T							
CLPF3OUdS (F53B Major)	ND	1.8	0.61	ng/L ng/L							
CI-PF3ONS (F53B Minor)	ND	1.8 1.8	0.75 0.80	ng/L ng/L							
8-Dioxa-3H-perfluorononanoic acid ADONA)	ND	1.0	0.80	ng/L							
urrogate: 13C-PFHxA	32.3			ng/L	36.6		88.2	70-130			
urrogate: M3HFPO-DA	33.4			ng/L	36.6		91.2	70-130			
urrogate: 13C-PFDA	33.1			ng/L	36.6		90.4	70-130			
urrogate: D5-NEtFOSAA	137			ng/L	146		93.4	70-130			
.CS (B332208-BS1)					Prepared: 02	2/21/23 Analy	yzed: 02/23/2	3			
erfluorobutanesulfonic acid (PFBS)	1.35	1.8	0.72	ng/L	1.62		83.5	50-150			J
erfluorohexanoic acid (PFHxA)	1.29	1.8	0.85	ng/L	1.83		70.8	50-150			J
erfluorohexanesulfonic acid (PFHxS)	1.15	1.8	0.82	ng/L	1.67		69.1	50-150			J
erfluoroheptanoic acid (PFHpA)	1.51	1.8	0.91	ng/L	1.83		82.9	50-150			J
erfluorooctanoic acid (PFOA)	1.29	1.8	0.94	ng/L	1.83		70.8	50-150			J
erfluorooctanesulfonic acid (PFOS)	1.48	1.8	0.69	ng/L	1.69		87.4	50-150			J
erfluorononanoic acid (PFNA)	1.36	1.8	0.84	ng/L	1.83		74.6	50-150			J
erfluorodecanoic acid (PFDA)	1.74	1.8	0.88	ng/L	1.83		95.2	50-150			J
-EtFOSAA (NEtFOSAA)	1.48	1.8	0.61	ng/L	1.83		81.0	50-150			J
erfluoroundecanoic acid (PFUnA)	1.49	1.8	0.69	ng/L	1.83		81.6	50-150			J
-MeFOSAA (NMeFOSAA)	1.48	1.8	0.68	ng/L	1.83		81.1	50-150			J
erfluorododecanoic acid (PFDoA)	1.30	1.8	0.65	ng/L	1.83		71.4	50-150			J
erfluorotridecanoic acid (PFTrDA)	1.66	1.8	0.67	ng/L	1.83		91.2	50-150			J
erfluorotetradecanoic acid (PFTA)	1.41	1.8	0.76	ng/L	1.83		77.0	50-150			J
exafluoropropylene oxide dimer acid  HFPO-DA)	1.66	1.8	1.1	ng/L	1.83		90.8	50-150			J
1Cl-PF3OUdS (F53B Major)	1.37	1.8	0.61	ng/L	1.72		79.5	50-150			J
CI-PF3ONS (F53B Minor) ,8-Dioxa-3H-perfluorononanoic acid ADONA)	1.36 1.40	1.8 1.8	0.74 0.80	ng/L ng/L	1.70 1.73		80.1 81.3	50-150 50-150			J
Surrogate: 13C-PFHxA	31.6			ng/L	36.5		86.6	70-130			
urrogate: M3HFPO-DA	31.8			ng/L	36.5		87.0	70-130			
urrogate: 13C-PFDA	30.9			ng/L	36.5		84.6	70-130			
<u> </u>				<i>U</i> –							



Surrogate: 13C-PFHxA

Surrogate: 13C-PFDA

Surrogate: M3HFPO-DA

Surrogate: D5-NEtFOSAA

#### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
			DL				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Batch B332208 - EPA 537.1											
LCS Dup (B332208-BSD1)					Prepared: 02	2/21/23 Anal	yzed: 02/23/2	23			
Perfluorobutanesulfonic acid (PFBS)	1.49	1.8	0.72	ng/L	1.62		91.9	50-150	9.55	50	J
Perfluorohexanoic acid (PFHxA)	1.48	1.8	0.85	ng/L	1.83		81.1	50-150	13.7	50	J
Perfluorohexanesulfonic acid (PFHxS)	1.40	1.8	0.82	ng/L	1.67		83.8	50-150	19.3	50	J
Perfluoroheptanoic acid (PFHpA)	1.88	1.8	0.91	ng/L	1.83		103	50-150	21.4	50	
Perfluorooctanoic acid (PFOA)	1.54	1.8	0.94	ng/L	1.83		84.4	50-150	17.6	50	J
Perfluorooctanesulfonic acid (PFOS)	1.73	1.8	0.69	ng/L	1.70		102	50-150	15.7	50	J
Perfluorononanoic acid (PFNA)	1.54	1.8	0.84	ng/L	1.83		84.2	50-150	12.1	50	J
Perfluorodecanoic acid (PFDA)	2.02	1.8	0.88	ng/L	1.83		110	50-150	14.7	50	
N-EtFOSAA (NEtFOSAA)	1.65	1.8	0.61	ng/L	1.83		90.5	50-150	11.2	50	J
Perfluoroundecanoic acid (PFUnA)	1.79	1.8	0.69	ng/L	1.83		98.0	50-150	18.3	50	J
N-MeFOSAA (NMeFOSAA)	1.69	1.8	0.68	ng/L	1.83		92.6	50-150	13.4	50	J
Perfluorododecanoic acid (PFDoA)	1.54	1.8	0.66	ng/L	1.83		84.2	50-150	16.6	50	J
Perfluorotridecanoic acid (PFTrDA)	1.86	1.8	0.67	ng/L	1.83		102	50-150	11.1	50	
Perfluorotetradecanoic acid (PFTA)	1.32	1.8	0.76	ng/L	1.83		72.3	50-150	6.22	50	J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.58	1.8	1.1	ng/L	1.83		86.5	50-150	4.80	50	J
11Cl-PF3OUdS (F53B Major)	1.72	1.8	0.61	ng/L	1.72		99.6	50-150	22.5	50	J
9Cl-PF3ONS (F53B Minor)	1.69	1.8	0.74	ng/L	1.71		99.3	50-150	21.5	50	J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.76	1.8	0.80	ng/L	1.73		102	50-150	22.5	50	J

ng/L

ng/L

ng/L

ng/L

36.5

36.5

36.5

146

93.0

93.8

91.0

93.6

70-130

70-130

70-130

70-130

34.0

34.3

33.3

137



#### FLAG/QUALIFIER SUMMARY

*	QC result is o	outside of	established	iimits.
_				

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

# Data exceeded client recommended or regulatory level

ND Not Detected

RL Reporting Limit

DL Method Detection Limit
MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated

concentration (CLP J-Flag).



## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte Certifications

<b>EPA</b>	537.1	in	Drin	king	Water
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Perfluorobutanesulfonic acid (PFBS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanoic acid (PFHxA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroheptanoic acid (PFHpA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorononanoic acid (PFNA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorodecanoic acid (PFDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-EtFOSAA (NEtFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluoroundecanoic acid (PFUnA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
N-MeFOSAA (NMeFOSAA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorododecanoic acid (PFDoA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotridecanoic acid (PFTrDA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Perfluorotetradecanoic acid (PFTA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
11Cl-PF3OUdS (F53B Major)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
9Cl-PF3ONS (F53B Minor)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	VT-DW,NJ,CT,ME,PA,MI,MA,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
ME	State of Maine	MA00100	06/9/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	06/30/2023

23B 2148 SX

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/ Zanjany Managers Tighe E Bend decess  deferss 53 Southampton Road Westfield, Massachusetts  (413) 562-1600  (413)	7.Day PFAS 10-Day (1) 1.Day (1) 2.Day (2) 3.Day (2) 3.Da	Outfile Him:  10-Cay   Claim  10-Cay   Claim  10-Cay   Claim  10-Cay   Claim  CXCEL   Claim  CAMPACTOR   Claim  Called   Claim	S S S S S S S S S S S S S S S S S S S	V.S.Wet.lg.s.mpler Field Filtered Lab to Filter		ANALYSIS	ANALYSIS REQUESTED 2 P.	Preservation Code	-
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by: (signator)	tection Limit Requirements		Special Requirements	ulrements				A .: Air S .: Soil	
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H.O 1/2				MCP Certifica	MC9 Certification Form Required		sample concentration within the Conc Code column	*******	
efinquished by: (signature) Date/Time:		7		RCP Certifica	RCP Certification Form Required		A High; M - Medium; L - Low; C - Clean; U Unknown		
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		PWSID #						M = Nitric Acid	
elinquished by: (signature) Date/Time: Project Entity Go	wernment	Municipatity		MWRA ()	WRIA	<b>6</b>	Other	S = Sultaric Acid	
eceived by: (signature)	Federal		S					X = Sodium Hydroxide	
	City 🖸	Brownfield	Γ	MBTA 🖂			•	T - Sockram Minoustate	
	Disclasimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a	cal is not responsible for a Custody. The Chain of C	ony omilled Custody is a	VIALS	Courier Use Only	. Glassware in		*************	
	figst document that must be compete and accurate and is used to determine what analyses the aboratory will perform. Any missing from afformation is not the aboratory's responsability. Pace Analysis.	ust be complete and accurate and is used to see the taboratory will perform. Any missing taboratory's responsibility. Pace Analutical	ind is used to Any missing se Analytical	GLASS PLASTIC	***************************************	freezer? Y / N	Ę.		
	values your partnership on each project and will try to assist with massing information, but will not be held accountable.	s your partnership on each project and will try to assis missing information, but will not be held accountable.	o assist with Hable.	BACTERIA ENCORE		Cooler? Y / N	Signal birdarked Cooless	Parkeyes	

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405

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ENV-FRIVI-ELUIV-0009V02\_Sample Receiving Unecklist 1-12-2 Table of Contents

# Log In Back-Sheet

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



Client	Tighe + Bone	Q		broagi	it to the Bu	iendon on t	ile Chern	True or raise	7	·	Enla
	FAS Sample Col		wto	buru						rue	False
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	By / Date / Time <u>DWh</u>				į	s there e	nough Vo	lume		XI	
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8oz 4oz	Amber Clear Amber Clear			<b></b>	<u></u>						
20z	Amber Clear		-		······································		-				
Col/Bac	· · · · · · · · · · · · · · · · · · ·							-			
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Encore	Proper Headspace	UnP	HCI	МеОН	Bis	ulfate	DI	Thiosulfate	Sulfuric	Other	