

P-0534
March 3, 2020

Ms. Rebecca Buswell
Massachusetts Department of Environmental Protection
8 New Bond Street
Worcester, MA 01606

**Re: IRA Status Report No. 1 and IRA Plan Modification
6 Town Hall Drive
Princeton, Massachusetts
RTN 2-21072**

Dear Ms. Buswell:

On behalf of the Town of Princeton (the "Town"), Tighe & Bond has prepared this Immediate Response Action (IRA) Status Report and IRA Plan Modification for the IRA that was commenced after the Massachusetts Department of Environmental Protection ("MassDEP") sent a Notice of Responsibility ("NOR") to the Town dated November 25, 2019, in response to the reported detection of per-fluoroalkyl substances (collectively known as "PFAS") in the drinking water well that serves the Princeton Town Hall campus at 6 Town Hall Drive in Princeton, Massachusetts ("the Site"). The Site previously was identified as a disposal site for a release of oil from underground storage tanks ("UST") removed in 1987 that has been the subject of response actions conducted under Release Tracking Number ("RTN") 2-11327.

In May 2019, the Town and MassDEP entered into Administrative Consent Order ACO-CE-19-5D00006872 ("ACO") to address the Town's obligations for the Public Water Supply ("PWS") being operated at the Site. In accordance with Section 8(C)(vii) of the ACO, drinking water samples from the PWS well were collected by the Town's PWS operator on September 5, 2019 and September 27, 2019. These sample results identified total regulated PFAS concentrations of 127 and 102 parts per trillion ("ppt," or nanograms/liter ("ng/L"), respectively. At that time, MassDEP's drinking water guideline was 70 ppt, and MassDEP's proposed Maximum Contaminant Level ("MCL") for PFAS in public water supply wells is proposed to be a combined total of 20 ppt for six specified PFAS compounds.

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

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



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

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

The activities described herein include immediate response actions completed since the submittal of the IRA Plan on January 3, 2020, as well as modifications to the Plan that were verbally approved by MassDEP on February 14, 2020.

Release History

As stated, MassDEP BWSC was notified on November 4, 2019, of the sample results from the PWS well samples collected on September 5, and 27, 2019. Subsequent to notification, MassDEP issued the NOR and assigned RTN 2-21072 to the detection of PFAS and the following immediate response actions proposed by Tighe & Bond were approved:

- Provide bottled water or water treatment for every location serviced by this public water supply well; Install signs on all water dispensing locations at the Town Hall campus including all buildings served by PWS 2241017-01G, warning people not to drink the tap water due to PFAS contamination;
- Sample and analyze monitoring wells, private drinking water supply wells, and public water supply wells within 500 feet for PFAS; and
- Resample the Town Hall campus public water supply (PWS) 2241017-01G on a quarterly basis for PFAS.

On November 19, 2019, the Town of Princeton sent letters to all residents within a 500-foot radius of the Town Hall PWS, informing residents of the detection and requesting access to their homes to collect a water sample from their potable well for PFAS analysis. Letters were sent to the following addresses:

- 5, 7, 15, 19 and 23 Hubbardston Road;
- 6, 10, 14, 18, 19, 20, 21 and 22 Mountain Road; and
- 5 and 7 Prospect Street

A copy of the letter sent to these locations was included in the January 3, 2020 IRA Plan.

Between December 4 and December 16, 2019, samples were collected from eleven of the 15 locations included in the initial round of private potable well sampling.

On December 13, 2019, laboratory results were received for the samples collected at 5, 7, 15, 19 Hubbardston Road, and 6, 19, and 21 Mountain Road. Total concentrations for the regulated PFAS compounds were 39.2, 9.7, 132.6, 9.7, 30.1, 421.0, and 102.4 ng/L, respectively. Based on these results and discussions with MassDEP, residents were verbally notified of the results within 24-hours of receipt of the data and the Town mobilized to immediately provide bottled water to all sample locations with detections. The laboratory

data are summarized in Table 1, in Appendix C. The laboratory reports for these 7 locations were included in the IRA Plan submitted on January 3, 2020.

On December 17, 2019 a granular activated carbon (GAC) filter system consisting of two 2-cubic foot GAC vessels was installed at 19 Mountain Road. This system was installed as a temporary measure to reduce PFAS concentrations.

Status of Immediate Response Actions

Status of Potable Well Sampling

With the submittal of this Status Report, all potable wells within 500 feet of the Town Hall Campus PWS have been sampled with the exception of 22 Mountain Road. The homeowner of this location is out of the country until April 2020 and the residence is currently vacant. Sampling of 22 Mountain Road is anticipated to take place in April 2020 and the results will be included in a forthcoming submittal.

Results from the sampling effort identified total PFAS concentrations for the six regulated compounds above the proposed MCL of 20 ppt at 5 Hubbardston Road; 6, 14, 18, 19, 20, 21 Mountain Road; and 5 Prospect Street. PFAS results for the initial round of potable well sampling are summarized in Table 1, included in Appendix B.

In accordance with the IRA Plan, point-of-entry treatment ("POET") systems have been installed at all locations referenced above with the exception of 14 Mountain Road. 14 Mountain Road is currently registered as a public water supply, which requires a permit for POET installation. Tighe & Bond will be designing the system and applying for this permit on behalf of the Town of Princeton. We are also maintaining contact with the system operator.

Round 2 Sampling Radius

Based on the sample results from the 14 potable wells within 500 feet of the Town Campus PWS, the sampling radius was extended by 500 feet from any location with a confirmed PFAS detection. The locations included in the new (Round 2) radius include the following properties:

- 7, 12, 13, 16, 17, 18, 24 Boylston Avenue;
- 11, 13, 14, 15 Gregory Hill Road;
- 2, 29, 30, 33 Mountain Road;
- 1 Hubbardston Road; and
- 1, 10 Worcester Road

On December 20, 2019, the Town of Princeton sent letters to all residents within the Round 2 sampling radius, informing residents of the detection and request access to their homes to collect a water sample from their potable well for PFAS analysis. The 22 properties included in Radius 2 are shown on the Site Plan (Figure 1) included in Appendix A for reference. As of this submittal, all Round 2 potable wells have been sampled.

Based on the laboratory results for the Round 2 sample locations; the potable wells located at 7 and 12 Boylston Ave, 15 Gregory Hill Road, 1 Hubbardston Road and 29 Mountain Road contained regulated PFAS concentrations above the proposed MCL. As of this submittal, POET systems have been installed at 15 Gregory Hill Road, 1 Hubbardston Road and 29 Mountain Road. POET systems for 7, 12 Boylston are scheduled to be installed in early March 2020. Bottled water is being provided for drinking purposes until the POET systems are installed.

43 Hubbardston Road



43 Hubbardston Road was located outside the initial 500-foot radius from the Town Campus PWS. However, the homeowner collected a water sample, on their own behalf, from their potable well on December 12, 2019 and submitted the sample for PFAS analysis to Con-Test Laboratory in East Longmeadow, Massachusetts, which is the same laboratory used by the Town. The results were shared with the Town and Tighe & Bond in January 2020. PFAS concentrations for the six regulated compounds were reported at 29 ppt. Based on this result, all potable wells within 500-feet of 43 Hubbardston Road were included in the Round 3 sampling radius. The installation of a POET system is planned for this location the week of March 9, 2020.

Round 3 Sampling Radius

Based on the sample results from the 22 potable wells within Radius 2, as well as 43 Hubbardston Road, the sampling radius was further extended by 500-feet from any location with a confirmed PFAS detection. The locations included in Radius 3 include the following properties and are shown on the Site Radius Map (Figure 1) included in Appendix A.

- 9, 12 Allen Hill Road
- 21 Boylston Road
- 21, 44 Gregory Hill Road
- 33, 35, 36, 39, 42, 44, 46, 48, 52 Hubbardston Road
- 38, 51 Mountain Road
- 26, 27, 31 Prospect Street
- 2, 7, 8, 11, 12, 13 Radford Road
- 15, 16, 17, 20, 23 Worcester Road

On January 23, 2020, the Town of Princeton sent letters to all residents within Radius 3, informing residents of the detection and request access to their homes to collect a water sample from their potable well for PFAS analysis.

On January 28, 2020, a public information meeting was held at the Thomas Prince School in Princeton. Based on the outcome of that meeting, several residents located outside the three established radii requested testing of their potable well and indicated that they would pay for their own analysis if Tighe & Bond collected the samples. The Town agreed to allow the collection of potable well samples from 28 Radford Road, 9 Gregory Road, 64 Mountain Road, and 32 Allen Hill Road. As a result of the analysis at these locations, PFAS was not reported in the potable well samples collected at 9 Gregory Road and 32 Allen Hill Road. Total regulated PFAS concentrations of 15.1 and 75 ppt were reported in the potable well samples collected from 28 Radford Road and 64 Mountain Road, respectively.

Due to the elevated PFAS concentration detected at 64 Mountain Road, all potable well locations within 500-feet of 64 Mountain Road were added to the Round 3 sampling radius, which include:

- 85, 105 Merriam Road
- 54, 58 Mountain Road

In addition, a POET system was installed at 64 Mountain Road on February 18, 2020.

Additional potable wells within 500-feet of 28 Radford Road will be included in Radius 4 which is currently being determined based on the results received from the Radius 3 sampling, which is ongoing. Results received to date are summarized in Table 1, included in Appendix B.



Point-of-Entry Treatment Systems

Point-of-entry treatment (POET) systems are required for all locations with total regulated PFAS concentration sums exceeding 20 ppt. As reported in this submittal, 12 POET systems have been installed and an additional four locations are identified as requiring POET systems.

With the exception of 18, 19, and 29 Mountain Road, the POET systems consist of two 2-cubic foot carbon vessels in series, 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.

The POET systems installed at 18, 19, and 29 Mountain Road were upsized to two 6-cubic foot carbon vessels due to the elevated PFAS concentrations detected at those locations.

Initial monitoring of POET systems consisted of collecting influent, midfluent, and effluent samples (approximately) on days 3, 6, and monthly for the first month of operation. However, based on system performance, MassDEP has approved modifying the monitoring protocol to one round of sampling in the first month.

If PFAS are detected in the mid-point sample at a concentration approaching or exceeding 20 ppt, the primary carbon unit will be considered spent. The secondary GAC unit will be moved to the primary position and the primary canister will be removed for carbon replacement. A unit with fresh GAC will be installed as the new secondary unit and the spent carbon will be sent for regeneration or disposed.

To date, midfluent and effluent samples collected from the POET systems at 5 Hubbardston Road, 6, 18, 19, 20, 21 Mountain Road, and 5 Prospect Street have not identified PFAS concentrations above laboratory detection limits.

The installation of POET systems and the identification of locations that require treatment are currently ongoing as data is received and evaluated. As of this submittal, treatment systems are planned at 7 and 12 Boylston Road, 43 Hubbardston Road, as well as, 14 Mountain Road.

Town Hall Campus Well Quarterly Sampling

White Water is the licensed operator for the Town Hall well. The PFAS treatment system for this well is currently being designed. All of the sinks in the four municipal buildings on the Town Hall campus have been labeled as "not for potable use" and bottled water is available in all of the buildings served by the well. The status of this treatment system will be updated in subsequent status reports.

White Water collected a sample from the Town Hall campus well on January 8, 2020. The sample, identified as Sample 1, was submitted to Alpha Analytical in Westborough, Massachusetts for PFAS analysis by EPA Method 537.1. Based on the results, a total regulated PFAS concentration of 230.1 ppt was reported. Whitewater will continue to sample the Town Hall Campus well quarterly and provide the data to Tighe & Bond.

Groundwater Monitoring Well Sampling

Six groundwater monitoring wells (MW-6, MA-10A, MW-10D, MW-12, MW-14 and MW-18R) were installed at the Town Hall campus at 6 Town Hall Drive during the 1990's and early 2000's, associated with the release of petroleum under RTN 2-11327.

On January 2, 2020 four of the six wells (MW-10A, MW-10D, MW-14, and MW-18R) were determined to be viable for sampling. Therefore, in accordance with the requirements of the NOR, groundwater samples were collected from those locations for PFAS analysis.

The samples were collected in general accordance with the Environmental Protection Agency (EPA) Low Flow Sampling Procedures (EQASOP-GW4, revised September 19, 2017). Samples were collected using dedicated laboratory-provided sample containers. An equipment blank, field blank, and a trip blank were also collected for quality control purposes. The samples were submitted to Con-test Analytical Laboratory in East Longmeadow, Massachusetts for PFAS analysis by EPA Method 537.1 Modified, which utilizes EPA SOP 434 for non-potable water sources.

Groundwater Monitoring Well Results

Based on the results of the groundwater monitoring well sampling conducted on January 2, 2020, total regulated PFAS concentrations were identified in monitoring wells MW-10A, MW-10D, MW-14, and MW-18R at concentrations of 33, 79, 350, and 29 ppt, respectively.

Laboratory results for the groundwater monitoring conducted on January 2, 2020 is summarized in Table 1, included in Appendix B. The laboratory report is included in Appendix C. Note that MW-6 appeared to have a blockage that prevented sample collection and we did not plan to sample MW-7DRR, which is in the Hubbardston Road travel lane and requires a police detail. We will attempt to clear the obstruction from MW-6 and will sample that well if possible. We will also make arrangements for sampling MW-7DRR this spring.

IRA Plan Modification

On February 14, 2020, Tighe & Bond requested modifications to the IRA Plan submitted on January 3, 2020, during a telephone conversation with Rebecca Buswell and Joe Laughton of MassDEP. At that time the following modifications were requested.

1. A reduction in the sampling of POET systems during the first month of operation from days 3, 6, and 1 month to once per month, as long as bottled water continues to be supplied until it is proven through laboratory analysis that the system is operating effectively;
2. Discontinuation of bottled water at houses where POET systems have been proven effective;
3. A reduction in how often field blank samples are analyzed. Going forward, field blanks will only be analyzed if there is a detection in the batch which the field blank accompanies, or in the case of POET sampling only if the effluent sample has a detection.

These IRA Plan modifications were orally approved on February 14, 2020 and are currently being implemented. Additionally, Tighe & Bond has agreed to provide MassDEP with a spreadsheet detailing the status of sampling activities and results on a monthly basis. Monthly submittals will be uploaded to eDEP using the miscellaneous document transmittal form BWSC126.

Remediation Waste

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

Permits

No permits are required for the IRA activities completed to date or the proposed IRA activities planned under the modifications for RTN 2-21072.

Notification of Environmental Sampling Results

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

Verbal notifications were made within 24 hours to those residents with detections (along with the notifications to MassDEP, and the Princeton Board of Health).

Conceptual Site Model

The source of the PFAS detections is not currently known. There is a Fire Station within the Town Hall campus, which has been active for several decades. Fire Department personnel are being contacted to determine if aqueous film-forming foam (AFFF) may have been used on the property in connection with training activities. It has been reported recently that during the period of 1969-1972, up to 10 gallons of AFFF may have been used during fire training at the Town Campus property. The Town's investigation of this report is on-going.

The former Princeton Inn, located at 30 Mountain Road and directly upgradient of 19 Mountain Road and the Town Hall campus, was the scene of a major structural fire in May 2017. The response reportedly involved fire equipment and personnel from approximately 20 surrounding communities. It is reported that when fire personnel could not safely access an area of persistent combustion at the center of the fire, AFFF was applied to the center of the fire site. This AFFF application may be the source of, or may be contributing to, the detected PFAS groundwater contamination.

The results of the groundwater monitoring well sampling at the Town Campus indicate that the same six PFAS compounds detected in area potable wells and in the Town Campus PWS well were also generally detected in all of the groundwater monitoring well samples, suggesting that all of these PFAS detections in this area of Town are likely from the same source(s).

Conclusions

As discussed above, there is a substantial CEP sampling effort underway to identify the extent of PFAS contamination in private wells in the area surrounding the Town Campus where there was a detection of PFAS in the Town Hall campus PWS. To date, 69 homes have been either sampled or are proposed for sampling based on currently available data. An additional 4 homes located outside the sampling radius were sampled at the request of the homeowner; two of which initiated new 500-foot radii and a POET system at 64 Mountain Road.

In addition, carbon treatment systems have been installed at 12 locations and 4 additional locations are being scheduled. The systems at 18, 19 and 29 Mountain Road were upscaled due to elevated PFAS concentrations. The treatment systems for the Town Hall campus well (White Water) and 14 Mountain Road (Tighe & Bond) are currently being designed and Whitewater is sampling the Town well quarterly. Permit applications are also in-process for these two PWS wells. We will notify MassDEP when a date has been determined for these installations.

Upcoming IRA activities include the quarterly sampling of those wells that were sampled in December 2019 and January 2020. This list of wells may be expanded, based on the results of the current sampling effort.

Source identification is on-going as well, to evaluate whether historical use of AFFF at the Town Campus and/or use of AFFF during firefighting in 2017 at 30 Mountain Road might be the source of the PFAS being detected in private wells. It also is being evaluated whether any residual source areas of PFAS may be present that can be managed or controlled in order to eliminate any continued migration of PFAS from shallow soil into the deep bedrock fractures in the area where private water supplies are being derived.

An update on these activities will be reported to MassDEP in the next IRA Status report and a spreadsheet of current results will be uploaded to MassDEP monthly. If you have any questions or require additional information, please contact me at 413.572.3227.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

cc: Sherry Patch, Town of Princeton

Appendices

Appendix A – Figure 1, Radius Map

Appendix B – Table 1, Summary of PFAS Analytical Data

Appendix C – Groundwater Laboratory Report

Appendix D – Public Notification Letters and Potable Well Laboratory Reports

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APPENDIX A

FIGURE 2 ORTHOPHOTOGRAPH SITE PLAN

LEGEND

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

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

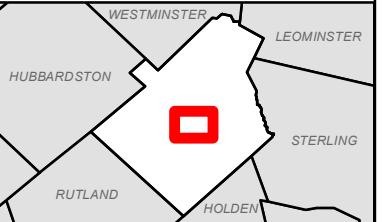
500' Foot Radii Over Time

- Start of Project
- Current Status (2020/02/17)
- Preliminary Radius 4 Boundary

Affected Property Labels:

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

LOCUS MAP



1:7,200

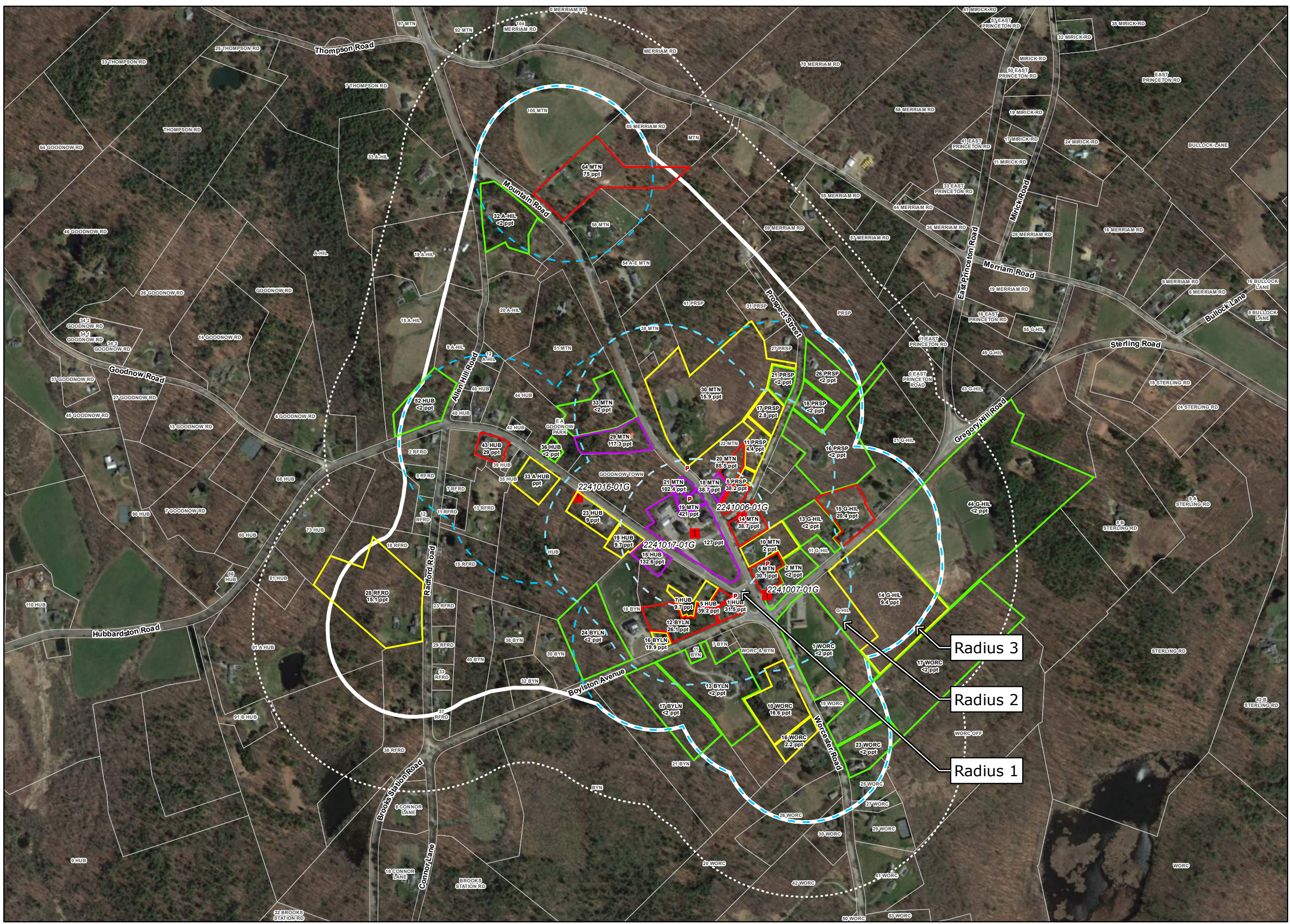
NOTES

1. Based on Google Imagery (2017)
2. 500' Buffer based on a 50' buffer of building structures. Well locations are assumed to be within 50' of each home.
3. Abbreviation Dictionary:

"ALLEN HILL RD" : "A-HIL"
 "BOYLSTON AVE" : "BYLN"
 "GREGORY HILL RD" : "G-HIL"
 "HUBBARDSTON RD" : "HUB"
 "MOUNTAIN RD" : "MTN"
 "PROSPECT ST" : "PRSP"
 "RADFORD RD" : "RFRD"
 "WORCESTER RD" : "WORC"

Princeton, Massachusetts

February 2020



Tighe&Bond

APPENDIX B

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	E. Princeton FS	E. Princeton FS FB	Krashes Field DPW	12 Allen Hill Rd	32 Allen Hill Rd	7 Boylston Ave	7 Boylston Ave	7 Boylston Ave FB	12 Boylston Ave	13 Boylston Ave	16 Boylston Ave	17 Boylston Ave	21 Boylston Ave	21 Boylston Ave FB
Sample Date		1/9/20	1/9/20	1/13/20	2/19/20	2/2/20	1/27/20	1/27/20	1/27/20	1/10/20	1/8/20	1/9/20	1/8/20	2/19/20	2/19/20
Lab Sample ID		20A0455-01	20A0455-02	20A0586-01	20B0848-01	20B0053-01	20A1229-01	20A1229-01	20A1229-02	20A0577-01	20A0416-01	20A0424-01	20A0421-01	20B0952-01	20B0952-02
Hydrocarbon (mg/l)															
Diesel/#2 Fuel	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry (mg/l)															
Hardness (as CaCO3)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals 6010 (ug/l)															
Arsenic	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)															
11CI-PF3OUdS (F53B Major)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9CI-PF3ONS (F53B Minor)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	3.7	3.6	<2.0	9.1	<2.0	5.3	<2.0	<2.0	<2.0
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic acid (PFHxA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.7	<2.0	<2.0	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic acid (PFTrDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFAS - Regulated (ng/L)															
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluoroheptanoic acid (PFHpA)	NS	<2.0	<2.0	<2.0	2.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	17	16	<2.0	14	<2.0	4.7	<2.0	<2.0	<2.0
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	<2.0	<2.0	<2.0	4.2	<2.0	6.2	4.5	4.7	6.4	<2.0	7.2	<2.0	<2.0	<2.0
perfluorooctanoic acid (PFOA)	NS	<2.0	<2.0	<2.0	5.8	<2.0	<2.0	2.7	14	5.7	<2.0	8.0	<2.0	<2.0	<2.0
Total Regulated PFAS (ng/L)	20	ND	ND	ND	12.2	ND	23.2	23.2	19	26.1	ND	19.9	ND	ND	ND
Total PFAS (ng/L)	NS	ND	ND	ND	12.2	ND	26.9	26.8	19	35.2	ND	28.9	ND	ND	ND

mg/l - milligrams per liter
 ug/l - micrograms per liter
 ng/l - nanograms per liter
 MCP - Massachusetts Contingency Plan
 MMCL is Massachusetts Maximum Containment Level
 PFAS - Per- and Polyfluoroalkyl substances
 NS - No Standard
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TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	24 Boylston Ave 1/9/20 20A0423-01	9 Gregory Rd 2/1/20 20B0052-01	11 Gregory Hill Rd 1/22/20 20A1073-01	13 Gregory Hill Rd 1/10/20 20A0581-01	13 Gregory Hill Rd FB 1/10/20 20A0581-02	14 Gregory Hill Rd 1/9/20 20A0456-01	15 Gregory Hill Rd 1/13/20 20A0575-01	44 Gregory Hill Road 2/5/20 20B0261-01	1 Hubbardston Rd 1/8/20 20A0419-01	5 Hubbardston Rd 12/5/19 19L0336-01	5 Hubbardston Rd 12/5/19 19L0340-01	5 Hubbardston Rd 12/5/19 19L0336-01	5 Hubbardston Inf 2/5/20 20B0268-01
Hydrocarbon (mg/l)														
Diesel/#2 Fuel	NS	-	-	-	-	-	-	-	-	-	<0.21	-	-	-
General Chemistry (mg/l)														
Hardness (as CaCO3)	NS	-	-	-	-	-	-	-	-	-	-	-	350	-
Solids (Total Dissolved)	NS	-	-	-	-	-	-	-	-	-	-	-	670	-
Chloride	NS	-	-	-	-	-	-	-	-	-	-	-	390	-
Metals 6010 (ug/l)														
Arsenic	NS	-	-	-	-	-	-	-	-	-	-	-	1.3	-
Manganese	NS	-	-	-	-	-	-	-	-	-	-	-	5.7	-
Sodium	NS	-	-	-	-	-	-	-	-	-	-	-	<50	-
Iron	NS	-	-	-	-	-	-	-	-	-	-	-	130,000	-
PFAS - Unregulated (ng/L)														
11Cl-PF3OUdS (F53B Major)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
9Cl-PF3ONS (F53B Minor)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
N-EtFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
N-MeFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	2.6	2.7	<2.0	7.0	-	8.4	-	6.3
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
Perfluorohexanoic acid (PFHxA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.9	<2.0	<2.0	-	<2.0	-	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
Perfluorotridecanoic acid (PFTDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
PFAS - Regulated (ng/L)														
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
perfluoroheptanoic acid (PFHpA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.7	<2.0	<2.0	-	<2.0	-	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	3.7	5.2	<2.0	22	-	29	-	25
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	-	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	2.5	5.4	<2.0	6.1	-	7.3	-	6.9
perfluorooctanoic acid (PFOA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	3.2	5.1	<2.0	3.4	-	2.9	-	2.5
Total Regulated PFAS (ng/L)	20	ND	ND	ND	ND	ND	9.4	20.4	ND	31.5	-	39.2	-	34.4
Total PFAS (ng/L)	NS	ND	ND	ND	ND	ND	12	26	ND	38.5	-	47.6	-	40.7

mg/l - milligrams per liter
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 ng/l - nanograms per liter
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TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	5 Hubbardston Mid 2/5/20 20B0268-02	5 Hubbardston Eff 2/5/20 20B0268-03	7 Hubbardston Rd 12/5/19 19L0336-02	7 Hubbardston Rd 12/5/19 19L0341-01	15 Hubbardston Rd 12/5/19 19L0334-01	15 Hubbardston Rd 1/17/20 20A0984-01	19 Hubbardston Rd 12/5/19 19L0339-01	23 Hubbardston Rd 1/10/20 20A0578-01	23 Hubbardston Rd 1/27/20 20A1148-01	33 Hubbardston Rd 2/5/20 20B0262-01	36 Hubbardston Rd 2/6/20 20B0267-01	2 Mountain Rd 1/7/20 20A0415-01	6 Mountain Rd 12/5/19 19L0332-01
Hydrocarbon (mg/l)														
Diesel/#2 Fuel	NS	-	-	<0.21	-	-	-	-	-	-	-	-	-	-
General Chemistry (mg/l)														
Hardness (as CaCO3)	NS	-	-	-	-	-	400	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	-	-	-	-	-	910	-	-	-	-	-	-	-
Chloride	NS	-	-	-	-	-	430	-	-	-	-	-	-	-
Metals 6010 (ug/l)														
Arsenic	NS	-	-	-	-	-	<0.80	-	-	-	-	-	-	-
Manganese	NS	-	-	-	-	-	17	-	-	-	-	-	-	-
Sodium	NS	-	-	-	-	-	160,000	-	-	-	-	-	-	-
Iron	NS	-	-	-	-	-	<50	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)														
11Cl-PF3OUdS (F53B Major)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS (F53B Minor)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	<2.0	<2.0	-	2.3	27	-	2.9	<2.0	<2.0	<2.0	<2.0	<2.0	8.4
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic acid (PFHxA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic acid (PFTTrDA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFAS - Regulated (ng/L)														
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluoroheptanoic acid (PFHpA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	<2.0	<2.0	-	3.5	110	-	9.7	<2.0	<2.0	<2.0	<2.0	<2.0	23
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	-	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	<2.0	<2.0	-	3.3	18	-	<2.0	4.1	3.7	2.5	<2.0	<2.0	4.7
perfluorooctanoic acid (PFOA)	NS	<2.0	<2.0	-	2.9	4.6	-	<2.0	4.9	5.0	<2.0	<2.0	<2.0	2.4
Total Regulated PFAS (ng/L)	20	ND	ND	-	9.7	132.6	-	9.7	9.0	8.7	2.5	ND	ND	30.1
Total PFAS (ng/L)	NS	ND	ND	-	12	159.6	-	12.6	9	8.7	2.5	ND	ND	38.5

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 ug/l - micrograms per liter
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 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	6 Mountain Rd	6 Mountain Inf	6 Mountain Mid	6 Mountain Eff	6 Mountain Rd FB	10 Mountain Rd	10 Mountain Rd	14 Mountain Rd	14 Mountain Rd	14 Mountain Rd	14 Mountain Road FB	18 Mountain Rd	19 Mountain Rd	19 Mountain Rd INF
Sample Date		12/5/19	2/5/20	2/5/20	2/5/20	12/5/19	12/5/19	12/5/19	1/9/20	1/9/20	1/22/20	1/9/20	1/10/20	12/4/19	1/10/20
Lab Sample ID		19L0332-01	20B0269-01	20B0269-02	20B0269-03	19L0332-02	19L0333-01	19L0336-03	20A0410-01	20A0413-01	20A1071-01	20A0413-02	20A0765-01	19L0338-01	20A0763-01
Hydrocarbon (mg/l)															
Diesel/#2 Fuel	NS	-	-	-	-	-	-	<0.21	<0.20	-	-	-	-	-	-
General Chemistry (mg/l)															
Hardness (as CaCO3)	NS	370	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	510	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NS	280	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals 6010 (ug/l)															
Arsenic	NS	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	NS	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NS	<50	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	NS	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)															
11Cl-PF3OUdS (F53B Major)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS (F53B Minor)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	-	3.7	<2.0	<2.0	<2.0	<2.0	-	-	7.4	8.7	<2.0	25	32	9.2
Perfluorododecanoic acid (PFDoA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic acid (PFHxA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	3.4	5.1	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic acid (PFTrDA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFAS - Regulated (ng/L)															
Perfluorodecanoic acid (PFDA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluoroheptanoic acid (PFHpA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	2.5	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	-	12	<2.0	<2.0	<2.0	<2.0	-	-	30	35	<2.0	150	220	58
perfluorononanoic acid (PFNA)	NS	-	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	-	4.1	<2.0	<2.0	<2.0	<2.0	2.0	-	6.1	7.8	<2.0	61	190	48
perfluorooctanoic acid (PFOA)	NS	-	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	-	2.6	2.3	<2.0	6.4	11	3.5
Total Regulated PFAS (ng/L)	20	-	18.2	ND	ND	ND	2.0	-	-	38.7	45.1	ND	217.4	424	109.5
Total PFAS (ng/L)	NS	-	21.9	ND	ND	ND	2	-	-	46.1	53.8	ND	245.8	460.6	118.7

mg/l - milligrams per liter
 ug/l - micrograms per liter
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 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	19 Mountain Rd INF	19 Mountain Rd INF	19 Mountain Rd MID	19 Mountain Rd MID	19 Mountain Rd MID	19 Mountain Rd EFF	19 Mountain Rd EFF	19 Mountain Rd EFF	19 Mountain Rd FB	19 Mountain Rd FB	20 Mountain Rd	21 Mountain Rd	21 Mountain Rd	21 Mountain Rd INF
Sample Date		1/17/20	1/31/20	1/10/20	1/17/20	1/31/20	1/10/20	1/17/20	1/31/20	1/10/20	1/17/20	1/10/20	12/5/19	1/17/20	1/24/20
Lab Sample ID		20A0981-01	20B0055-01	20A0763-02	20A0981-02	20B0055-03	20A0763-03	20A0981-03	20B0055-02	20A0763-04	20A0981-04	20A0764-01	19L0331-01	20A0982-01	20A1171-01
Hydrocarbon (mg/l)															
Diesel/#2 Fuel	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry (mg/l)															
Hardness (as CaCO3)	NS	-	-	-	-	-	-	-	-	-	-	-	-	240	-
Solids (Total Dissolved)	NS	-	-	-	-	-	-	-	-	-	-	-	-	400	-
Chloride	NS	-	-	-	-	-	-	-	-	-	-	-	-	130	-
Metals 6010 (ug/l)															
Arsenic	NS	-	-	-	-	-	-	-	-	-	-	-	-	1.6	-
Manganese	NS	-	-	-	-	-	-	-	-	-	-	-	-	21	-
Sodium	NS	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-
Iron	NS	-	-	-	-	-	-	-	-	-	-	-	-	<50	-
PFAS - Unregulated (ng/L)															
11CI-PF3OUdS (F53B Major)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
9CI-PF3ONS (F53B Minor)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
N-EtFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
N-MeFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	28	6.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	8.2	-	7.5
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Perfluorohexanoic acid (PFHxA)	NS	4.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.4	-	2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Perfluorotridecanoic acid (PFTTrDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
PFAS - Regulated (ng/L)															
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
perfluoroheptanoic acid (PFHpA)	NS	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	190	38	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	60	53	-	47
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	140	32	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	22	44	-	37
perfluorooctanoic acid (PFOA)	NS	8.9	3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.5	5.4	-	4.6
Total Regulated PFAS (ng/L)	20	341.2	73.0	ND	ND	ND	ND	ND	ND	ND	ND	85.5	102.4	-	88.6
Total PFAS (ng/L)	NS	373.6	79.3	ND	ND	ND	ND	ND	ND	ND	ND	97.5	113	-	98.1

mg/l - milligrams per liter
 ug/l - micrograms per liter
 ng/l - nanograms per liter
 MCP - Massachusetts Contingency Plan
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TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	21 Mountain	21 Mountain	21 Mountain	21 Mountain	21 Mountain	21 Mountain	21 Mountain	21 Mountain	21 Mountain	21 Mountain	29 Mountain	29 Mountain	30 Mountain	33 Mountain	38 Mountain
		Rd INF	Rd. INF	Rd MID	Rd MID	Rd. MID	Rd EFF	Rd EFF	Rd. EFF	Rd FB	Rd	Rd	Rd	Rd.	Rd	
Sample Date		1/31/20	2/7/20	1/24/20	1/31/20	2/7/20	1/24/20	1/31/20	2/7/20	1/24/20	1/8/20	1/8/20	1/27/20	2/7/20	2/14/20	
Lab Sample ID		20B0057-01	20B0429-01	20A1171-02	20B0057-02	20B0429-02	20A1171-03	20B0057-03	20B0429-03	20A1171-04	20A0411-01	20A0418-01	20A1146-01	20B0430-01	20B0846-01	
Hydrocarbon (mg/l)																
Diesel/#2 Fuel	NS	-	-	-	-	-	-	-	-	-	<0.25	-	-	-	-	-
General Chemistry (mg/l)																
Hardness (as CaCO3)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals 6010 (ug/l)																
Arsenic	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)																
11CI-PF3OUdS (F53B Major)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
9CI-PF3ONS (F53B Minor)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	5.5	4.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	9.6	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic acid (PFHxA)	NS	2.2	3.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	2.5	<2.0	<2.0	<2.0	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic acid (PFTTrDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
PFAS - Regulated (ng/L)																
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
perfluoroheptanoic acid (PFHpA)	NS	<2.0	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	37	28	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	59	4.4	<2.0	<2.0	<2.0
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	35	26	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	53	5.4	<2.0	<2.0	2.2
perfluorooctanoic acid (PFOA)	NS	5.7	5.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	5.3	6.1	<2.0	<2.0	<2.0
Total Regulated PFAS (ng/L)	20	77.7	61.5	ND	ND	ND	ND	ND	ND	ND	-	117.3	15.9	ND	2.2	
Total PFAS (ng/L)	NS	85.4	69	ND	ND	ND	ND	ND	ND	ND	-	129.4	15.9	ND	2.2	

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TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	64 Mountain Rd 1/30/20 20A1378-01	28 Radford Rd 1/30/20 20A1380-01	5 Prospect St 1/13/20 20A0546-01	5 Prospect St 1/20/20 20A0986-01	5 Prospect St. INF 1/24/20 20A1143-01	5 Prospect St INF 1/31/20 20B0054-01	5 Prospect St. INF 2/7/20 20B0428-01	5 Prospect St. MID 1/24/20 20A1143-03	5 Prospect St MID 1/31/20 20B0054-02	5 Prospect St. MID 2/7/20 20B0428-02	5 Prospect St. EFF 1/24/20 20A1143-02	5 Prospect St EFF 1/31/20 20B0054-03	5 Prospect St. EFF 2/7/20 20B0428-03	7 Prospect St 12/9/19 19L0552-01
Hydrocarbon (mg/l)															
Diesel/#2 Fuel	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry (mg/l)															
Hardness (as CaCO3)	NS	-	-	-	330	-	-	-	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	-	-	-	530	-	-	-	-	-	-	-	-	-	-
Chloride	NS	-	-	-	210	-	-	-	-	-	-	-	-	-	-
Metals 6010 (ug/l)															
Arsenic	NS	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-
Manganese	NS	-	-	-	1.3	-	-	-	-	-	-	-	-	-	-
Sodium	NS	-	-	-	35,000	-	-	-	-	-	-	-	-	-	-
Iron	NS	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)															
11CI-PF3OUdS (F53B Major)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9CI-PF3ONS (F53B Minor)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	<2.0	2.1	9.4	-	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.1
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic acid (PFHxA)	NS	14	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic acid (PFTTrDA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFAS - Regulated (ng/L)															
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluoroheptanoic acid (PFHpA)	NS	19	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	<2.0	2.7	32	-	6.6	2.5	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	8.8
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	22	7	6.2	-	3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.5
perfluorooctanoic acid (PFOA)	NS	34	5.4	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Regulated PFAS (ng/L)	20	75	15.1	38.2	-	9.6	2.5	2.4	ND	ND	ND	ND	ND	ND	13.3
Total PFAS (ng/L)	NS	89	17.2	47.6	-	12	12	2.4	ND	ND	ND	ND	ND	ND	16.4

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 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	11 Prospect St	16 Prospect St	17 Prospect St	18 Prospect St	21 Prospect St.	26 Prospect St	11 Radford Rd	1 Worcester Rd	10 Worcester Rd	16 Worcester Rd.	17 Worcester Rd.	23 Worcester Rd.	MW-10A 1/2/20	MW-10A 1/2/20
Sample Date		1/8/20	1/22/20	1/8/20	1/8/20	2/5/20	2/6/20	2/14/20	1/7/20	1/9/20	2/5/20	2/10/20	2/5/20	20A0099-03	20A0105-03
Lab Sample ID		20A0417-01	20A1072-01	20A0422-01	20A0420-01	20B0263-01	20B0266-01	20B0847-01	20A0414-01	20A0412-01	20B0264-01	20B0431-01	20B0265-01		
Hydrocarbon (mg/l)															
Diesel/#2 Fuel	NS	-	-	-	-	-	-	-	-	-	-	-	-	0.23	-
General Chemistry (mg/l)															
Hardness (as CaCO3)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals 6010 (ug/l)															
Arsenic	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)															
11CI-PF3OUdS (F53B Major)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
9CI-PF3ONS (F53B Minor)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
N-EtFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
N-MeFOSAA	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	5.3
Perfluorododecanoic acid (PFDoA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Perfluorohexanoic acid (PFHxA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.8	<2.0	<2.0	<2.0	-	4.1
Perfluorotetradecanoic acid (PFTA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Perfluorotridecanoic acid (PFTrDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
PFAS - Regulated (ng/L)															
Perfluorodecanoic acid (PFDA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0
perfluoroheptanoic acid (PFHpA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	8.0	<2.0	<2.0	<2.0	-	2.1
perfluorohexanesulfonic acid (PFHxS)	NS	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	22
perfluorononanoic acid (PFNA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	<2.0	<2.0	<2.0	-	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	2.3	<2.0	2.8	<2.0	<2.0	<2.0	2.3	<2.0	2.3	<2.0	<2.0	<2.0	-	4.0
perfluorooctanoic acid (PFOA)	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	<2.0	3.6	2.2	<2.0	<2.0	-	4.5
Total Regulated PFAS (ng/L)	20	4.4	ND	2.8	ND	ND	ND	5	ND	16.6	2.2	ND	ND	-	32.6
Total PFAS (ng/L)	NS	4.4	ND	2.8	ND	ND	ND	5	ND	20.4	2.2	ND	ND	-	42

mg/l - milligrams per liter
 ug/l - micrograms per liter
 ng/l - nanograms per liter
 MCP - Massachusetts Contingency Plan
 MMCL is Massachusetts Maximum Containment Level
 PFAS - Per- and Polyfluoroalkyl substances
 NS - No Standard
 <## - Parameter not detected above provided reporting limit
 ND - Analytes in parameter group not detected above reporting limit
 Bold and boxed values indicate exceedances of criteria

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	MW-10D 1/2/20 20A0099-01	MW-10D 1/2/20 20A0105-01	MW-14 1/2/20 20A0099-02	MW-14 1/2/20 20A0105-02	MW-18R 1/2/20 20A0099-04	MW-18R 1/2/20 20A0105-04	Field Blank 1/2/20 20A0105-05	TB- 12052019 12/5/19 19L0335-01	TB- 12092019 12/12/19 19L0552-02	TB- 01022020 1/2/20 20A0105-06	TB- 01102020 1/14/20 20A0583-01	TB- 01172020 1/22/20 20A0981-05	TB- 01212020 1/24/20 20A1171-05	TB- 01272020 1/27/20 20A1148-02
Hydrocarbon (mg/l)															
Diesel/#2 Fuel	NS	0.49	-	<0.20	-	0.62	-	-	-	-	-	-	-	-	-
General Chemistry (mg/l)															
Hardness (as CaCO3)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids (Total Dissolved)	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals 6010 (ug/l)															
Arsenic	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Unregulated (ng/L)															
11CI-PF3OUdS (F53B Major)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9CI-PF3ONS (F53B Minor)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	-	7.2	-	21	-	3.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic acid (PFDoA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic acid (PFHxA)	NS	-	3.6	-	2.1	-	2.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic acid (PFTTrDA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFAS - Regulated (ng/L)															
Perfluorodecanoic acid (PFDA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluoroheptanoic acid (PFHpA)	NS	-	3.3	-	<2.0	-	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	-	39	-	200	-	17	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorononanoic acid (PFNA)	NS	-	<2.0	-	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	-	28	-	140	-	7.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
perfluorooctanoic acid (PFOA)	NS	-	8.6	-	6.5	-	3.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Regulated PFAS (ng/L)	20	-	78.9	-	346.5	-	29.2	ND	ND	ND	ND	ND	ND	ND	ND
Total PFAS (ng/L)	NS	-	89.7	-	369.6	-	35.9	ND	ND	ND	ND	ND	ND	ND	ND

mg/l - milligrams per liter
 ug/l - micrograms per liter
 ng/l - nanograms per liter
 MCP - Massachusetts Contingency Plan
 MMCL is Massachusetts Maximum Containment Level
 PFAS - Per- and Polyfluoroalkyl substances
 NS - No Standard
 <## - Parameter not detected above provided reporting limit
 ND - Analytes in parameter group not detected above reporting limit
 Bold and boxed values indicate exceedances of criteria

TABLE 1
 PFAS Drinking Water Summary
 Princeton, Massachusetts
 RTN 2-21072
 Last Updated: 02/27/2020

Sample ID	MassDEP MCP GW-1 & Proposed MMCL	TB- 01312020 1/31/20 20B0057-04
Hydrocarbon (mg/l)		
Diesel/#2 Fuel	NS	-
General Chemistry (mg/l)		
Hardness (as CaCO3)	NS	-
Solids (Total Dissolved)	NS	-
Chloride	NS	-
Metals 6010 (ug/l)		
Arsenic	NS	-
Manganese	NS	-
Sodium	NS	-
Iron	NS	-
PFAS - Unregulated (ng/L)		
11Cl-PF3OUdS (F53B Major)	NS	<2.0
9Cl-PF3ONS (F53B Minor)	NS	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NS	<2.0
N-EtFOSAA	NS	<2.0
N-MeFOSAA	NS	<2.0
perfluorobutanesulfonic acid (PFBS)	NS	<2.0
Perfluorododecanoic acid (PFDoA)	NS	<2.0
Perfluorohexanoic acid (PFHxA)	NS	<2.0
Perfluorotetradecanoic acid (PFTA)	NS	<2.0
Perfluorotridecanoic acid (PFTrDA)	NS	<2.0
Perfluoroundecanoic acid (PFUnA)	NS	<2.0
PFAS - Regulated (ng/L)	NS	
Perfluorodecanoic acid (PFDA)	NS	<2.0
perfluoroheptanoic acid (PFHpA)	NS	<2.0
perfluorohexanesulfonic acid (PFHxS)	NS	<2.0
perfluorononanoic acid (PFNA)	NS	<2.0
perfluorooctanesulfonic acid (PFOS)	NS	<2.0
perfluorooctanoic acid (PFOA)	NS	<2.0
Total Regulated PFAS (ng/L)	20	ND
Total PFAS (ng/L)	NS	ND

mg/l - milligrams per liter
 ug/l - micrograms per liter
 ng/l - nanograms per liter
 MCP - Massachusetts Contingency Plan
 MMCL is Massachusetts Maximum Containment Level
 PFAS - Per- and Polyfluoroalkyl substances
 NS - No Standard
 <# - Parameter not detected above provided reporting limit
 ND - Analytes in parameter group not detected above reporting limit
 Bold and boxed values indicate exceedances of criteria

Tighe&Bond

APPENDIX C



ANALYTICAL REPORT

Lab Number:	L2000912
Client:	White Water Inc. 253B Worcester Road Charlton, MA 01507
ATTN:	Andrew Donnelly
Phone:	(888) 377-7678
Project Name:	PRINCETON TOWN CAMPUS
Project Number:	Not Specified
Report Date:	01/31/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Six Park Row, Mansfield, MA 02048
508-261-7467 (Fax) -- -- emccarter@mansfieldma.com



Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2000912-01	SAMPLE 1	DW	PRINCETON	01/08/20 10:00	01/09/20
L2000912-02	SAMPLE 1 FB	DW	PRINCETON	01/08/20 10:00	01/09/20

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

Case Narrative

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

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

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

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

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

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

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

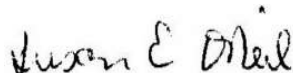
Case Narrative (continued)

Sample Receipt

L2000912-02: A sample identified as "SAMPLE 1 FB" was received, but not listed on the Chain of Custody. At the client's request, this sample was analyzed.

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

Authorized Signature:



Susan O'Neil

Title: Technical Director/Representative

Date: 01/31/20

ORGANICS

SEMIVOLATILES

Project Name: PRINCETON TOWN CAMPUS**Lab Number:** L2000912**Project Number:** Not Specified**Report Date:** 01/31/20**SAMPLE RESULTS**

Lab ID: L2000912-01

Date Collected: 01/08/20 10:00

Client ID: SAMPLE 1

Date Received: 01/09/20

Sample Location: PRINCETON

Field Prep: Not Specified

Sample Depth:

Matrix: Dw

Extraction Method: EPA 537

Analytical Method: 122,537

Extraction Date: 01/10/20 07:50

Analytical Date: 01/24/20 04:45

Analyst: RS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	31.9		ng/l	1.84	--	1
Perfluorohexanoic Acid (PFHxA)	2.86		ng/l	1.84	--	1
Perfluoroheptanoic Acid (PFHpA)	2.47		ng/l	1.84	--	1
Perfluorohexanesulfonic Acid (PFHxS)	168		ng/l	1.84	--	1
Perfluorooctanoic Acid (PFOA)	9.52		ng/l	1.84	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.84	--	1
Perfluorooctanesulfonic Acid (PFOS)	52.6		ng/l	1.84	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.84	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.84	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.84	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.84	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.84	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.84	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.84	--	1
PFOA/PFOS, Total	62.1		ng/l	1.84	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	82		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	76		70-130

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

SAMPLE RESULTS

Lab ID: L2000912-02
 Client ID: SAMPLE 1 FB
 Sample Location: PRINCETON

Date Collected: 01/08/20 10:00
 Date Received: 01/09/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw
 Analytical Method: 122,537
 Analytical Date: 01/30/20 05:21
 Analyst: RS

Extraction Method: EPA 537
 Extraction Date: 01/14/20 17:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.95	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.95	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.95	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.95	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.95	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.95	--	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.95	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.95	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.95	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.95	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.95	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.95	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.95	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.95	--	1
PFOA/PFOS, Total	ND		ng/l	1.95	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	95		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101		70-130

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 122,537
Analytical Date: 01/23/20 22:14
Analyst: RS

Extraction Method: EPA 537
Extraction Date: 01/10/20 07:50

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab for sample(s): 01 Batch: WG1328708-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	--
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	--
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	--
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	--
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	--
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	--
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	--
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	--
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	--
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	--
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	--
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	--
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	--
PFOA/PFOS, Total	ND		ng/l	2.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	82		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	90		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	83		70-130

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 122,537
Analytical Date: 01/30/20 02:31
Analyst: RS

Extraction Method: EPA 537
Extraction Date: 01/14/20 17:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab for sample(s): 02 Batch: WG1330054-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	--
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	--
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	--
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	--
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	--
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	--
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	--
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	--
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	--
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	--
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	--
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	--
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	--
PFOA/PFOS, Total	ND		ng/l	2.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	89		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	96		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	92		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

Parameter	LCS		LCSD		%Recovery		RPD	RPD	
	%Recovery	Qual	%Recovery	Qual	Limits	Qual		Limits	
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 01 Batch: WG1328708-2 WG1328708-3									
Perfluorobutanesulfonic Acid (PFBS)	91		95		70-130		4		30
Perfluorohexanoic Acid (PFHxA)	84		88		70-130		5		30
Perfluoroheptanoic Acid (PFHpA)	87		90		70-130		3		30
Perfluorohexanesulfonic Acid (PFHxS)	89		93		70-130		4		30
Perfluorooctanoic Acid (PFOA)	88		93		70-130		6		30
Perfluorononanoic Acid (PFNA)	91		96		70-130		5		30
Perfluorooctanesulfonic Acid (PFOS)	89		94		70-130		5		30
Perfluorodecanoic Acid (PFDA)	89		94		70-130		5		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	83		84		70-130		1		30
Perfluoroundecanoic Acid (PFUnA)	95		98		70-130		3		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	80		83		70-130		4		30
Perfluorododecanoic Acid (PFDoA)	103		110		70-130		7		30
Perfluorotridecanoic Acid (PFTrDA)	113		120		70-130		6		30
Perfluorotetradecanoic Acid (PFTA)	99		106		70-130		7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	83		87		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	86		92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	77		79		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

Parameter	LCS		LCSD		%Recovery		RPD	
	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 02 Batch: WG1330054-2 WG1330054-3								
Perfluorobutanesulfonic Acid (PFBS)	89		95		70-130	7		30
Perfluorohexanoic Acid (PFHxA)	85		88		70-130	3		30
Perfluoroheptanoic Acid (PFHpA)	90		94		70-130	4		30
Perfluorohexanesulfonic Acid (PFHxS)	89		94		70-130	5		30
Perfluorooctanoic Acid (PFOA)	90		97		70-130	7		30
Perfluorononanoic Acid (PFNA)	90		97		70-130	7		30
Perfluorooctanesulfonic Acid (PFOS)	87		92		70-130	6		30
Perfluorodecanoic Acid (PFDA)	89		96		70-130	8		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	82		86		70-130	5		30
Perfluoroundecanoic Acid (PFUnA)	93		101		70-130	8		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	90		93		70-130	3		30
Perfluorododecanoic Acid (PFDoA)	95		105		70-130	10		30
Perfluorotridecanoic Acid (PFTrDA)	94		100		70-130	6		30
Perfluorotetradecanoic Acid (PFTA)	88		97		70-130	10		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	94		96		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	98		99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	97		93		70-130



Project Name: PRINCETON TOWN CAMPUS

Project Number: Not Specified

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

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

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2000912-01A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		2.7	Y	Absent		A2-537(14)
L2000912-01B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		2.7	Y	Absent		A2-537(14)
L2000912-02A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		2.7	Y	Absent		A2-537(14)

PFAS PARAMETER SUMMARY

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

Project Name: PRINCETON TOWN CAMPUS**Lab Number:** L2000912**Project Number:** Not Specified**Report Date:** 01/31/20

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name: PRINCETON TOWN CAMPUS**Lab Number:** L2000912**Project Number:** Not Specified**Report Date:** 01/31/20

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

Terms

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

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

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

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

Report Format: Data Usability Report



Project Name: PRINCETON TOWN CAMPUS
Project Number: Not Specified

Lab Number: L2000912
Report Date: 01/31/20

Data Qualifiers

than 5x the RL. (Metals only.)

- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Project Name: PRINCETON TOWN CAMPUS

Lab Number: L2000912

Project Number: Not Specified

Report Date: 01/31/20

REFERENCES

- 122 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537, EPA/600/R-08/092. Version 1.1, September 2009.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

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

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

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

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

Mansfield Facility

SM 2540D: TSS

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

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

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

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

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

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

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

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

Non-Potable Water

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

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

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

EPA 624.1: Volatile Halocarbons & Aromatics,

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

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

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

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

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

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

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

EPA 245.1 Hg.

SM2340B

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

Tighe&Bond

APPENDIX D

S-1760
February 19, 2020

Andrew Olesin
PO Box 143
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
1 Hubbardston Road, Princeton**

Dear Mr. Olesin:

Enclosed is a copy of the laboratory analytical results for the groundwater sample collected from the residential well located at 1 Hubbardston Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 31.5 ng/L in the water samples collected on January 8, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you wish to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	1 Hubbardston Rd
Well Depth (feet)		~175'
Sampling Date		1/8/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		7
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		22
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		3.4
Perfluorooctanesulfonic acid (PFOS)		6.1
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		38.5
Regulated Total	20	31.5

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0419

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0419

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
1 Hubbardston Rd	20A0419-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0419

Date Received: 1/10/2020

Field Sample #: 1 Hubbardston Rd

Sampled: 1/8/2020 08:30

Sample ID: 20A0419-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	7.0	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorohexanesulfonic acid (PFHxS)	22	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorooctanoic acid (PFOA)	3.4	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorooctanesulfonic acid (PFOS)	6.1	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 7:48	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.0	70-130	1/16/20 7:48
M3HFPO-DA	80.8	70-130	1/16/20 7:48
13C-PFDA	81.4	70-130	1/16/20 7:48
d5-NEtFOSAA	89.4	70-130	1/16/20 7:48

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0419-01 [1 Hubbardston Rd]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B249867 - EPA 537.1

Blank (B249867-BLK1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			

LCS (B249867-BS1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06262019

http://www.contestlabs.com

39 Spruce Street
East Longmeadow, MA 01028

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01608
Phone: 508-754-2201
Project Name: Princeton Residential Well Sampling
Project Location: Princeton, MA
Project Number: P-0534
Project Manager: M. Scherer
Con-Test Quote Name/Number:
Invoice Recipient: Tighe & Bond
Sampled By: M. Scherer

ANALYSIS REQUESTED

Requested Turnaround Time: 7-Day 10-Day Field Filtered
 PFAS 10-Day (std) Due Date: Lab to Filter
 1-Day 3-Day Orthophosphate Samples
 2-Day 4-Day Lab to Filter
 Data Delivery: EXCEL PDF
 Other:
 CLP Like Data Pkg Required:
 Email To:
 Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
01	1 Hubbardston Rd	1/4/20	08:30	GR					2		

PFOS/PFOA 537.1

? Preservation Code
 ? Counter Use Only
 Total Number Of:
 VIALS _____
 GLASS _____
 PLASTIC _____
 BACTERIA _____
 ENCORE _____
 Glassware in the fridge? Y / N
 Glassware in freezer? Y / N
 Prepackaged Cooler? Y / N
 *Contest is not responsible for missing samples from prepacked coolers

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

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

Client Comments:

Relinquished by: (signature) *M. Scherer*
 Date/Time: 1/8/20 05:00
 Received by: (signature) *F. LeBe*
 Date/Time: 1/9/20 15:00
 Relinquished by: (signature) *[Signature]*
 Date/Time: 1/10/20 09:55
 Received by: (signature) *[Signature]*
 Date/Time: 1/19/20 09:00
 Relinquished by: (signature) *[Signature]*
 Date/Time: 1/20/20 3:00
 Received by: (signature) *[Signature]*
 Date/Time: 1/20/20 18:00

Detection/Limit Requirements
 MA: MCP Required
 MCP Certification Form Required
 CT: RCP Required
 RCP Certification Form Required
 MA State DW Required
 PWSID # _____

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

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

Lab Comments:

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B

Received By RLJ Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.8 °C
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA

Base NA

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Roman Catholic Bishop
1 Worcester Road
PO Box 305
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
1 Worcester Rd, Princeton**

To Whom it May Concern:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 1 Worcester Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 7, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on January 7, 2020. A copy of the lab report is attached to this letter.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions. We will contact you to arrange for the POET system installation shortly.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

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

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0414

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. 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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B249867	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0414

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
1 Worcester Road	20A0414-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0414

Date Received: 1/10/2020

Field Sample #: 1 Worcester Road

Sampled: 1/7/2020 07:15

Sample ID: 20A0414-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:56	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		87.1		70-130					1/16/20 4:56	
M3HFPO-DA		82.4		70-130					1/16/20 4:56	
13C-PFDA		85.5		70-130					1/16/20 4:56	
d5-NEtFOSAA		93.3		70-130					1/16/20 4:56	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0414-01 [1 Worcester Road]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 - Rev 5 2017

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

Client T&B

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.8°C
By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____
Who was notified? _____
Who was notified? _____

MS/MSD? F
Is splitting samples required? F

On COC? F

Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Justin Hebb
2 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
2 Mountain Rd, Princeton

Dear Mr. Hebb:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 2 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 7, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on January 7, 2020. A copy of the lab report is attached to this letter.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

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

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0415

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. 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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B249867	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0415

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
2 Mountain Road	20A0415-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0415

Date Received: 1/10/2020

Field Sample #: 2 Mountain Road

Sampled: 1/7/2020 08:00

Sample ID: 20A0415-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:17	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	88.0	70-130	1/16/20 5:17
M3HFPO-DA	80.6	70-130	1/16/20 5:17
13C-PFDA	83.2	70-130	1/16/20 5:17
d5-NEtFOSAA	91.5	70-130	1/16/20 5:17

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0415-01 [2 Mountain Road]	B249867	250	1.00	01/13/20

QUALITY CONTROL

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

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

Batch B249867 - EPA 537.1

Blank (B249867-BLK1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			

LCS (B249867-BS1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T & B

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 °C
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA

Base NA

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Susan Mayer
5 Hubbardston Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
5 Hubbardston Road, Princeton**

Dear Ms. Mayer:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 5 Hubbardston Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS) and Total Petroleum Hydrocarbons (TPH). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 39.2 ng/L in the water samples collected on December 5, 2019, which is above the MassDEP proposed MCL of 20 ng/L. TPH was not detected in your samples.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	5 Hubbardston Rd
Well Depth (feet)		UNKNOWN
Sampling Date		12/5/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		8.4
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		29
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		2.9
Perfluorooctanesulfonic acid (PFOS)		7.3
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		47.6
Regulated Total	20	39.2

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0336

Date Received: 12/10/2019

Field Sample #: 5 Hubbardston Rd

Sampled: 12/5/2019 09:30

Sample ID: 19L0336-01

Sample Matrix: Drinking Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diesel Range Organics	ND	0.21	mg/L	1		SW-846 8015C	12/11/19	12/18/19 15:35	RDD
Surrogates		% Recovery			Recovery Limits				
2-Fluorobiphenyl		59.3			40-140			12/18/19 15:35	

December 13, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0340

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. 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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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0340

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
5 Hubbardston Rd	19L0340-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Sample(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0340

Date Received: 12/10/2019

Field Sample #: 5 Hubbardston Rd

Sampled: 12/5/2019 09:30

Sample ID: 19L0340-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	8.4	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorohexanesulfonic acid (PFHxS)	29	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorooctanoic acid (PFOA)	2.9	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorooctanesulfonic acid (PFOS)	7.3	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:30	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		115		70-130					12/12/19 1:30	
M3HFPO-DA		100		70-130					12/12/19 1:30	
13C-PFDA		104		70-130					12/12/19 1:30	
d5-NEtFOSAA		120		70-130					12/12/19 1:30	

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Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0340-01 [5 Hubbardston Rd]	B248078	250	1.00	12/11/19

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248078 - EPA 537										
Blank (B248078-BLK1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			
LCS (B248078-BS1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By af Date 12/10/19 Time 20:30

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? N/A

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid _____ Base _____

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Paul & Deborah Simeone
5 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
5 Prospect Street, Princeton**

Dear Mr. and Mrs. Simeone:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 5 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 24, 31, and February 7, 2020 to monitor the granular activated carbon (GAC) point-of-entry treatment (POET) system that was installed in your home on January 21, 2020. The samples were submitted to Con-Test Analytical Laboratory (Con-Test) 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 sample dates 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 Standards (MCP, 310 CMR 40.0974)*.

Water quality results indicate that the POET system installed in your home is effectively removing PFAS from your drinking water, as there were no detections in the midfluent or effluent samples. Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you have any questions regarding this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)

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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

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

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

February 6, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1143

Enclosed are results of analyses for samples received by the laboratory on January 27, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/6/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1143

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
5 Prospect St. INF	20A1143-01	Drinking Water		EPA 537.1	
5 Prospect St. EFF	20A1143-02	Drinking Water		EPA 537.1	
5 Prospect St. MID	20A1143-03	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1143

Date Received: 1/27/2020

Field Sample #: 5 Prospect St. INF

Sampled: 1/24/2020 10:00

Sample ID: 20A1143-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	2.4	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorohexanesulfonic acid (PFHxS)	6.6	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorooctanesulfonic acid (PFOS)	3.0	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 4:12	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	93.7	70-130	2/5/20 4:12
M3HFPO-DA	90.9	70-130	2/5/20 4:12
13C-PFDA	75.8	70-130	2/5/20 4:12
d5-NEtFOSAA	77.9	70-130	2/5/20 4:12

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1143

Date Received: 1/27/2020

Field Sample #: 5 Prospect St. EFF

Sampled: 1/24/2020 10:00

Sample ID: 20A1143-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:19	ZZZ

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	85.3	70-130	1/29/20 20:19
M3HFPO-DA	84.6	70-130	1/29/20 20:19
13C-PFDA	73.8	70-130	1/29/20 20:19
d5-NEtFOSAA	74.9	70-130	1/29/20 20:19

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1143

Date Received: 1/27/2020

Field Sample #: 5 Prospect St. MID

Sampled: 1/24/2020 10:00

Sample ID: 20A1143-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 20:40	ZZZ
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		93.1		70-130					1/29/20 20:40	
M3HFPO-DA		87.7		70-130					1/29/20 20:40	
13C-PFDA		83.0		70-130					1/29/20 20:40	
d5-NEtFOSAA		82.6		70-130					1/29/20 20:40	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1143-02 [5 Prospect St. EFF]	B250967	250	1.00	01/28/20
20A1143-03 [5 Prospect St. MID]	B250967	250	1.00	01/28/20

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1143-01RE1 [5 Prospect St. INF]	B251147	250	1.00	01/30/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250967 - EPA 537.1										
Blank (B250967-BLK1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.6		ng/L	40.0		89.1	70-130			
Surrogate: M3HFPO-DA	34.9		ng/L	40.0		87.2	70-130			
Surrogate: 13C-PFDA	34.3		ng/L	40.0		85.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			
LCS (B250967-BS1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	9.55	2.0	ng/L	8.85		108	70-130			
Perfluorohexanoic acid (PFHxA)	9.83	2.0	ng/L	10.0		98.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	10.5	2.0	ng/L	9.10		116	70-130			
Perfluoroheptanoic acid (PFHpA)	10.7	2.0	ng/L	10.0		107	70-130			
Perfluorooctanoic acid (PFOA)	10.9	2.0	ng/L	10.0		109	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.7	2.0	ng/L	9.25		115	70-130			
Perfluorononanoic acid (PFNA)	10.5	2.0	ng/L	10.0		105	70-130			
Perfluorodecanoic acid (PFDA)	9.78	2.0	ng/L	10.0		97.8	70-130			
N-EtFOSAA	11.4	2.0	ng/L	10.0		114	70-130			
Perfluoroundecanoic acid (PFUnA)	9.44	2.0	ng/L	10.0		94.4	70-130			
N-MeFOSAA	11.8	2.0	ng/L	10.0		118	70-130			
Perfluorododecanoic acid (PFDoA)	8.07	2.0	ng/L	10.0		80.7	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.04	2.0	ng/L	10.0		80.4	70-130			
Perfluorotetradecanoic acid (PFTA)	7.35	2.0	ng/L	10.0		73.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.4	2.0	ng/L	10.0		124	70-130			
11Cl-PF3OUdS (F53B Major)	9.50	2.0	ng/L	9.40		101	70-130			
9Cl-PF3ONS (F53B Minor)	10.6	2.0	ng/L	9.30		114	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.75	2.0	ng/L	10.0		97.5	70-130			
Surrogate: 13C-PFHxA	33.7		ng/L	40.0		84.3	70-130			
Surrogate: M3HFPO-DA	32.6		ng/L	40.0		81.4	70-130			
Surrogate: 13C-PFDA	33.1		ng/L	40.0		82.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251147 - EPA 537.1										
Blank (B251147-BLK1)										
Prepared: 01/30/20 Analyzed: 02/05/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	43.6		ng/L	40.0		109	70-130			
Surrogate: M3HFPO-DA	40.1		ng/L	40.0		100	70-130			
Surrogate: 13C-PFDA	44.0		ng/L	40.0		110	70-130			
Surrogate: d5-NEtFOSAA	175		ng/L	160		109	70-130			
LCS (B251147-BS1)										
Prepared: 01/30/20 Analyzed: 02/05/20										
Perfluorobutanesulfonic acid (PFBS)	10.1	2.0	ng/L	8.85		114	70-130			
Perfluorohexanoic acid (PFHxA)	10.0	2.0	ng/L	10.0		100	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.98	2.0	ng/L	9.10		98.7	70-130			
Perfluoroheptanoic acid (PFHpA)	10.0	2.0	ng/L	10.0		100	70-130			
Perfluorooctanoic acid (PFOA)	10.3	2.0	ng/L	10.0		103	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.7	2.0	ng/L	9.25		116	70-130			
Perfluorononanoic acid (PFNA)	9.38	2.0	ng/L	10.0		93.8	70-130			
Perfluorodecanoic acid (PFDA)	9.88	2.0	ng/L	10.0		98.8	70-130			
N-EtFOSAA	10.3	2.0	ng/L	10.0		103	70-130			
Perfluoroundecanoic acid (PFUnA)	9.28	2.0	ng/L	10.0		92.8	70-130			
N-MeFOSAA	10.3	2.0	ng/L	10.0		103	70-130			
Perfluorododecanoic acid (PFDoA)	8.94	2.0	ng/L	10.0		89.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.80	2.0	ng/L	10.0		88.0	70-130			
Perfluorotetradecanoic acid (PFTA)	8.56	2.0	ng/L	10.0		85.6	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.72	2.0	ng/L	10.0		87.2	70-130			
11Cl-PF3OUdS (F53B Major)	8.81	2.0	ng/L	9.40		93.7	70-130			
9Cl-PF3ONS (F53B Minor)	9.52	2.0	ng/L	9.30		102	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.02	2.0	ng/L	10.0		80.2	70-130			
Surrogate: 13C-PFHxA	46.3		ng/L	40.0		116	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	41.3		ng/L	40.0		103	70-130			
Surrogate: d5-NEtFOSAA	156		ng/L	160		97.6	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com

http://www.contestlabs.com

39 Spruce Street
 East Longmeadow, MA 01028

Doc # 381 Rev 2_06262019

20A1143

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01608
Project Name: Princeton Residential Well Sampling
Project Location: Princeton, MA
Project Number: P-0534
Project Manager: M. Scherer
Con-Test Quote Name/Number: Tighe & Bond
Invoice Recipient: M. Scherer
Sampled By: M. Scherer

Requested Turnaround Time: 10 Day 10 Day
Due Date: 3-Day 4-Day
Rush-Approval Required:
Data Delivery: PDF EXCEL

ANALYSIS REQUESTED

7-Day PFAS 10-Day (std)	1-Day	2-Day	Orthophosphate Samples	Field Filtered	Lab to Filter
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ending Date/Time	COM/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1/24/20 10:00	GRAB	DW	U					
↓	↓	↓	↓					
↓	↓	↓	↓					

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time
1	S PRESPECT ST. 10F	1/24/20
2	S PRESPECT ST EFF	↓
3	S PRESPECT ST MID	↓

Client Comments: 10 day Test

Detection Limit Requirements: MA CT Other
Special Requirements: MA MCP Required MA MCP Certification Form Required
 CT RCP Required CT RCP Certification Form Required
 MA State DW Required MA State DW Required

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

Received by: (signature) [Signature]
 Date/Time: 1/24/20 11:00
Received by: (signature) [Signature]
 Date/Time: 1/24/20 11:00
Received by: (signature) [Signature]
 Date/Time: 1/24/20 11:00
Received by: (signature) [Signature]
 Date/Time: 1/24/20 11:00
Received by: (signature) [Signature]
 Date/Time: 1/24/20 11:00

1 Preservation Code: Courier Use Only
 Total Number Of: VIALS _____ GLASS _____ BACTERIA _____ ENCORE _____
 Glassware in the fridge? Y / N _____
 Glassware in freezer? Y / N _____
 Prepackaged Cooler? Y / N _____
 *Contest is not responsible for missing samples from prepackaged coolers
 1 Matrix Codes: GW = Ground Water, WW = Waste Water, DW = Drinking Water, A = Air, S = Soil, SL = Sludge, SOL = Solid, O = Other (please define)
 2 Preservation Codes: I = Iced, H = HCL, M = Methanol, N = Nitric Acid, S = Sulfuric Acid, B = Sodium Bisulfate, X = Sodium Hydroxide, T = Sodium Thiosulfate, O = Other (please define)
 PCB ONLY: Soxhlet Non Soxhlet
 Please use the following codes to indicate possible sample concentration within the Conc Code column above: H - High; M - Medium; L - Low; C - Clean; U - Unknown
 Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By mf Date 1/27/20 Time 18:00

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.9
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampled with? N/A
Was COC Relinquished? T Does Chain Agree With Samples? T

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

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

Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
Is there Headspace where applicable? N/A MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	6	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

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

Comments:

February 7, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20B0054

Enclosed are results of analyses for samples received by the laboratory on February 3, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/7/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0054

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
5 Prospect St INF	20B0054-01	Drinking Water		EPA 537.1	
5 Prospect St MID	20B0054-02	Drinking Water		EPA 537.1	
5 Prospect St EFF	20B0054-03	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Sample(s) Qualified:

Hexafluoropropylene oxide dimer :

S045369-CCV2, S045369-CCV3, S045369-CCV4, S045369-CCV5

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0054

Date Received: 2/3/2020

Field Sample #: 5 Prospect St INF

Sampled: 1/31/2020 14:45

Sample ID: 20B0054-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorohexanesulfonic acid (PFHxS)	2.5	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:29	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	91.1	70-130	2/6/20 20:29
M3HFPO-DA	82.2	70-130	2/6/20 20:29
13C-PFDA	92.4	70-130	2/6/20 20:29
d5-NEtFOSAA	98.6	70-130	2/6/20 20:29

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0054

Date Received: 2/3/2020

Field Sample #: 5 Prospect St MID

Sampled: 1/31/2020 14:45

Sample ID: 20B0054-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 20:51	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	90.9	70-130	2/6/20 20:51
M3HFPO-DA	79.6	70-130	2/6/20 20:51
13C-PFDA	87.3	70-130	2/6/20 20:51
d5-NEtFOSAA	93.7	70-130	2/6/20 20:51

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0054

Date Received: 2/3/2020

Field Sample #: 5 Prospect St EFF

Sampled: 1/31/2020 14:45

Sample ID: 20B0054-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:12	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	92.6	70-130	2/6/20 21:12
M3HFPO-DA	82.3	70-130	2/6/20 21:12
13C-PFDA	96.5	70-130	2/6/20 21:12
d5-NEtFOSAA	99.8	70-130	2/6/20 21:12

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0054-01 [5 Prospect St INF]	B251512	250	1.00	02/04/20
20B0054-02 [5 Prospect St MID]	B251512	250	1.00	02/04/20
20B0054-03 [5 Prospect St EFF]	B251512	250	1.00	02/04/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251512 - EPA 537.1										
Blank (B251512-BLK1)										
Prepared: 02/04/20 Analyzed: 02/06/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: M3HFPO-DA	36.0		ng/L	40.0		90.1	70-130			
Surrogate: 13C-PFDA	38.6		ng/L	40.0		96.6	70-130			
Surrogate: d5-NEtFOSAA	160		ng/L	160		99.8	70-130			
LCS (B251512-BS1)										
Prepared: 02/04/20 Analyzed: 02/06/20										
Perfluorobutanesulfonic acid (PFBS)	8.68	2.0	ng/L	8.85		98.0	70-130			
Perfluorohexanoic acid (PFHxA)	9.03	2.0	ng/L	10.0		90.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	9.15	2.0	ng/L	9.10		101	70-130			
Perfluoroheptanoic acid (PFHpA)	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorooctanoic acid (PFOA)	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.8	2.0	ng/L	9.25		117	70-130			
Perfluorononanoic acid (PFNA)	9.87	2.0	ng/L	10.0		98.7	70-130			
Perfluorodecanoic acid (PFDA)	9.13	2.0	ng/L	10.0		91.3	70-130			
N-EtFOSAA	9.36	2.0	ng/L	10.0		93.6	70-130			
Perfluoroundecanoic acid (PFUnA)	9.01	2.0	ng/L	10.0		90.1	70-130			
N-MeFOSAA	10.1	2.0	ng/L	10.0		101	70-130			
Perfluorododecanoic acid (PFDoA)	8.56	2.0	ng/L	10.0		85.6	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.27	2.0	ng/L	10.0		82.7	70-130			
Perfluorotetradecanoic acid (PFTA)	7.95	2.0	ng/L	10.0		79.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.42	2.0	ng/L	10.0		74.2	70-130			
11Cl-PF3OUdS (F53B Major)	8.83	2.0	ng/L	9.40		93.9	70-130			
9Cl-PF3ONS (F53B Minor)	9.58	2.0	ng/L	9.30		103	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.09	2.0	ng/L	10.0		80.9	70-130			
Surrogate: 13C-PFHxA	39.0		ng/L	40.0		97.6	70-130			
Surrogate: M3HFPO-DA	36.2		ng/L	40.0		90.6	70-130			
Surrogate: 13C-PFDA	37.1		ng/L	40.0		92.7	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.4	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client Tighe & Bond

Received By SA Date 2/3/2020 Time 1915

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 2.7
By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid F Base F

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

Unused Media

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

Comments:

February 18, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20B0428

Enclosed are results of analyses for samples received by the laboratory on February 11, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style and is placed on a light gray rectangular background.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/18/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0428

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
5 Prospect St. INF	20B0428-01	Drinking Water		EPA 537.1	
5 Prospect St. MID	20B0428-02	Drinking Water		EPA 537.1	
5 Prospect St. EFF	20B0428-03	Drinking Water		EPA 537.1	
Trip Blank	20B0428-04	Trip Blank 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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: 5 Prospect St. INF

Sampled: 2/7/2020 16:00

Sample ID: 20B0428-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorohexanesulfonic acid (PFHxS)	2.4	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.3	70-130	2/14/20 2:54
M3HFPO-DA	84.0	70-130	2/14/20 2:54
13C-PFDA	89.8	70-130	2/14/20 2:54
d5-NEtFOSAA	83.6	70-130	2/14/20 2:54

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: 5 Prospect St. MID

Sampled: 2/7/2020 16:00

Sample ID: 20B0428-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	92.7	70-130	2/14/20 3:16
M3HFPO-DA	87.5	70-130	2/14/20 3:16
13C-PFDA	95.8	70-130	2/14/20 3:16
d5-NEtFOSAA	87.5	70-130	2/14/20 3:16

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: 5 Prospect St. EFF

Sampled: 2/7/2020 16:00

Sample ID: 20B0428-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		90.4		70-130					2/14/20 3:37	
M3HFPO-DA		86.3		70-130					2/14/20 3:37	
13C-PFDA		91.5		70-130					2/14/20 3:37	
d5-NEtFOSAA		86.1		70-130					2/14/20 3:37	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: Trip Blank

Sampled: 2/7/2020 00:00

Sample ID: 20B0428-04

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	90.3	70-130	2/14/20 3:59
M3HFPO-DA	85.1	70-130	2/14/20 3:59
13C-PFDA	96.3	70-130	2/14/20 3:59
d5-NEtFOSAA	88.5	70-130	2/14/20 3:59

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0428-01 [5 Prospect St. INF]	B252068	250	1.00	02/12/20
20B0428-02 [5 Prospect St. MID]	B252068	250	1.00	02/12/20
20B0428-03 [5 Prospect St. EFF]	B252068	250	1.00	02/12/20
20B0428-04 [Trip Blank]	B252068	250	1.00	02/12/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B252068 - EPA 537.1										
Blank (B252068-BLK1)										
Prepared: 02/12/20 Analyzed: 02/14/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	33.6		ng/L	40.0		84.0	70-130			
Surrogate: M3HFPO-DA	32.4		ng/L	40.0		81.0	70-130			
Surrogate: 13C-PFDA	35.7		ng/L	40.0		89.2	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.3	70-130			
LCS (B252068-BS1)										
Prepared: 02/12/20 Analyzed: 02/14/20										
Perfluorobutanesulfonic acid (PFBS)	16.5	2.0	ng/L	17.7		93.2	70-130			
Perfluorohexanoic acid (PFHxA)	18.9	2.0	ng/L	20.0		94.4	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.8	2.0	ng/L	18.2		97.6	70-130			
Perfluoroheptanoic acid (PFHpA)	18.9	2.0	ng/L	20.0		94.6	70-130			
Perfluorooctanoic acid (PFOA)	20.2	2.0	ng/L	20.0		101	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.3	2.0	ng/L	18.5		93.5	70-130			
Perfluorononanoic acid (PFNA)	19.9	2.0	ng/L	20.0		99.5	70-130			
Perfluorodecanoic acid (PFDA)	19.0	2.0	ng/L	20.0		95.0	70-130			
N-EtFOSAA	21.7	2.0	ng/L	20.0		108	70-130			
Perfluoroundecanoic acid (PFUnA)	18.6	2.0	ng/L	20.0		93.0	70-130			
N-MeFOSAA	19.2	2.0	ng/L	20.0		96.0	70-130			
Perfluorododecanoic acid (PFDoA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Perfluorotridecanoic acid (PFTTrDA)	16.8	2.0	ng/L	20.0		84.1	70-130			
Perfluorotetradecanoic acid (PFTA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	17.0	2.0	ng/L	20.0		84.9	70-130			
11Cl-PF3OUdS (F53B Major)	16.0	2.0	ng/L	18.8		85.2	70-130			
9Cl-PF3ONS (F53B Minor)	17.3	2.0	ng/L	18.6		93.0	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.3	2.0	ng/L	20.0		86.5	70-130			
Surrogate: 13C-PFHxA	36.0		ng/L	40.0		90.0	70-130			
Surrogate: M3HFPO-DA	35.2		ng/L	40.0		88.0	70-130			
Surrogate: 13C-PFDA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: d5-NEtFOSAA	132		ng/L	160		82.6	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06/26/2019

http://www.con-testlabs.com

Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@con-testlabs.com



Company Name: **JLU 2080427**

Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer

Invoice Recipient: Tighe & Bond
 M. Scherer

Con-Test Quote Name/Number: CLP Like Data Pkg Required:

Sampled By: Tighe & Bond
 M. Scherer

39 Spruce Street
 East Longmeadow, MA 01028

Requested Turnaround Time

7-Day 10-Day 15-Day
 PFAS 10-Day (std) Due Date:
 Rush-Approval Required
 1-Day 3-Day 4-Day
 2-Day

Data Delivery
 PDF EXCEL

Format: PDF EXCEL

Other:

CLP Like Data Pkg Required:

Email To:

Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	5 PERSPECT ST INF	2/1/20	1600	GRAB	DW	U			2		
2	5 PERSPECT ST MID	↓	↓	↓	↓	↓			2		
3	5 PERSPECT ST EFF	↓	↓	↓	↓	↓			2		
4	TAP WATER	2/1/20							1		

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

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

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

PCB ONLY
 Soxhlet
 Non Soxhlet

Client Comments:

MA MCP Required
 MA Certification Form Required
 CT RCP Required
 CT Certification Form Required
 MA State DW Required
 PWSID #

Project Entity
 Government 21 J
 Federal Brownfield
 City

Other
 WRTA
 MWRA
 School
 MBTA
 Chromatogram
 AIHA-LAP, LLC

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By U Date 2-11-2020 Time 1850

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -4.9
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? T

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

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

Unused Media

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

Comments:

S-1760
January 16, 2020

Paul & Deborah Simeone
5 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
5 Prospect Street, Princeton**

Dear Mr. and Mrs. Simeone:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 5 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 13, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 38.2 ng/L in the water samples collected on January 13, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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) |
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	5 Prospect St
Well Depth (feet)		UNKNOWN
Sampling Date		1/13/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		9.4
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		32
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.2
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		47.6
Regulated Total	20	38.2

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 16, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0546

Enclosed are results of analyses for samples received by the laboratory on January 13, 2020. 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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20A0546-01	5
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B249982	7
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Chain of Custody/Sample Receipt	10

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

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

REPORT DATE: 1/16/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0546

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
5 Prospect St.	20A0546-01	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 the Con-Test Analytical Laboratory for testing.

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

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

Tod E. Kopycinski
Laboratory Director

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0546

Date Received: 1/13/2020

Field Sample #: 5 Prospect St.

Sampled: 1/13/2020 10:00

Sample ID: 20A0546-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	9.4	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorohexanesulfonic acid (PFHxS)	32	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorooctanesulfonic acid (PFOS)	6.2	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/14/20	1/15/20 17:49	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		91.4		70-130					1/15/20 17:49	
M3HFPO-DA		88.0		70-130					1/15/20 17:49	
13C-PFDA		90.9		70-130					1/15/20 17:49	
d5-NEtFOSAA		102		70-130					1/15/20 17:49	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0546-01 [5 Prospect St.]	B249982	250	1.00	01/14/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249982 - EPA 537.1										
Blank (B249982-BLK1)										
Prepared: 01/14/20 Analyzed: 01/15/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	38.9		ng/L	40.0		97.3	70-130			
Surrogate: M3HFPO-DA	37.1		ng/L	40.0		92.7	70-130			
Surrogate: 13C-PFDA	34.4		ng/L	40.0		85.9	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.4	70-130			
LCS (B249982-BS1)										
Prepared: 01/14/20 Analyzed: 01/15/20										
Perfluorobutanesulfonic acid (PFBS)	16.9	2.0	ng/L	17.7		95.7	70-130			
Perfluorohexanoic acid (PFHxA)	19.6	2.0	ng/L	20.0		98.1	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.6	2.0	ng/L	18.2		96.5	70-130			
Perfluoroheptanoic acid (PFHpA)	19.5	2.0	ng/L	20.0		97.5	70-130			
Perfluorooctanoic acid (PFOA)	20.3	2.0	ng/L	20.0		101	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.7	2.0	ng/L	18.5		95.9	70-130			
Perfluorononanoic acid (PFNA)	19.9	2.0	ng/L	20.0		99.6	70-130			
Perfluorodecanoic acid (PFDA)	20.0	2.0	ng/L	20.0		100	70-130			
N-EtFOSAA	24.2	2.0	ng/L	20.0		121	70-130			
Perfluoroundecanoic acid (PFUnA)	19.7	2.0	ng/L	20.0		98.7	70-130			
N-MeFOSAA	21.7	2.0	ng/L	20.0		108	70-130			
Perfluorododecanoic acid (PFDoA)	17.4	2.0	ng/L	20.0		86.9	70-130			
Perfluorotridecanoic acid (PFTrDA)	18.1	2.0	ng/L	20.0		90.7	70-130			
Perfluorotetradecanoic acid (PFTA)	18.1	2.0	ng/L	20.0		90.4	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	18.7	2.0	ng/L	20.0		93.7	70-130			
11Cl-PF3OUdS (F53B Major)	17.1	2.0	ng/L	18.8		91.2	70-130			
9Cl-PF3ONS (F53B Minor)	19.0	2.0	ng/L	18.6		102	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.5	2.0	ng/L	20.0		87.5	70-130			
Surrogate: 13C-PFHxA	38.6		ng/L	40.0		96.6	70-130			
Surrogate: M3HFPO-DA	37.4		ng/L	40.0		93.5	70-130			
Surrogate: 13C-PFDA	36.7		ng/L	40.0		91.8	70-130			
Surrogate: d5-NEtFOSAA	154		ng/L	160		96.5	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

20A0546

Doc # 381 Rev 2_06262019

http://www.contestlabs.com



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com

39 Spruce Street
 East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

ANALYSIS REQUESTED

Page 1 of 1

Requested Turnaround Time
 7-Day
 10-Day
 15-Day
 30-Day

Rush Approval Required
 Yes
 No

Due Date: _____

Field Filtered
 Lab to Filter
 Field Filtered

Orthophosphate Samples
 Lab to Filter
 Field Filtered

Data Delivery
 PDF
 EXCEL

Format: _____

Other: _____

CLP Like Data Pkg Required:

Email To: _____

Fax To #: _____

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/CRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	5 RESPECT ST.	1/13/20	10:00	G	DW	-			2		

Client Comments:
 Please Have Results EMAILED BY Friday 1/13/20

Relinquished by: (signature) _____
 Date/Time: 1/13/20 15:00

Received by: (signature) _____
 Date/Time: 1/13/20 15:00

Relinquished by: (signature) _____
 Date/Time: _____

Received by: (signature) _____
 Date/Time: 1/13/20 15:00

Relinquished by: (signature) _____
 Date/Time: 1/13/20 15:00

Received by: (signature) _____
 Date/Time: _____

Special Requirements

Detection Limits Requirements

MA MCP Required **MA MCP Certification Form Required**

CT RCP Required **CT RCP Certification Form Required**

MA State DW Required

PWSID # _____

Project Entry

Government Municipality WRTA

Federal 21 J School MBTA

City Brownfield

Other
 Chromatogram
 ALPHA-LAP, LLC

PEB ONLY
 Soxhlet
 Non Soxhlet

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T-B

Received By MP Date 1/15/22 Time 2000

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -4.8
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? T Who was notified? B. White
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

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

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

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Thomjon & Lynda Borges
6 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
6 Mountain Road, Princeton**

Dear Mr. and Mrs. Borges:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 6 Mountain Road 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 5, 2020 to monitor the granular activated carbon (GAC) point-of-entry treatment (POET) system that was installed in your home on January 28, 2020. The samples were submitted to Con-Test Analytical Laboratory (Con-Test) 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 sample dates 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 Standards (MCP, 310 CMR 40.0974)*.

Water quality results indicate that the POET system installed in your home is effectively removing PFAS from your drinking water, as there were no detections in the midfluent or effluent samples. Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you have any questions regarding this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)

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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	6 Mountain Road				
Flow Meter Reading (gallons)		-	-	1,557		
Sampling Date		12/5/2019	1/28/2020	2/5/2020		
Notes			POET INSTALLED	INF	MID	EFF
EPA 537.1 (ng/L)						
Perfluorobutanesulfonic acid (PFBS)		8.4		3.7	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		23		12	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.4		2.1	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.7		4.1	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		38.5		21.9	ND (2.0)	ND (2.0)
Regulated Total	20	30.1		18.2	ND (2.0)	ND (2.0)

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

February 18, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20B0428

Enclosed are results of analyses for samples received by the laboratory on February 11, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/18/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0428

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
5 Prospect St. INF	20B0428-01	Drinking Water		EPA 537.1	
5 Prospect St. MID	20B0428-02	Drinking Water		EPA 537.1	
5 Prospect St. EFF	20B0428-03	Drinking Water		EPA 537.1	
Trip Blank	20B0428-04	Trip Blank 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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: 5 Prospect St. INF

Sampled: 2/7/2020 16:00

Sample ID: 20B0428-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorohexanesulfonic acid (PFHxS)	2.4	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 2:54	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.3	70-130	2/14/20 2:54
M3HFPO-DA	84.0	70-130	2/14/20 2:54
13C-PFDA	89.8	70-130	2/14/20 2:54
d5-NEtFOSAA	83.6	70-130	2/14/20 2:54

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: 5 Prospect St. MID

Sampled: 2/7/2020 16:00

Sample ID: 20B0428-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:16	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	92.7	70-130	2/14/20 3:16
M3HFPO-DA	87.5	70-130	2/14/20 3:16
13C-PFDA	95.8	70-130	2/14/20 3:16
d5-NEtFOSAA	87.5	70-130	2/14/20 3:16

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: 5 Prospect St. EFF

Sampled: 2/7/2020 16:00

Sample ID: 20B0428-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 3:37	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		90.4		70-130					2/14/20 3:37	
M3HFPO-DA		86.3		70-130					2/14/20 3:37	
13C-PFDA		91.5		70-130					2/14/20 3:37	
d5-NEtFOSAA		86.1		70-130					2/14/20 3:37	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0428

Date Received: 2/11/2020

Field Sample #: Trip Blank

Sampled: 2/7/2020 00:00

Sample ID: 20B0428-04

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	2/12/20	2/14/20 3:59	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	90.3	70-130	2/14/20 3:59
M3HFPO-DA	85.1	70-130	2/14/20 3:59
13C-PFDA	96.3	70-130	2/14/20 3:59
d5-NEtFOSAA	88.5	70-130	2/14/20 3:59

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0428-01 [5 Prospect St. INF]	B252068	250	1.00	02/12/20
20B0428-02 [5 Prospect St. MID]	B252068	250	1.00	02/12/20
20B0428-03 [5 Prospect St. EFF]	B252068	250	1.00	02/12/20
20B0428-04 [Trip Blank]	B252068	250	1.00	02/12/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B252068 - EPA 537.1										
Blank (B252068-BLK1)										
Prepared: 02/12/20 Analyzed: 02/14/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	33.6		ng/L	40.0		84.0	70-130			
Surrogate: M3HFPO-DA	32.4		ng/L	40.0		81.0	70-130			
Surrogate: 13C-PFDA	35.7		ng/L	40.0		89.2	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.3	70-130			
LCS (B252068-BS1)										
Prepared: 02/12/20 Analyzed: 02/14/20										
Perfluorobutanesulfonic acid (PFBS)	16.5	2.0	ng/L	17.7		93.2	70-130			
Perfluorohexanoic acid (PFHxA)	18.9	2.0	ng/L	20.0		94.4	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.8	2.0	ng/L	18.2		97.6	70-130			
Perfluoroheptanoic acid (PFHpA)	18.9	2.0	ng/L	20.0		94.6	70-130			
Perfluorooctanoic acid (PFOA)	20.2	2.0	ng/L	20.0		101	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.3	2.0	ng/L	18.5		93.5	70-130			
Perfluorononanoic acid (PFNA)	19.9	2.0	ng/L	20.0		99.5	70-130			
Perfluorodecanoic acid (PFDA)	19.0	2.0	ng/L	20.0		95.0	70-130			
N-EtFOSAA	21.7	2.0	ng/L	20.0		108	70-130			
Perfluoroundecanoic acid (PFUnA)	18.6	2.0	ng/L	20.0		93.0	70-130			
N-MeFOSAA	19.2	2.0	ng/L	20.0		96.0	70-130			
Perfluorododecanoic acid (PFDoA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Perfluorotridecanoic acid (PFTTrDA)	16.8	2.0	ng/L	20.0		84.1	70-130			
Perfluorotetradecanoic acid (PFTA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	17.0	2.0	ng/L	20.0		84.9	70-130			
11Cl-PF3OUdS (F53B Major)	16.0	2.0	ng/L	18.8		85.2	70-130			
9Cl-PF3ONS (F53B Minor)	17.3	2.0	ng/L	18.6		93.0	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.3	2.0	ng/L	20.0		86.5	70-130			
Surrogate: 13C-PFHxA	36.0		ng/L	40.0		90.0	70-130			
Surrogate: M3HFPO-DA	35.2		ng/L	40.0		88.0	70-130			
Surrogate: 13C-PFDA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: d5-NEtFOSAA	132		ng/L	160		82.6	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06/26/2019

http://www.con-testlabs.com

Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@con-testlabs.com



Company Name: **JLU 2080427**

Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer

Invoice Recipient: Tighe & Bond
 M. Scherer

Con-Test Quote Name/Number: CLP Like Data Pkg Required:

Sampled By: Tighe & Bond
 M. Scherer

39 Spruce Street
 East Longmeadow, MA 01028

Requested Turnaround Time

7-Day 10-Day Due Date:
 PFAS 10-Day (std) Rush-Approval Required
 1-Day 3-Day
 2-Day 4-Day

Format: PDF EXCEL
 Other:

CLP Like Data Pkg Required:

Email To:
 Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	PFOS/PFOA 537.1
1	5 PERSPECT ST INF	2/1/20	1600	GRAB	DW	U			2			X
2	5 PERSPECT ST MID	↓	↓	↓	↓	↓			2			X
3	5 PERSPECT ST EFF	↓	↓	↓	↓	↓			2			X
4	TAP 5 LAL	2/1/20							1			X

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

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

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

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

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

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

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

Client Comments:
 Date/Time: 2/7/20 1700
 Date/Time: 2/7/20 1700
 Date/Time: 2/11/20 1155
 Date/Time: 2/11/20 1850
 Date/Time: 2-11-2025

Relinquished by (signature): [Signature]
 Received by (signature): [Signature]
 Relinquished by (signature): [Signature]
 Received by (signature): [Signature]
 Relinquished by (signature): [Signature]
 Received by (signature): [Signature]

Detection Limit Requirements: MA MCP Required
 MCF Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required
 PWSID #

Special Requirements: MA MCP Required
 MCF Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required
 PWSID #

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

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By U Date 2-11-2020 Time 1850

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -4.9
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? T

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

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Thomjon & Lynda Borges
6 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
6 Mountain Road, Princeton**

Dear Mr. & Mrs. Borges:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 6 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 30.1 ng/L in the water samples collected on December 5, 2019, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	6 Mountain Rd	6 Mountain Rd FB
Well Depth (feet)		UNKNOWN	FIELD BLANK
Sampling Date		12/5/2019	
EPA 537.1 (ng/L)			
Perfluorobutanesulfonic acid (PFBS)		8.4	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		23	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.4	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.7	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)
Total (All Compounds)		38.5	ND (2.0)
Regulated Total	20	30.1	ND (2.0)

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

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

Bolded values exceed the proposed Method 1 Standard

December 13, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0332

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0332

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
6 Mountain Rd	19L0332-01	Drinking Water		EPA 537.1	
6 Mountain Rd FB	19L0332-02	Field Blank		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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0332

Date Received: 12/10/2019

Field Sample #: 6 Mountain Rd

Sampled: 12/5/2019 10:05

Sample ID: 19L0332-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	8.4	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorohexanesulfonic acid (PFHxS)	23	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorooctanoic acid (PFOA)	2.4	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorooctanesulfonic acid (PFOS)	4.7	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:00	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		102		70-130					12/11/19 23:00	
M3HFPO-DA		91.3		70-130					12/11/19 23:00	
13C-PFDA		99.4		70-130					12/11/19 23:00	
d5-NEtFOSAA		119		70-130					12/11/19 23:00	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0332

Date Received: 12/10/2019

Field Sample #: 6 Mountain Rd FB

Sampled: 12/5/2019 10:05

Sample ID: 19L0332-02

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
		RL	MA ORSG					Prepared	Analyzed	
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/11/19 23:21	BLM
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
13C-PFHxA		103	70-130						12/11/19 23:21	
M3HFPO-DA		94.3	70-130						12/11/19 23:21	
13C-PFDA		97.9	70-130						12/11/19 23:21	
d5-NEtFOSAA		108	70-130						12/11/19 23:21	

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

Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0332-01 [6 Mountain Rd]	B248078	250	1.00	12/11/19
19L0332-02 [6 Mountain Rd FB]	B248078	250	1.00	12/11/19

QUALITY CONTROL

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

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

Batch B248078 - EPA 537

Blank (B248078-BLK1)

Prepared & Analyzed: 12/11/19

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			

LCS (B248078-BS1)

Prepared & Analyzed: 12/11/19

Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By AP Date 12/10/19 Time 20:30

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? N/A MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? N/A Acid _____ Base _____

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

Unused Media

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

Comments:

S-1760
February 28, 2020

Deborah Lindberg
7 Boylston Avenue
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
7 Boylston Avenue, Princeton**

Dear Ms. Lindberg:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 7 Boylston Avenue as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 27, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 23.2 ng/L in the water samples collected on January 27, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	7 Boylston Ave		
			DUPLICATE	FIELD BLANK
Well Depth (feet)		UNKNOWN		
Sampling Date		1/27/2020		
<i>EPA 537.1 (ng/L)</i>				
Perfluorobutanesulfonic acid (PFBS)		3.6	3.7	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		16	17	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.7	ND (2.0)	14
Perfluorooctanesulfonic acid (PFOS)		4.5	6.2	4.7
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		26.8	26.9	18.7
Regulated Total	20	23.2	23.2	18.7

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

February 13, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1229

Enclosed are results of analyses for samples received by the laboratory on January 28, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a prominent flourish at the end.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/13/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1229

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
7 Boylston Ave	20A1229-01	Drinking Water		EPA 537.1	
7 Boylston Ave FB	20A1229-02	Field Blank		EPA 537.1	
Trip Blank	20A1229-03	Trip Blank 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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1229

Date Received: 1/28/2020

Field Sample #: 7 Boylston Ave

Sampled: 1/27/2020 16:00

Sample ID: 20A1229-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			MA	ORSG						
Perfluorobutanesulfonic acid (PFBS)	3.7	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorobutanesulfonic acid (PFBS)	3.6	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorohexanesulfonic acid (PFHxS)	17	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorohexanesulfonic acid (PFHxS)	16	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorooctanoic acid (PFOA)	2.7	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorooctanesulfonic acid (PFOS)	6.2	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorooctanesulfonic acid (PFOS)	4.5	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
N-EtFOSAA	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
N-EtFOSAA	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
N-MeFOSAA	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
N-MeFOSAA	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/5/20 2:03	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1	EPA 537.1	1/30/20	2/8/20 6:55	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.3	70-130	
13C-PFHxA	117	70-130	
M3HFPO-DA	76.8	70-130	
M3HFPO-DA	110	70-130	
13C-PFDA	82.3	70-130	
13C-PFDA	89.9	70-130	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1229

Date Received: 1/28/2020

Field Sample #: 7 Boylston Ave

Sampled: 1/27/2020 16:00

Sample ID: 20A1229-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL			Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG	Units						
Surrogates		% Recovery	Recovery Limits		Flag/Qual					
d5-NEtFOSAA		80.7		70-130				2/5/20	2:03	
d5-NEtFOSAA		93.4		70-130				2/8/20	6:55	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1229

Date Received: 1/28/2020

Field Sample #: 7 Boylston Ave FB

Sampled: 1/27/2020 16:00

Sample ID: 20A1229-02

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorooctanoic acid (PFOA)	14	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorooctanesulfonic acid (PFOS)	4.7	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:24	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	85.9	70-130	2/5/20 2:24
M3HFPO-DA	77.1	70-130	2/5/20 2:24
13C-PFDA	80.8	70-130	2/5/20 2:24
d5-NEtFOSAA	71.0	70-130	2/5/20 2:24

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1229

Date Received: 1/28/2020

Field Sample #: Trip Blank

Sampled: 1/27/2020 00:00

Sample ID: 20A1229-03

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	1/30/20	2/5/20 2:46	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	102	70-130	2/5/20 2:46
M3HFPO-DA	94.1	70-130	2/5/20 2:46
13C-PFDA	100	70-130	2/5/20 2:46
d5-NEtFOSAA	97.0	70-130	2/5/20 2:46

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1229-01 [7 Boylston Ave]	B251138	250	1.00	01/30/20
20A1229-02 [7 Boylston Ave FB]	B251138	250	1.00	01/30/20
20A1229-03 [Trip Blank]	B251138	250	1.00	01/30/20

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1229-01RE1 [7 Boylston Ave]	B251811	250	1.00	01/30/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251138 - EPA 537.1										
Blank (B251138-BLK1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.0		ng/L	40.0		87.5	70-130			
Surrogate: M3HFPO-DA	33.4		ng/L	40.0		83.5	70-130			
Surrogate: 13C-PFDA	36.4		ng/L	40.0		91.1	70-130			
Surrogate: d5-NEtFOSAA	148		ng/L	160		92.6	70-130			
LCS (B251138-BS1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	2.12	2.0	ng/L	1.77		120	50-150			
Perfluorohexanoic acid (PFHxA)	1.61	2.0	ng/L	2.00		80.7	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.43	2.0	ng/L	1.82		134	50-150			
Perfluoroheptanoic acid (PFHpA)	1.68	2.0	ng/L	2.00		84.0	50-150			
Perfluorooctanoic acid (PFOA)	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.76	2.0	ng/L	1.85		149	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.80	2.0	ng/L	2.00		90.1	50-150			
N-EtFOSAA	2.07	2.0	ng/L	2.00		103	50-150			
Perfluoroundecanoic acid (PFUnA)	1.73	2.0	ng/L	2.00		86.7	50-150			
N-MeFOSAA	1.96	2.0	ng/L	2.00		98.2	50-150			
Perfluorododecanoic acid (PFDoA)	1.72	2.0	ng/L	2.00		86.1	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Perfluorotetradecanoic acid (PFTA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.33	2.0	ng/L	2.00		66.7	50-150			
11Cl-PF3OUdS (F53B Major)	2.22	2.0	ng/L	1.88		118	50-150			
9Cl-PF3ONS (F53B Minor)	2.18	2.0	ng/L	1.86		117	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.49	2.0	ng/L	2.00		74.6	50-150			
Surrogate: 13C-PFHxA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: M3HFPO-DA	32.8		ng/L	40.0		82.0	70-130			
Surrogate: 13C-PFDA	36.0		ng/L	40.0		89.9	70-130			
Surrogate: d5-NEtFOSAA	150		ng/L	160		94.0	70-130			

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251811 - EPA 537.1										
Blank (B251811-BLK1)										
Prepared: 02/07/20 Analyzed: 02/11/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.8		ng/L	40.0		92.0	70-130			
Surrogate: M3HFPO-DA	37.9		ng/L	40.0		94.7	70-130			
Surrogate: 13C-PFDA	35.1		ng/L	40.0		87.8	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.7	70-130			
LCS (B251811-BS1)										
Prepared: 02/07/20 Analyzed: 02/11/20										
Perfluorobutanesulfonic acid (PFBS)	2.26	2.0	ng/L	1.77		127	50-150			
Perfluorohexanoic acid (PFHxA)	1.68	2.0	ng/L	2.00		83.8	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.60	2.0	ng/L	1.82		143	50-150			
Perfluoroheptanoic acid (PFHpA)	1.83	2.0	ng/L	2.00		91.5	50-150			
Perfluorooctanoic acid (PFOA)	1.82	2.0	ng/L	2.00		91.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.54	2.0	ng/L	1.85		138	50-150			
Perfluorononanoic acid (PFNA)	1.91	2.0	ng/L	2.00		95.7	50-150			
Perfluorodecanoic acid (PFDA)	1.85	2.0	ng/L	2.00		92.3	50-150			
N-EtFOSAA	1.72	2.0	ng/L	2.00		85.9	50-150			
Perfluoroundecanoic acid (PFUnA)	1.75	2.0	ng/L	2.00		87.3	50-150			
N-MeFOSAA	2.01	2.0	ng/L	2.00		101	50-150			
Perfluorododecanoic acid (PFDoA)	1.54	2.0	ng/L	2.00		76.8	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.58	2.0	ng/L	2.00		78.8	50-150			
Perfluorotetradecanoic acid (PFTA)	1.48	2.0	ng/L	2.00		73.9	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.77	2.0	ng/L	2.00		88.6	50-150			
11Cl-PF3OUdS (F53B Major)	1.91	2.0	ng/L	1.88		102	50-150			
9Cl-PF3ONS (F53B Minor)	2.08	2.0	ng/L	1.86		112	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.67	2.0	ng/L	2.00		83.4	50-150			
Surrogate: 13C-PFHxA	37.8		ng/L	40.0		94.5	70-130			
Surrogate: M3HFPO-DA	38.8		ng/L	40.0		97.0	70-130			
Surrogate: 13C-PFDA	36.0		ng/L	40.0		90.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.4	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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Page 1 of 1

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

ANALYSIS REQUESTED

Requested Turnaround Time: 7-Day 10-Day 10-Day Due Date: Field Filtered Lab to Filter

Disinfectant Residuals: Field Filtered Lab to Filter

Orthophosphate Samples: Field Filtered Lab to Filter

Rush-Approval Required: 1-Day 3-Day 4-Day Data Delivery: PDF EXCEL

Format: _____ Other: _____

CLP Like Data Pkg Required:

Email To: _____ Fax To #:

Ending Date/Time: _____

Beginning Date/Time: _____

Client Sample ID / Description: _____

Client Sample ID / Description: _____

Client Sample ID / Description: _____

Matrix Code: _____

Matrix Code: _____

Matrix Code: _____

COMP GRAB: _____

COMP GRAB: _____

COMP GRAB: _____

VIALS: _____

VIALS: _____

VIALS: _____

GLASS: _____

GLASS: _____

GLASS: _____

PLASTIC: _____

PLASTIC: _____

PLASTIC: _____

BACTERIA: _____

BACTERIA: _____

BACTERIA: _____

ENCORE: _____

ENCORE: _____

ENCORE: _____

Glassware in the fridge? Y/N

Glassware in the fridge? Y/N

Glassware in the fridge? Y/N

Glassware in freezer? Y/N

Glassware in freezer? Y/N

Glassware in freezer? Y/N

Prepackaged Cooler? Y/N

Prepackaged Cooler? Y/N

Prepackaged Cooler? Y/N

*Contest is not responsible for missing samples from prepacked coolers

*Contest is not responsible for missing samples from prepacked coolers

*Contest is not responsible for missing samples from prepacked coolers

1 Matrix Codes:

1 Matrix Codes:

1 Matrix Codes:

GW = Ground Water

GW = Ground Water

GW = Ground Water

WW = Waste Water

WW = Waste Water

WW = Waste Water

DW = Drinking Water

DW = Drinking Water

DW = Drinking Water

A = Air

A = Air

A = Air

S = Soil

S = Soil

S = Soil

SL = Sludge

SL = Sludge

SL = Sludge

SOL = Solid

SOL = Solid

SOL = Solid

O = Other (please define)

O = Other (please define)

O = Other (please define)

2 Preservation Codes:

2 Preservation Codes:

2 Preservation Codes:

I = Iced

I = Iced

I = Iced

H = HCL

H = HCL

H = HCL

M = Methanol

M = Methanol

M = Methanol

N = Nitric Acid

N = Nitric Acid

N = Nitric Acid

S = Sulfuric Acid

S = Sulfuric Acid

S = Sulfuric Acid

B = Sodium Bisulfate

B = Sodium Bisulfate

B = Sodium Bisulfate

X = Sodium Hydroxide

X = Sodium Hydroxide

X = Sodium Hydroxide

T = Sodium Thiosulfate

T = Sodium Thiosulfate

T = Sodium Thiosulfate

O = Other (please define)

O = Other (please define)

O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

H - High; M - Medium; L - Low; C - Clean; U - Unknown

H - High; M - Medium; L - Low; C - Clean; U - Unknown

MA MCP Required

MA MCP Required

MA MCP Required

MCP Certification Form Required

MCP Certification Form Required

MCP Certification Form Required

CT RCP Required

CT RCP Required

CT RCP Required

RCP Certification Form Required

RCP Certification Form Required

RCP Certification Form Required

MA State DW Required

MA State DW Required

MA State DW Required

PWSID # _____

PWSID # _____

PWSID # _____

Project Entity: _____

Project Entity: _____

Project Entity: _____

Government

Government

Government

Federal

Federal

Federal

City

City

City

Municipality

Municipality

Municipality

21 J

21 J

21 J

Brownfield

Brownfield

Brownfield

MWRA

MWRA

MWRA

School

School

School

MBTA

MBTA

MBTA

WRMA

WRMA

WRMA

Chromatogram

Chromatogram

Chromatogram

AIIA-LAP, LLC

AIIA-LAP, LLC

AIIA-LAP, LLC

Other

Other

Other

PCB ONLY

PCB ONLY

PCB ONLY

Soxhlet

Soxhlet

Soxhlet

Non Soxhlet

Non Soxhlet

Non Soxhlet

Client Comments:

Client Comments:

Client Comments:

Relinquished by: (signature)

Relinquished by: (signature)

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</

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



CON-TEST
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client TAB

Received By [Signature]

Date 1/28/20

Time 18:30

How were the samples received?

In Cooler T

No Cooler _____

On Ice T

No Ice _____

Direct from Sampling _____

Ambient _____

Melted Ice _____

Were samples within Temperature? 2-6°C T

By Gun # 2

Actual Temp - 3.8

Was Custody Seal Intact? N/A

By Blank # _____

Actual Temp - _____

Was COC Relinquished? T

N/A

Were Samples Tampered with? N/A

T

Does Chain Agree With Samples? T

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

Is COC in ink/ Legible? T

Were samples received within holding time? T

Did COC include all pertinent Information? Client T Project T

Analysis T

Sampler Name T

ID's T

Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? None

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? T

Do all samples have the proper pH? N/A

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? T

Acid _____

Base _____

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Ken Patton
7 Hubbardston Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
7 Hubbardston Road, Princeton**

Dear Mr. Patton:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 7 Hubbardston Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS) and Total Petroleum Hydrocarbons (TPH). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 9.7 ng/L in the water samples collected on December 5, 2019, which is below the MassDEP proposed MCL of 20 ng/L. TPH was not detected in your sample.

If you would like to discuss any of this information further, please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	7 Hubbardston Rd
Well Depth (feet)		400'
Sampling Date		12/5/2019 0:00
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		2.3
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		3.5
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		2.9
Perfluorooctanesulfonic acid (PFOS)		3.3
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		12
Regulated Total	20	9.7

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

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

Bolded values exceed the proposed Method 1 Standard

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0336

Date Received: 12/10/2019

Field Sample #: 7 Hubbardston Rd

Sampled: 12/5/2019 09:50

Sample ID: 19L0336-02

Sample Matrix: Drinking Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diesel Range Organics	ND	0.21	mg/L	1		SW-846 8015C	12/11/19	12/18/19 15:56	RDD
Surrogates		% Recovery			Recovery Limits				
2-Fluorobiphenyl		56.4			40-140			12/18/19 15:56	

December 13, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0341

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style and is set against a light gray rectangular background.

Jessica L. Hoffman
Project Manager

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Sample Summary	3
Case Narrative	4
Sample Results	5
19L0341-01	5
Sample Preparation Information	6
QC Data	7
Semivolatile Organic Compounds by - LC/MS-MS	7
B248078	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

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

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

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0341

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
7 Hubbardston Rd	19L0341-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0341

Date Received: 12/10/2019

Field Sample #: 7 Hubbardston Rd

Sampled: 12/5/2019 09:50

Sample ID: 19L0341-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	2.3	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorohexanesulfonic acid (PFHxS)	3.5	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorooctanoic acid (PFOA)	2.9	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorooctanesulfonic acid (PFOS)	3.3	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:52	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		107		70-130					12/12/19 1:52	
M3HFPO-DA		92.6		70-130					12/12/19 1:52	
13C-PFDA		98.6		70-130					12/12/19 1:52	
d5-NEtFOSAA		111		70-130					12/12/19 1:52	

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

Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0341-01 [7 Hubbardston Rd]	B248078	250	1.00	12/11/19

QUALITY CONTROL

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

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

Batch B248078 - EPA 537

Blank (B248078-BLK1)

Prepared & Analyzed: 12/11/19

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			

LCS (B248078-BS1)

Prepared & Analyzed: 12/11/19

Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By AP Date 12/10/19 Time 20:30

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
 By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? N/A

Who was notified? _____
 Who was notified? _____
 Who was notified? _____

MS/MSD? F
 Is splitting samples required? F
 On COC? F Acid _____ Base _____

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Debra Marrone
7 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
7 Prospect Street, Princeton**

Dear Ms. Mayer:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 7 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 9, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 13.3 ng/L in the water samples collected on December 9, 2019, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)

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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	7 Prospect St
Well Depth (feet)		UNKNOWN
Sampling Date		12/9/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		3.1
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		8.8
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.5
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		16.4
Regulated Total	20	13.3

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

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

Bolded values exceed the proposed Method 1 Standard

December 30, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0552

Enclosed are results of analyses for samples received by the laboratory on December 12, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 12/30/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0552

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
7 Prospect St	19L0552-01	Drinking Water		EPA 537.1	
Trip Blank-12092019	19L0552-02	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0552

Date Received: 12/12/2019

Field Sample #: 7 Prospect St

Sampled: 12/9/2019 16:00

Sample ID: 19L0552-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
			MA	ORSG					Prepared	Analyzed	
Perfluorobutanesulfonic acid (PFBS)	3.1	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorohexanesulfonic acid (PFHxS)	8.8	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorooctanesulfonic acid (PFOS)	4.5	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
N-EtFOSAA	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
N-MeFOSAA	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1		EPA 537.1	12/13/19	12/25/19 7:53	BLM
Surrogates		% Recovery	Recovery Limits				Flag/Qual				
13C-PFHxA		118	70-130						12/25/19	7:53	
M3HFPO-DA		103	70-130						12/25/19	7:53	
13C-PFDA		100	70-130						12/25/19	7:53	
d5-NEtFOSAA		106	70-130						12/25/19	7:53	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0552

Date Received: 12/12/2019

Field Sample #: Trip Blank-12092019

Sampled: 12/12/2019 00:00

Sample ID: 19L0552-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
		RL	MA ORSG					Prepared	Analyzed	
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 8:14	BLM
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
13C-PFHxA		115	70-130					12/25/19	8:14	
M3HFPO-DA		105	70-130					12/25/19	8:14	
13C-PFDA		92.2	70-130					12/25/19	8:14	
d5-NEtFOSAA		89.8	70-130					12/25/19	8:14	

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Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0552-01 [7 Prospect St]	B248340	250	1.00	12/13/19
19L0552-02 [Trip Blank-12092019]	B248340	250	1.00	12/13/19

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248340 - EPA 537										
Blank (B248340-BLK1)										
Prepared: 12/13/19 Analyzed: 12/25/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	46.5		ng/L	40.0		116	70-130			
Surrogate: M3HFPO-DA	41.4		ng/L	40.0		103	70-130			
Surrogate: 13C-PFDA	40.0		ng/L	40.0		99.9	70-130			
Surrogate: d5-NEtFOSAA	160		ng/L	160		100	70-130			
LCS (B248340-BS1)										
Prepared: 12/13/19 Analyzed: 12/25/19										
Perfluorobutanesulfonic acid (PFBS)	1.95	2.0	ng/L	2.00		97.7	70-130			
Perfluorohexanoic acid (PFHxA)	2.03	2.0	ng/L	2.00		101	70-130			
Perfluorohexanesulfonic acid (PFHxS)	2.04	2.0	ng/L	1.82		112	70-130			
Perfluoroheptanoic acid (PFHpA)	2.08	2.0	ng/L	2.00		104	70-130			
Perfluorooctanoic acid (PFOA)	2.16	2.0	ng/L	2.00		108	70-130			
Perfluorooctanesulfonic acid (PFOS)	2.29	2.0	ng/L	1.85		124	70-130			
Perfluorononanoic acid (PFNA)	2.10	2.0	ng/L	2.00		105	70-130			
Perfluorodecanoic acid (PFDA)	2.25	2.0	ng/L	2.00		113	70-130			
N-EtFOSAA	2.08	2.0	ng/L	2.00		104	70-130			
Perfluoroundecanoic acid (PFUnA)	2.16	2.0	ng/L	2.00		108	70-130			
N-MeFOSAA	2.05	2.0	ng/L	2.00		103	70-130			
Perfluorododecanoic acid (PFDoA)	1.82	2.0	ng/L	2.00		91.0	70-130			
Perfluorotridecanoic acid (PFTrDA)	1.85	2.0	ng/L	2.00		92.3	70-130			
Perfluorotetradecanoic acid (PFTA)	1.84	2.0	ng/L	2.00		92.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.55	2.0	ng/L	2.00		128	70-130			
11Cl-PF3OUdS (F53B Major)	1.70	2.0	ng/L	1.88		90.4	70-130			
9Cl-PF3ONS (F53B Minor)	1.80	2.0	ng/L	1.86		96.6	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.96	2.0	ng/L	2.00		98.1	70-130			
Surrogate: 13C-PFHxA	51.9		ng/L	40.0		130	70-130			
Surrogate: M3HFPO-DA	49.7		ng/L	40.0		124	70-130			
Surrogate: 13C-PFDA	48.6		ng/L	40.0		121	70-130			
Surrogate: d5-NEtFOSAA	208		ng/L	160		130	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,NY,NH,ME
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,NY,NH,ME
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

http://www.con-test.com
 CHAIN OF CUSTODY RECORD
 39 Spruce Street
 East Longmeadow, MA 01028
 Doc # 381 Rev 2_06262019

Company Name: **JCH 190552**
 Address: 170 Front Street, Worcester, MA 01608
 Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@con-test.com
 Tighe & Bond
 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0834
 Project Manager: M. Scherer
 Con-Test Quote Name/Number: Tighe & Bond
 Invoice Recipient: M. Scherer
 Sampled By:

Page 1 of 1

Requested Turnaround Time		Dissolved Metals Samples		Orthophosphate Samples							
7-Day PFAS	10-Day (std)	10-Day	Due Date:	Field Filtered	Lab to Filter						
1-Day	2-Day	3-Day	4-Day	Field Filtered	Lab to Filter						
Format: PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> Other: <input type="checkbox"/> CLP Lite Data Pkg Required: <input type="checkbox"/> Email To: <input type="checkbox"/> Fax To #: <input type="checkbox"/>											
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/DRAB	Matrix Code	Cont Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	7 PROSPECT ST	12/19/19	1600	G	DW	-	-	-	-	-	-
2	TRIO Blunk-11092019										
Client Comments:											
Relinquished by: (signature) <i>[Signature]</i> Date/Time: 12/19/19 0800 Received by: (signature) <i>[Signature]</i> Date/Time: 12/19/19 0800 Relinquished by: (signature) <i>[Signature]</i> Date/Time: 12/19/19 7:30 Received by: (signature) <i>[Signature]</i> Date/Time: 12/19/19 7:30 Relinquished by: (signature) <i>[Signature]</i> Date/Time: 12/19/19 7:30 Received by: (signature) <i>[Signature]</i> Date/Time: 12/19/19 7:30											
Detection Limit Requirements:											
Special Requirements:											
Please use the following codes to indicate possible sample concentration within the Conc Code column above: H - High; M - Medium; L - Low; C - Clean; U - Unknown											
Preservation Codes: I = Iced H = HCL M = Methanol N = Nitric Acid S = Sulfuric Acid B = Sodium Bisulfate X = Sodium Hydroxide T = Sodium Thiosulfate O = Other (please define)											
Matrix Codes: GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)											
Preservation Code: <input type="checkbox"/> Courier Use Only: <input type="checkbox"/> Total Number Of: <input type="checkbox"/> VIALS: <input type="checkbox"/> GLASS: <input type="checkbox"/> PLASTIC: <input type="checkbox"/> BACTERIA: <input type="checkbox"/> ENCORE: <input type="checkbox"/> Glassware in the fridge? Y/N <input type="checkbox"/> Glassware in freezer? Y/N <input type="checkbox"/> Prepackaged Cooler? Y/N <input type="checkbox"/> *Contest is not responsible for missing samples from prepacked coolers											
PCB ONLY <input type="checkbox"/> Soxhlet <input type="checkbox"/> Non Soxhlet <input type="checkbox"/> Chromatogram <input type="checkbox"/> AIHA-LAP, LLC <input type="checkbox"/>											

Project Entry: Government Municipality WRTA
 Federal City School MBTA
 Brownfield
 PWSID #
 MA State DW Required
 MA MCP Required
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Tighe & Bond

Received By _____ Date _____ Time 0330 1530

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 2.1
By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? T

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

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Susan Ollila
P.O. Box 63
10 Mountain Rd
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
10 Mountain Road, Princeton**

Dear Ms. Ollila:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 10 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS) and Total Petroleum Hydrocarbons (TPH). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 2.0 ng/L in the water samples collected on December 5, 2019, which is below the MassDEP proposed MCL of 20 ng/L. TPH was not detected in your samples.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	10 Mountain Rd
Well Depth (feet)		UNKNOWN
Sampling Date		12/5/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.0
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		2.0
Regulated Total	20	2.0

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

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

Bolded values exceed the proposed Method 1 Standard

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0336

Date Received: 12/10/2019

Field Sample #: 10 Mountain Rd

Sampled: 12/5/2019 11:00

Sample ID: 19L0336-03

Sample Matrix: Drinking Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diesel Range Organics	ND	0.21	mg/L	1		SW-846 8015C	12/11/19	12/18/19 16:16	RDD
Surrogates		% Recovery			Recovery Limits				
2-Fluorobiphenyl		54.3			40-140			12/18/19 16:16	

December 30, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0333

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. 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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B248078	7
B248340	8
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 12/30/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0333

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
10 Mountain Rd	19L0333-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0333

Date Received: 12/10/2019

Field Sample #: 10 Mountain Rd

Sampled: 12/5/2019 11:00

Sample ID: 19L0333-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorooctanesulfonic acid (PFOS)	2.0	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/13/19	12/25/19 5:01	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		123		70-130					12/25/19 5:01	
M3HFPO-DA		108		70-130					12/25/19 5:01	
13C-PFDA		112		70-130					12/25/19 5:01	
d5-NEtFOSAA		116		70-130					12/25/19 5:01	

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Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0333-01RE1 [10 Mountain Rd]	B248340	250	1.00	12/13/19

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248078 - EPA 537										
Blank (B248078-BLK1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			
LCS (B248078-BS1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248340 - EPA 537										
Blank (B248340-BLK1)										
Prepared: 12/13/19 Analyzed: 12/25/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	46.5		ng/L	40.0		116	70-130			
Surrogate: M3HFPO-DA	41.4		ng/L	40.0		103	70-130			
Surrogate: 13C-PFDA	40.0		ng/L	40.0		99.9	70-130			
Surrogate: d5-NEtFOSAA	160		ng/L	160		100	70-130			
LCS (B248340-BS1)										
Prepared: 12/13/19 Analyzed: 12/25/19										
Perfluorobutanesulfonic acid (PFBS)	1.95	2.0	ng/L	2.00		97.7	70-130			
Perfluorohexanoic acid (PFHxA)	2.03	2.0	ng/L	2.00		101	70-130			
Perfluorohexanesulfonic acid (PFHxS)	2.04	2.0	ng/L	1.82		112	70-130			
Perfluoroheptanoic acid (PFHpA)	2.08	2.0	ng/L	2.00		104	70-130			
Perfluorooctanoic acid (PFOA)	2.16	2.0	ng/L	2.00		108	70-130			
Perfluorooctanesulfonic acid (PFOS)	2.29	2.0	ng/L	1.85		124	70-130			
Perfluorononanoic acid (PFNA)	2.10	2.0	ng/L	2.00		105	70-130			
Perfluorodecanoic acid (PFDA)	2.25	2.0	ng/L	2.00		113	70-130			
N-EtFOSAA	2.08	2.0	ng/L	2.00		104	70-130			
Perfluoroundecanoic acid (PFUnA)	2.16	2.0	ng/L	2.00		108	70-130			
N-MeFOSAA	2.05	2.0	ng/L	2.00		103	70-130			
Perfluorododecanoic acid (PFDoA)	1.82	2.0	ng/L	2.00		91.0	70-130			
Perfluorotridecanoic acid (PFTTrDA)	1.85	2.0	ng/L	2.00		92.3	70-130			
Perfluorotetradecanoic acid (PFTA)	1.84	2.0	ng/L	2.00		92.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.55	2.0	ng/L	2.00		128	70-130			
11Cl-PF3OUdS (F53B Major)	1.70	2.0	ng/L	1.88		90.4	70-130			
9Cl-PF3ONS (F53B Minor)	1.80	2.0	ng/L	1.86		96.6	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.96	2.0	ng/L	2.00		98.1	70-130			
Surrogate: 13C-PFHxA	51.9		ng/L	40.0		130	70-130			
Surrogate: M3HFPO-DA	49.7		ng/L	40.0		124	70-130			
Surrogate: 13C-PFDA	48.6		ng/L	40.0		121	70-130			
Surrogate: d5-NEtFOSAA	208		ng/L	160		130	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06262019

http://www.con-testlabs.com

Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@con-testlabs.com



39 Spruce Street
 East Longmeadow, MA 01108

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 10-Day 14-Day
 Due Date: _____
 Rush Approval Required: Yes No

Company Name: **Tight & Bond**
 Address: 120 Front Street, Worcester, MA 01608
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number: _____
 Invoice Recipient: Tight & Bond
 Sampled By: M. Scherer

Requested: Field Filtered Lab to Filter
 Orthophosphate Samples Field Filtered Lab to Filter

Format: PDF EXCEL

CLP Like Data Pkg Required:

Email To: _____
 Fax To #: _____

Ending Date/Time: 11:00
 Matrix Code: DW
 Conc Code: -

MA MCP Required
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required
 PWSID #: _____

Special Requirements:

Project Entity: Government Municipality WRTA
 Federal School MBRA
 City MBTA

Other: Chromatogram
 AIHA-LAP, LLC

1 7- Day 10- Day 14- Day

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

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

4 Glassware in the fridge? Y / N
 Glassware in freezer? Y / N
 Prepackaged Cooler? Y / N
 *Contest is not responsible for missing samples from prepacked coolers

5 Total Number Of: _____
 VIALS _____
 GLASS _____
 PLASTIC _____
 BACTERIA _____
 ENCORE _____

6 Preservation Code: _____
 Cooler Use Only

7 ANALYSIS REQUESTED

8 PFOS/PFOA 537.1

9 Date/Time: 12/15/19 17:00
 Date/Time: 12/15/19 17:00
 Date/Time: 12/16/19 11:00
 Date/Time: 12/16/19 11:00
 Date/Time: 12/16/19 11:00
 Date/Time: 12/16/19 20:30

Relinquished by: (signature)
 Received by: (signature)
 Relinquished by: (signature)
 Received by: (signature)
 Relinquished by: (signature)
 Received by: (signature)
 Relinquished by: (signature)
 Received by: (signature)

Client Comments:

Lab Comments:

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By af Date 12/10/19 Time 20:30

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
 By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? N/A

Who was notified? _____
 Who was notified? _____
 Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid _____ Base _____

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Steven Parr and Michelle York
10 Worcester Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
10 Worcester Road, Princeton**

Dear Mr. Parr and Ms. York:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 10 Worcester Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 9, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 16.6 ng/L in the water samples collected on January 9, 2020, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

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

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0412

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. 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, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0412

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
10 Worcester Road	20A0412-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0412

Date Received: 1/10/2020

Field Sample #: 10 Worcester Road

Sampled: 1/9/2020 09:00

Sample ID: 20A0412-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorohexanoic acid (PFHxA)	3.8	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluoroheptanoic acid (PFHpA)	8.0	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorooctanoic acid (PFOA)	3.6	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorooctanesulfonic acid (PFOS)	2.3	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorononanoic acid (PFNA)	2.7	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:13	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		98.5		70-130					1/16/20 4:13	
M3HFPO-DA		94.3		70-130					1/16/20 4:13	
13C-PFDA		93.0		70-130					1/16/20 4:13	
d5-NEtFOSAA		88.4		70-130					1/16/20 4:13	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0412-01 [10 Worcester Road]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B249867 - EPA 537.1

Blank (B249867-BLK1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			

LCS (B249867-BS1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B

Received By RLF Date 1/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 C
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____
 Who was notified? _____
 Who was notified? _____

MS/MSD? F
 Is splitting samples required? F
 On COC? F
 Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
February 28, 2020

Elaine McCullough
11 Gregory Hill Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
11 Gregory Hill Rd, Princeton

Dear Ms. McCullough:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 11 Gregory Hill Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 22, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on January 22, 2020.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

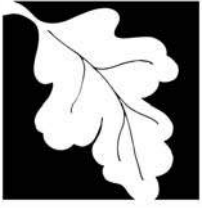
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

February 6, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: 11 Gregory Hill Rd, Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1073

Enclosed are results of analyses for samples received by the laboratory on January 24, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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20A1073-01	5
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B251138	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 2/6/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1073

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

PROJECT LOCATION: 11 Gregory Hill Rd, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
11 Gregory Hill Rd	20A1073-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: 11 Gregory Hill Rd, Princeton, MA Sample Description:

Work Order: 20A1073

Date Received: 1/24/2020

Field Sample #: 11 Gregory Hill Rd

Sampled: 1/22/2020 18:30

Sample ID: 20A1073-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:41	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	89.4	70-130	2/5/20 1:41
M3HFPO-DA	80.7	70-130	2/5/20 1:41
13C-PFDA	85.4	70-130	2/5/20 1:41
d5-NEtFOSAA	81.3	70-130	2/5/20 1:41

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1073-01RE1 [11 Gregory Hill Rd]	B251138	250	1.00	01/30/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251138 - EPA 537.1										
Blank (B251138-BLK1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.0		ng/L	40.0		87.5	70-130			
Surrogate: M3HFPO-DA	33.4		ng/L	40.0		83.5	70-130			
Surrogate: 13C-PFDA	36.4		ng/L	40.0		91.1	70-130			
Surrogate: d5-NEtFOSAA	148		ng/L	160		92.6	70-130			
LCS (B251138-BS1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	2.12	2.0	ng/L	1.77		120	50-150			
Perfluorohexanoic acid (PFHxA)	1.61	2.0	ng/L	2.00		80.7	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.43	2.0	ng/L	1.82		134	50-150			
Perfluoroheptanoic acid (PFHpA)	1.68	2.0	ng/L	2.00		84.0	50-150			
Perfluorooctanoic acid (PFOA)	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.76	2.0	ng/L	1.85		149	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.80	2.0	ng/L	2.00		90.1	50-150			
N-EtFOSAA	2.07	2.0	ng/L	2.00		103	50-150			
Perfluoroundecanoic acid (PFUnA)	1.73	2.0	ng/L	2.00		86.7	50-150			
N-MeFOSAA	1.96	2.0	ng/L	2.00		98.2	50-150			
Perfluorododecanoic acid (PFDoA)	1.72	2.0	ng/L	2.00		86.1	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Perfluorotetradecanoic acid (PFTA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.33	2.0	ng/L	2.00		66.7	50-150			
11Cl-PF3OUdS (F53B Major)	2.22	2.0	ng/L	1.88		118	50-150			
9Cl-PF3ONS (F53B Minor)	2.18	2.0	ng/L	1.86		117	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.49	2.0	ng/L	2.00		74.6	50-150			
Surrogate: 13C-PFHxA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: M3HFPO-DA	32.8		ng/L	40.0		82.0	70-130			
Surrogate: 13C-PFDA	36.0		ng/L	40.0		89.9	70-130			
Surrogate: d5-NEtFOSAA	150		ng/L	160		94.0	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Handwritten initials/signature

20A1073

Doc # 381 Rev 2_06262019

Page 1 of 1

http://www.contestlabs.com

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 10 Day 3 Day 4 Day Due Date: Field Filtered Lab to Filter Orthophosphate Samples Field Filtered Lab to Filter

7-Day PFAS 10-Day (std) Rush-Approval Required Data Delivery: PDF EXCEL

Company Name: **con-test ANALYTICAL LABORATORY**
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number:
 Invoice Recipient: Tighe & Bond
 Sampled By: M. Scherer

ANALYSIS REQUESTED

Preservation Code	Carrier Use Only	Total Number Of:	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
Glassware in the fridge? Y / N							
Glassware in freezer? Y / N							
Prepackaged Cooler? Y / N							
*Contest is not responsible for missing samples from prepackaged coolers							
1 Matrix Codes: GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)							
2 Preservation Codes: I = Iced H = HCL M = Methanol N = Nitric Acid S = Sulfuric Acid B = Sodium Bisulfate X = Sodium Hydroxide T = Sodium Thiosulfate O = Other (please define)							

Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
11 Gregory Hill Rd	1/22/20	1/30	GRAB	DW	U	2				

Retinquired by: (signature)	Date/Time: 1/23/20 0800	Client Comments: 10 day TAT
Received by: (signature)	Date/Time: 1/23/20 0800	
Retinquired by: (signature)	Date/Time: 1/23/20 18:00	
Received by: (signature)	Date/Time: 1/23/20 1800	
Retinquired by: (signature)	Date/Time: 1/23/20 1800	
Received by: (signature)	Date/Time: 1/23/20 1800	

Special Requirements: MA MCP Required MA MCP Required
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required
 PWSID #

Project Entity: Government Municipality WRTA Other
 Federal City School MBTA
 City Brownfield

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

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



CON-TEST
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By [Signature] Date 1/29/20 Time 1800

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.4
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid n/a Base n/a

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Jean-Pierre and Ann Flatt
11 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
11 Prospect Street, Princeton

Dear Mr. and Mrs. Flatt:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 11 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 4.4 ng/L in the water samples collected on January 8, 2020, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

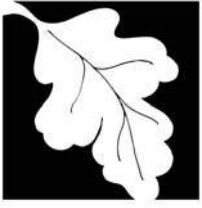
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	11 Prospect St
Well Depth (feet)		~137'
Sampling Date		1/8/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		2.1
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.3
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		4.4
Regulated Total	20	4.4

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0417

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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B249867	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0417

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
11 Prospect St.	20A0417-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0417

Date Received: 1/10/2020

Field Sample #: 11 Prospect St.

Sampled: 1/8/2020 10:40

Sample ID: 20A0417-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorohexanesulfonic acid (PFHxS)	2.1	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorooctanesulfonic acid (PFOS)	2.3	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 6:00	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		85.5		70-130					1/16/20 6:00	
M3HFPO-DA		79.2		70-130					1/16/20 6:00	
13C-PFDA		84.7		70-130					1/16/20 6:00	
d5-NEtFOSAA		93.4		70-130					1/16/20 6:00	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0417-01 [11 Prospect St.]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 - Rev 5 2017

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

Client T&B

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.8 °C
By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA

Base NA

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

Unused Media

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

Comments:

S-1760
February 28, 2020

Aaron and Jenna Larocque
12 Boylston Avenue
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
12 Boylston Avenue, Princeton**

Dear Mr. & Mrs. Larocque:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 12 Boylston Avenue as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 10, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 26.1 ng/L in the water samples collected on January 10, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you wish to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	12 Boylston Ave
Well Depth (feet)		UNKNOWN
Sampling Date		1/10/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		9.1
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		14
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		5.7
Perfluorooctanesulfonic acid (PFOS)		6.4
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		35.2
Regulated Total	20	26.1

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 29, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0577

Enclosed are results of analyses for samples received by the laboratory on January 13, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/29/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0577

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
12 Boylston Ave	20A0577-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0577

Date Received: 1/13/2020

Field Sample #: 12 Boylston Ave

Sampled: 1/10/2020 14:00

Sample ID: 20A0577-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			MA	ORSG							
Perfluorobutanesulfonic acid (PFBS)	9.1	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorohexanesulfonic acid (PFHxS)	14	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorooctanoic acid (PFOA)	5.7	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorooctanesulfonic acid (PFOS)	6.4	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
N-EtFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
N-MeFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1		EPA 537.1	1/23/20	1/28/20 16:18	BLM
Surrogates		% Recovery	Recovery Limits				Flag/Qual				
13C-PFHxA		94.4	70-130							1/28/20 16:18	
M3HFPO-DA		91.1	70-130							1/28/20 16:18	
13C-PFDA		90.2	70-130							1/28/20 16:18	
d5-NEtFOSAA		98.2	70-130							1/28/20 16:18	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0577-01RE1 [12 Boylston Ave]	B250676	250	1.00	01/23/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250676 - EPA 537.1										
Blank (B250676-BLK1)										
Prepared: 01/23/20 Analyzed: 01/28/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	38.7		ng/L	40.0		96.9	70-130			
Surrogate: M3HFPO-DA	36.3		ng/L	40.0		90.8	70-130			
Surrogate: 13C-PFDA	37.6		ng/L	40.0		94.0	70-130			
Surrogate: d5-NEtFOSAA	159		ng/L	160		99.3	70-130			
LCS (B250676-BS1)										
Prepared: 01/23/20 Analyzed: 01/28/20										
Perfluorobutanesulfonic acid (PFBS)	9.40	2.0	ng/L	8.85		106	70-130			
Perfluorohexanoic acid (PFHxA)	9.62	2.0	ng/L	10.0		96.2	70-130			
Perfluorohexanesulfonic acid (PFHxS)	10.1	2.0	ng/L	9.10		111	70-130			
Perfluoroheptanoic acid (PFHpA)	10.3	2.0	ng/L	10.0		103	70-130			
Perfluorooctanoic acid (PFOA)	11.0	2.0	ng/L	10.0		110	70-130			
Perfluorooctanesulfonic acid (PFOS)	11.4	2.0	ng/L	9.25		123	70-130			
Perfluorononanoic acid (PFNA)	10.5	2.0	ng/L	10.0		105	70-130			
Perfluorodecanoic acid (PFDA)	10.7	2.0	ng/L	10.0		107	70-130			
N-EtFOSAA	12.0	2.0	ng/L	10.0		120	70-130			
Perfluoroundecanoic acid (PFUnA)	9.97	2.0	ng/L	10.0		99.7	70-130			
N-MeFOSAA	12.0	2.0	ng/L	10.0		120	70-130			
Perfluorododecanoic acid (PFDoA)	8.73	2.0	ng/L	10.0		87.3	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorotetradecanoic acid (PFTA)	7.77	2.0	ng/L	10.0		77.7	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	11.0	2.0	ng/L	10.0		110	70-130			
11Cl-PF3OUdS (F53B Major)	9.67	2.0	ng/L	9.40		103	70-130			
9Cl-PF3ONS (F53B Minor)	11.0	2.0	ng/L	9.30		118	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.56	2.0	ng/L	10.0		95.6	70-130			
Surrogate: 13C-PFHxA	37.1		ng/L	40.0		92.8	70-130			
Surrogate: M3HFPO-DA	36.0		ng/L	40.0		90.0	70-130			
Surrogate: 13C-PFDA	38.0		ng/L	40.0		95.1	70-130			
Surrogate: d5-NEtFOSAA	166		ng/L	160		104	70-130			

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B250676 - EPA 537.1

MRL Check (B250676-MRL1)

Prepared: 01/23/20 Analyzed: 01/28/20

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1.77			0-200			
Perfluorohexanoic acid (PFHxA)	2.26	2.0	ng/L	2.00		113	0-200			
Perfluorohexanesulfonic acid (PFHxS)	2.53	2.0	ng/L	1.82		139	0-200			
Perfluoroheptanoic acid (PFHpA)	2.16	2.0	ng/L	2.00		108	0-200			
Perfluorooctanoic acid (PFOA)	2.54	2.0	ng/L	2.00		127	0-200			
Perfluorooctanesulfonic acid (PFOS)	2.34	2.0	ng/L	1.85		126	0-200			
Perfluorononanoic acid (PFNA)	2.39	2.0	ng/L	2.00		119	0-200			
Perfluorodecanoic acid (PFDA)	2.23	2.0	ng/L	2.00		112	0-200			
N-EtFOSAA	2.45	2.0	ng/L	2.00		123	0-200			
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	2.00			0-200			
N-MeFOSAA	2.40	2.0	ng/L	2.00		120	0-200			
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	2.00			0-200			
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	2.00			0-200			
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	2.00			0-200			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.20	2.0	ng/L	2.00		110	0-200			
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1.88			0-200			
9Cl-PF3ONS (F53B Minor)	2.09	2.0	ng/L	1.86		112	0-200			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	2.00			0-200			
Surrogate: 13C-PFHxA	38.7		ng/L	40.0		96.8	70-130			
Surrogate: M3HFPO-DA	37.3		ng/L	40.0		93.1	70-130			
Surrogate: 13C-PFDA	37.3		ng/L	40.0		93.3	70-130			
Surrogate: d5-NEtFOSAA	151		ng/L	160		94.7	70-130			

MRL Check (B250676-MRL2)

Prepared: 01/23/20 Analyzed: 01/28/20

Perfluorobutanesulfonic acid (PFBS)	2.22	2.0	ng/L	1.77		126	0-200			
Perfluorohexanoic acid (PFHxA)	2.21	2.0	ng/L	2.00		110	0-200			
Perfluorohexanesulfonic acid (PFHxS)	2.39	2.0	ng/L	1.82		131	0-200			
Perfluoroheptanoic acid (PFHpA)	2.39	2.0	ng/L	2.00		119	0-200			
Perfluorooctanoic acid (PFOA)	2.54	2.0	ng/L	2.00		127	0-200			
Perfluorooctanesulfonic acid (PFOS)	2.62	2.0	ng/L	1.85		142	0-200			
Perfluorononanoic acid (PFNA)	2.36	2.0	ng/L	2.00		118	0-200			
Perfluorodecanoic acid (PFDA)	2.27	2.0	ng/L	2.00		114	0-200			
N-EtFOSAA	2.60	2.0	ng/L	2.00		130	0-200			
Perfluoroundecanoic acid (PFUnA)	2.00	2.0	ng/L	2.00		100	0-200			
N-MeFOSAA	2.57	2.0	ng/L	2.00		129	0-200			
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	2.00			0-200			
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	2.00			0-200			
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	2.00			0-200			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.39	2.0	ng/L	2.00		120	0-200			
11Cl-PF3OUdS (F53B Major)	2.07	2.0	ng/L	1.88		110	0-200			
9Cl-PF3ONS (F53B Minor)	2.21	2.0	ng/L	1.86		119	0-200			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.05	2.0	ng/L	2.00		103	0-200			
Surrogate: 13C-PFHxA	38.5		ng/L	40.0		96.3	70-130			
Surrogate: M3HFPO-DA	36.2		ng/L	40.0		90.5	70-130			
Surrogate: 13C-PFDA	37.6		ng/L	40.0		93.9	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.3	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06/26/2019

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Requested Turnaround Time

7-Day PFAS 10-Day (std) 10-Day Lab to Filter

Rush-Approval Required

1-Day 2-Day 3-Day 4-Day Lab to Filter

Orthophosphate Samples

Field Filtered Lab to Filter

Orthophosphate Samples

Field Filtered Lab to Filter

Data Delivery

PDF EXCEL

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Company Name: SCH ZAG 572

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@conestlabs.com

Address: 120 Front Street, Worcester, MA 01608

Tighe & Bond

508-754-2201

Princeton Residential Well Sampling

Princeton, MA

P-0514

M. Scherer

Con-Test Quote Name/Number:

Invoice Recipient:

Tighe & Bond

M. Scherer

Client Sample ID / Description

12 Schafstrom Ave

Beginning Date/Time

1/13/20 14:00

Ending Date/Time

1/13/20 14:00

Matrix Code

GW

Comp/GRAB

G

Conc. Code

-

Vials

2

Glass

0

Plastic

0

Bacteria

0

Encore

0

MA MCP Required

MCP Certification Form Required

CT RCP Required

RCP Certification Form Required

MA State DW Required

PWSID #

Project Entry

Government

Federal

City

21 J

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Tight L Bond
 Received By SA Date 1/3 Time 2000

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

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp -4.8
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

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

Is there enough Volume? T

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

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

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

Unused Media

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

Comments:

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	30 Mountain Rd
Well Depth (feet)		UNKNOWN
Sampling Date		1/27/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		<2.0
Perfluorohexanoic acid (PFHxA)		<2.0
Perfluorohexanesulfonic acid (PFHxS)		4.4
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		6.1
Perfluorooctanesulfonic acid (PFOS)		5.4
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		15.9
Regulated Total	20	16

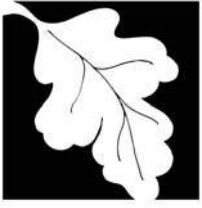
NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

S-1760
February 19, 2020

Wachusett House Corp
13 Boylston Ave
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
13 Boylston Ave, Princeton**

To Whom it May Concern:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 13 Boylston Ave as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not detected above laboratory reporting limits in the water samples collected on January 8, 2020. A copy of the lab report is attached to this letter.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions. We will contact you to arrange for the POET system installation shortly.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	13 Boylston Ave
Well Depth (feet)		~100'
Sampling Date		1/8/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0416

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0416

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
13 Boylston Ave	20A0416-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0416

Date Received: 1/10/2020

Field Sample #: 13 Boylston Ave

Sampled: 1/8/2020 09:00

Sample ID: 20A0416-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 5:39	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		90.8		70-130					1/16/20 5:39	
M3HFPO-DA		82.5		70-130					1/16/20 5:39	
13C-PFDA		86.6		70-130					1/16/20 5:39	
d5-NEtFOSAA		95.4		70-130					1/16/20 5:39	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0416-01 [13 Boylston Ave]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B
 Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8°C
 By Blank # _____ Actual Temp - _____

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

Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? NA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid NA Base NA

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

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

Comments:

S-1760
February 19, 2020

Steven Lilburn
Carrie Phillips
13 Gregory Hill Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
13 Gregory Hill Road, Princeton

Dear Mr. Lilburn and Ms. Phillips:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 13 Gregory Hill Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 10, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on January 10, 2020. A copy of the lab report is attached to this letter.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

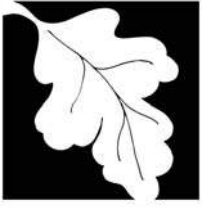
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 23, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0581

Enclosed are results of analyses for samples received by the laboratory on January 13, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/23/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0581

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
13 Gregory Hill Rd	20A0581-01	Drinking Water		EPA 537.1	
13 Gregory Hill Rd FB	20A0581-02	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0581

Date Received: 1/13/2020

Field Sample #: 13 Gregory Hill Rd

Sampled: 1/10/2020 15:00

Sample ID: 20A0581-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:05	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		85.8		70-130					1/22/20 20:05	
M3HFPO-DA		79.6		70-130					1/22/20 20:05	
13C-PFDA		79.6		70-130					1/22/20 20:05	
d5-NEtFOSAA		90.8		70-130					1/22/20 20:05	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0581

Date Received: 1/13/2020

Field Sample #: 13 Gregory Hill Rd FB

Sampled: 1/10/2020 15:00

Sample ID: 20A0581-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 20:48	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		94.0		70-130					1/22/20 20:48	
M3HFPO-DA		86.9		70-130					1/22/20 20:48	
13C-PFDA		81.6		70-130					1/22/20 20:48	
d5-NEtFOSAA		88.9		70-130					1/22/20 20:48	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0581-01 [13 Gregory Hill Rd]	B250253	250	1.00	01/17/20
20A0581-02 [13 Gregory Hill Rd FB]	B250253	250	1.00	01/17/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc. # 381 Rev 2_06262019

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

http://www.contestlabs.com

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com



JLH 2000581

Address: 120 Front Street, Worcester, MA 01608
Project Name: Tighe & Bond
Project Location: Princeton Residential Well Sampling
Project Number: P-0534
Project Manager: M. Scherer
Invoice Recipient: Tighe & Bond
Sampled By: M. Scherer

Requested Turnaround Time: 7-Day PFAS 10-Day (std) 10-Day Field Filtered 10-Day Lab to Filter

Rush Approval Required: 1-Day 2-Day 3-Day 4-Day Field Filtered Lab to Filter

Orthophosphate Samples: 1-Day 2-Day 3-Day 4-Day Field Filtered Lab to Filter

Format: PDF EXCEL

Other: CLP Like Data Pkg Required:

Email To:

Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/CRAS	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	13 GREGORY HILL RD	1/10/20	1500	G	DW						
2	13 GREGORY HILL RD	1/10/20	1500	G	DW						

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

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

Concentration Codes:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Special Requirements:
MA MCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State DW Required
PW/SID #

Project Entry:
Government
Federal
City
Municipality
21 J
Brownfield
MWRA
School
MBTA
WRMA
AIIA-LAP, LLC
Chromatogram
Non Soxhlet
PCB ONLY

Client Comments:
Date/Time: 1/19/20 0800
Date/Time: 1/13/20 0600
Date/Time: 1/13/20 0600
Date/Time: 1/13/20 0600
Date/Time: 1-13-2020

Received by: (signature)
Relinquished by: (signature)

Received by: (signature)
Relinquished by: (signature)

Received by: (signature)
Relinquished by: (signature)

Received by: (signature)
Relinquished by: (signature)

Lab Comments:

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

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



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Tighe L. Bond
Received By SAH

Date 1/13 Time 2000

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

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.8
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name F
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? _____

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Brett and Ashley Gibbs
14 Gregory Hill Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
14 Gregory Hill Road, Princeton

Dear Mr. and Mrs. Gibbs:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 14 Gregory Hill Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 9, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 9.4 ng/L in the water samples collected on January 9, 2020, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you wish to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

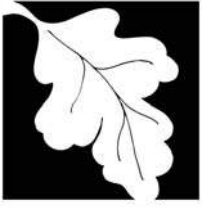
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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) |
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	14 Gregory Hill Rd
Well Depth (feet)		UNKNOWN
Sampling Date		1/9/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		2.6
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		3.7
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		3.2
Perfluorooctanesulfonic acid (PFOS)		2.5
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		12
Regulated Total	20	9.4

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0456

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping tail on the "n".

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0456

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
14 Gregory Hill Rd	20A0456-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0456

Date Received: 1/10/2020

Field Sample #: 14 Gregory Hill Rd

Sampled: 1/9/2020 10:30

Sample ID: 20A0456-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	2.6	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorohexanesulfonic acid (PFHxS)	3.7	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorooctanoic acid (PFOA)	3.2	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorooctanesulfonic acid (PFOS)	2.5	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 11:02	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	89.7	70-130	1/16/20 11:02
M3HFPO-DA	84.2	70-130	1/16/20 11:02
13C-PFDA	80.9	70-130	1/16/20 11:02
d5-NEtFOSAA	80.7	70-130	1/16/20 11:02

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0456-01 [14 Gregory Hill Rd]	B249867	250	1.00	01/13/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 C
By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
February 19, 2020

First Congregational Church
14 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
14 Mountain Road, Princeton**

To Whom it May Concern:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the water supply well located at 14 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the water supply well water samples on January 9 and 22, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS) and Total Petroleum Hydrocarbons (TPH). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab reports for the dates sampled are attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at concentrations of 38.7 and 45.1 ng/L in the water samples collected on January 9 and 22, 2020, respectively which are above the MassDEP proposed MCL of 20 ng/L. TPH was not detected in your samples.

Based on the PFAS concentrations detected in your water supply well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled in accordance with MassDEP monitoring requirements following installation, and the sampling schedule may be modified based on system performance.

If you would like to discuss any of this information further, please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup
David Papale, PWS General Operator





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

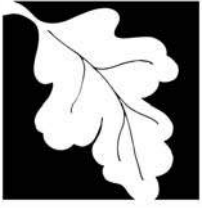
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	14 Mountain Rd		
		1/9/2020	1/9/2020	1/22/2020
Well Depth (feet)		500'		
Sampling Date		1/9/2020	1/9/2020	1/22/2020
			FIELD BLANK	
EPA 537.1 (ng/L)				
Perfluorobutanesulfonic acid (PFBS)		7.4	ND (2.0)	8.7
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		30	ND (2.0)	35
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.6	ND (2.0)	2.3
Perfluorooctanesulfonic acid (PFOS)		6.1	ND (2.0)	7.8
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		46.1	ND (2.0)	53.8
Regulated Total	20	38.7	ND (2.0)	45.1

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0410

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

Table of Contents

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0410

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
14 Mountain Road	20A0410-01	Drinking Water		SW-846 8015C	

CASE NARRATIVE SUMMARY

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

SW-846 8015C

Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0410

Date Received: 1/10/2020

Field Sample #: 14 Mountain Road

Sampled: 1/9/2020 11:00

Sample ID: 20A0410-01

Sample Matrix: Drinking Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diesel Range Organics	ND	0.20	mg/L	1		SW-846 8015C	1/16/20	1/21/20 11:38	RDD
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	84.0		40-140					1/21/20 11:38	

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Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0410-01 [14 Mountain Road]	B250177	1020	1.00	01/16/20

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

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250177 - SW-846 3510C										
Blank (B250177-BLK1)										
					Prepared: 01/16/20 Analyzed: 01/17/20					
Diesel Range Organics	ND	0.20	mg/L							
Surrogate: 2-Fluorobiphenyl	0.0723		mg/L	0.100		72.3	40-140			
LCS (B250177-BS1)										
					Prepared: 01/16/20 Analyzed: 01/17/20					
Diesel Range Organics	0.725	0.20	mg/L	1.00		72.5	40-140			
Surrogate: 2-Fluorobiphenyl	0.0782		mg/L	0.100		78.2	40-140			
LCS Dup (B250177-BSD1)										
					Prepared: 01/16/20 Analyzed: 01/17/20					
Diesel Range Organics	0.748	0.20	mg/L	1.00		74.8	40-140	3.09		
Surrogate: 2-Fluorobiphenyl	0.0812		mg/L	0.100		81.2	40-140			

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

FLAG/QUALIFIER SUMMARY

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‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>SW-846 8015C in Soil</i>	
Diesel Range Organics	NY,VA,NH,NC
<i>SW-846 8015C in Water</i>	
Diesel Range Organics	NY,VA,NH,NC

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Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
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NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06262019

http://www.contestlabs.com

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 7-Day 10-Day 3-Day 4-Day Field Filtered Lab to Filter Dissolved Metals Samples

PFAS 10-Day (std) Rush Approval Required Orthophosphates Samples Field Filtered Lab to Filter

1-Day 2-Day Data Delivery PDF EXCEL

Format: Other: CLP Like Data Pkg Required: Email To: Fax To #:

Beginning Date/Time: 1/9/20

Ending Date/Time: 1/10/20

Matrix Code: DW

COOP/CRAB VIALS GLASS PLASTIC BACTERIA ENCORE

Con-Test Work Order # 14

Client Sample ID / Description 14 KOUNTAIN Rd

Date/Time: 1/9/20 1500

Date/Time: 1/9/20 1500

Date/Time: 1/10/20 9:53

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

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Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

2020010



Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

120 Front Street, Worcester, MA 01608
Tighe & Bond

508-754-2201
Princeton Residential Well Sampling

Princeton, MA
P-0534

M. Scherer

Tighe & Bond

M. Scherer

Company Name: SUH

Address: 120 Front Street, Worcester, MA 01608

Phone: 508-754-2201

Project Name: Princeton Residential Well Sampling

Project Location: Princeton, MA

Project Number: P-0534

Project Manager: M. Scherer

Con-Test Quote Name/Number: Tighe & Bond

Invoice Recipient: M. Scherer

Sampled By: M. Scherer

Client Name: 14 KOUNTAIN Rd

Client Sample ID / Description: 14 KOUNTAIN Rd

Beginning Date/Time: 1/9/20

Ending Date/Time: 1/10/20

Matrix Code: DW

COOP/CRAB

VIALS

GLASS

Requested Turnaround Time: 7-Day 10-Day 3-Day 4-Day Field Filtered Lab to Filter Dissolved Metals Samples

PFAS 10-Day (std) Rush Approval Required Orthophosphates Samples Field Filtered Lab to Filter

1-Day 2-Day Data Delivery PDF EXCEL

Format: Other: CLP Like Data Pkg Required: Email To: Fax To #:

Beginning Date/Time: 1/9/20

Ending Date/Time: 1/10/20

Matrix Code: DW

COOP/CRAB VIALS GLASS PLASTIC BACTERIA ENCORE

Con-Test Work Order # 14

Client Sample ID / Description 14 KOUNTAIN Rd

Date/Time: 1/9/20 1500

Date/Time: 1/9/20 1500

Date/Time: 1/10/20 9:53

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

2020010



Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

120 Front Street, Worcester, MA 01608
Tighe & Bond

508-754-2201
Princeton Residential Well Sampling

Princeton, MA
P-0534

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Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

Date/Time: 1/10/20 1625

2020010



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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B
 Received By BBB Date 11/10/20 Time 1825
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 38
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T (limited)
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid n/a Base n/a

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

Unused Media

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

Comments:

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0413

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light gray rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0413

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
14 Mountain Road	20A0413-01	Drinking Water		EPA 537.1	
14 Mountain Road FB	20A0413-02	Field Blank		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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0413

Date Received: 1/10/2020

Field Sample #: 14 Mountain Road

Sampled: 1/9/2020 11:00

Sample ID: 20A0413-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	7.4	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorohexanesulfonic acid (PFHxS)	30	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorooctanoic acid (PFOA)	2.6	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorooctanesulfonic acid (PFOS)	6.1	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 4:34	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		90.5		70-130					1/16/20 4:34	
M3HFPO-DA		83.3		70-130					1/16/20 4:34	
13C-PFDA		86.5		70-130					1/16/20 4:34	
d5-NEtFOSAA		92.6		70-130					1/16/20 4:34	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0413

Date Received: 1/10/2020

Field Sample #: 14 Mountain Road FB

Sampled: 1/9/2020 11:00

Sample ID: 20A0413-02

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 6:43	JFC
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		86.6	70-130					1/16/20 6:43	
M3HFPO-DA		80.2	70-130					1/16/20 6:43	
13C-PFDA		82.3	70-130					1/16/20 6:43	
d5-NEtFOSAA		87.6	70-130					1/16/20 6:43	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0413-01 [14 Mountain Road]	B249867	250	1.00	01/13/20
20A0413-02 [14 Mountain Road FB]	B249867	250	1.00	01/13/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number:
 Invoice Recipient:
 Sampled By: Tighe & Bond
 M. Scherer

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 39 Spruce Street
 East Longmeadow, MA 01028
 Doc # 381 Rev 2_06262019

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Requested Turnaround Time		Dissolved Metals Samples		Orthophosphate Samples		ANALYSIS REQUESTED	
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>							

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 °C
By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? F

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA Base NA

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

Unused Media

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

Comments:

February 6, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: 14 Mountain Road, Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1071

Enclosed are results of analyses for samples received by the laboratory on January 24, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/6/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1071

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

PROJECT LOCATION: 14 Mountain Road, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
14 Mountain Rd	20A1071-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: 14 Mountain Road, Princeton, MA Sample Description:

Work Order: 20A1071

Date Received: 1/24/2020

Field Sample #: 14 Mountain Rd

Sampled: 1/22/2020 11:00

Sample ID: 20A1071-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	8.7	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorohexanesulfonic acid (PFHxS)	35	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorooctanoic acid (PFOA)	2.3	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorooctanesulfonic acid (PFOS)	7.8	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 0:58	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.1	70-130	2/5/20 0:58
M3HFPO-DA	79.5	70-130	2/5/20 0:58
13C-PFDA	83.6	70-130	2/5/20 0:58
d5-NEtFOSAA	84.5	70-130	2/5/20 0:58

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1071-01RE1 [14 Mountain Rd]	B251138	250	1.00	01/30/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251138 - EPA 537.1										
Blank (B251138-BLK1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.0		ng/L	40.0		87.5	70-130			
Surrogate: M3HFPO-DA	33.4		ng/L	40.0		83.5	70-130			
Surrogate: 13C-PFDA	36.4		ng/L	40.0		91.1	70-130			
Surrogate: d5-NEtFOSAA	148		ng/L	160		92.6	70-130			
LCS (B251138-BS1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	2.12	2.0	ng/L	1.77		120	50-150			
Perfluorohexanoic acid (PFHxA)	1.61	2.0	ng/L	2.00		80.7	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.43	2.0	ng/L	1.82		134	50-150			
Perfluoroheptanoic acid (PFHpA)	1.68	2.0	ng/L	2.00		84.0	50-150			
Perfluorooctanoic acid (PFOA)	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.76	2.0	ng/L	1.85		149	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.80	2.0	ng/L	2.00		90.1	50-150			
N-EtFOSAA	2.07	2.0	ng/L	2.00		103	50-150			
Perfluoroundecanoic acid (PFUnA)	1.73	2.0	ng/L	2.00		86.7	50-150			
N-MeFOSAA	1.96	2.0	ng/L	2.00		98.2	50-150			
Perfluorododecanoic acid (PFDoA)	1.72	2.0	ng/L	2.00		86.1	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Perfluorotetradecanoic acid (PFTA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.33	2.0	ng/L	2.00		66.7	50-150			
11Cl-PF3OUdS (F53B Major)	2.22	2.0	ng/L	1.88		118	50-150			
9Cl-PF3ONS (F53B Minor)	2.18	2.0	ng/L	1.86		117	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.49	2.0	ng/L	2.00		74.6	50-150			
Surrogate: 13C-PFHxA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: M3HFPO-DA	32.8		ng/L	40.0		82.0	70-130			
Surrogate: 13C-PFDA	36.0		ng/L	40.0		89.9	70-130			
Surrogate: d5-NEtFOSAA	150		ng/L	160		94.0	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By [Signature] Date 1/29/20 Time 1800

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.4
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid n/a Base n/a

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Nathaniel and Amy Gove
15 Gregory Hill Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
15 Gregory Hill Road, Princeton

Dear Mr. & Mrs. Gove:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 15 Gregory Hill Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 13, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 20.4 ng/L in the water samples collected on January 13, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you wish to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	15 Gregory Hill Rd
Well Depth (feet)		UNKNOWN
Sampling Date		1/13/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		2.7
Perfluorohexanoic acid (PFHxA)		2.9
Perfluorohexanesulfonic acid (PFHxS)		5.2
Perfluoroheptanoic acid (PFHpA)		4.7
Perfluorooctanoic acid (PFOA)		5.1
Perfluorooctanesulfonic acid (PFOS)		5.4
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		26
Regulated Total	20	20.4

NOTES:

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

January 23, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0575

Enclosed are results of analyses for samples received by the laboratory on January 13, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/23/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0575

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
15 Gregory Hill Rd	20A0575-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0575

Date Received: 1/13/2020

Field Sample #: 15 Gregory Hill Rd

Sampled: 1/13/2020 10:30

Sample ID: 20A0575-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			MA	ORSG							
Perfluorobutanesulfonic acid (PFBS)	2.7	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorohexanoic acid (PFHxA)	2.9	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorohexanesulfonic acid (PFHxS)	5.2	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluoroheptanoic acid (PFHpA)	4.7	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorooctanoic acid (PFOA)	5.1	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorooctanesulfonic acid (PFOS)	5.4	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
N-EtFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
N-MeFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/22/20 19:22	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	83.9	70-130	1/22/20 19:22
M3HFPO-DA	76.1	70-130	1/22/20 19:22
13C-PFDA	70.1	70-130	1/22/20 19:22
d5-NEtFOSAA	81.9	70-130	1/22/20 19:22

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0575-01 [15 Gregory Hill Rd]	B250253	250	1.00	01/17/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06262019

http://www.contestlabs.com

Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com



Company Name: **JCH 20A0575**

Address: 120 Front Street, Worcester, MA 01608
 Tighe & Bond

Project Name: 508-754-2201
 Princeton Residential Well Sampling

Project Location: Princeton, MA

Project Number: P-0534

Project Manager: M. Scherer

Con-Test Quote Name/Number: Tighe & Bond

Invoice Recipient: M. Scherer

Sampled By: Tighe & Bond

39 Spruce Street
 East Longmeadow, MA 01028

Requested Turnaround Time

7-Day PFAS 10-Day (std) 10-Day Field Filtered
 Rush-Approval Required Due Date: Lab to Filter
 1-Day 3-Day 4-Day Orthophosphate Samples
 2-Day Field Filtered Lab to Filter

Format: PDF EXCEL
 Other: DATA DELIVERY

CLP Like Data Pkg Required:

Ending Date/Time: 1/13/20 1030

Matrix Code: DW

COMP GRAB: C

VIALS: 2

GLASS: 2

PLASTIC: 2

BACTERIA: 2

ENCORE: 2

ANALYSIS REQUESTED

Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
DW	C	2	2	2	2	2

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

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

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

Total Number Of: _____

Preservation Code: _____

Matrix Codes: _____

Preservation Codes: _____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

Total Number Of: _____

Preservation Code: _____

Matrix Codes: _____

Preservation Codes: _____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

Total Number Of: _____

Preservation Code: _____

Matrix Codes: _____

Preservation Codes: _____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

Total Number Of: _____

Preservation Code: _____

Matrix Codes: _____

Preservation Codes: _____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

Total Number Of: _____

Preservation Code: _____

Matrix Codes: _____

Preservation Codes: _____

Glassware in the fridge? Y / N

Client Sample ID / Description: 15 GREGORY Hill Rd

Beginning Date/Time: 1/13/20 1030

Ending Date/Time: 1/13/20 1030

Matrix Code: DW

COMP GRAB: C

VIALS: 2

GLASS: 2

PLASTIC: 2

BACTERIA: 2

ENCORE: 2

MA MCP Required:

MCP Certification Form Required:

CT RCP Required:

RCP Certification Form Required:

MA State DW Required:

PWSID #

Project Entity

Government:

Federal:

City:

Municipality:

21 J:

Brownfield:

MWRA School MBTA:

WRMA:

Chromatogram:

AIRIA-LAP, LLC:

Other:

Client Comments:

Date/Time: 1/13/20 1500

Date/Time: 1/13/20 1500

Date/Time: 1/13/20 1500

Date/Time: 1/13/20 1500

Date/Time: 1/13/20 1500

Date/Time: 1/13/20 1500

Date/Time: 1/13/20 1500

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Date/Time: 1/13/20 1500

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Tighe L. Bong
Received By SA

Date 1/13 Time 2000

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

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.8
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? _____

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Jennifer Foss
15 Hubbardston Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
15 Hubbardston Road, Princeton**

Dear Ms. Foss:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 15 Hubbardston Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 132.6 ng/L in the water samples collected on December 5, 2019, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	15 Hubbardston Rd
Well Depth (feet)		285'
Sampling Date		12/5/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		27
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		110
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		4.6
Perfluorooctanesulfonic acid (PFOS)		18
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		159.6
Regulated Total	20	132.6

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

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

Bolded values exceed the proposed Method 1 Standard

December 13, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0334

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping tail on the "n".

Jessica L. Hoffman
Project Manager

Table of Contents

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B248078	7
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Chain of Custody/Sample Receipt	10

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

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

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0334

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
15 Hubbardston Rd	19L0334-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0334

Date Received: 12/10/2019

Field Sample #: 15 Hubbardston Rd

Sampled: 12/5/2019 16:10

Sample ID: 19L0334-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	27	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorohexanesulfonic acid (PFHxS)	110	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorooctanoic acid (PFOA)	4.6	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorooctanesulfonic acid (PFOS)	18	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:04	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		110		70-130					12/12/19 0:04	
M3HFPO-DA		96.2		70-130					12/12/19 0:04	
13C-PFDA		102		70-130					12/12/19 0:04	
d5-NEtFOSAA		115		70-130					12/12/19 0:04	

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

Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0334-01 [15 Hubbardston Rd]	B248078	250	1.00	12/11/19

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248078 - EPA 537										
Blank (B248078-BLK1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			
LCS (B248078-BS1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

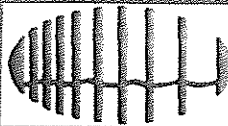
Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By AP Date 12/10/19 Time 20:30

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
 By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? N/A

Who was notified? _____
 Who was notified? _____
 Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid _____ Base _____

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Mark and Leslie Spencer
16 Boylston Ave
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
16 Boylston Ave, Princeton**

Dear Mr. and Mrs. Spencer:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 16 Boylston Ave. as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 9, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 19.9 ng/L in the water samples collected on January 9, 2020, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you would like to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	16 Boylston Ave
Well Depth (feet)		UNKNOWN
Sampling Date		1/9/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		5.3
Perfluorohexanoic acid (PFHxA)		3.7
Perfluorohexanesulfonic acid (PFHxS)		4.7
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		8
Perfluorooctanesulfonic acid (PFOS)		7.2
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		28.9
Regulated Total	20	19.9

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0424

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0424

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
16 Boylston Ave	20A0424-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0424

Date Received: 1/10/2020

Field Sample #: 16 Boylston Ave

Sampled: 1/9/2020 09:30

Sample ID: 20A0424-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	5.3	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorohexanoic acid (PFHxA)	3.7	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorohexanesulfonic acid (PFHxS)	4.7	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorooctanoic acid (PFOA)	8.0	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorooctanesulfonic acid (PFOS)	7.2	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:35	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		88.4		70-130					1/16/20 9:35	
M3HFPO-DA		81.1		70-130					1/16/20 9:35	
13C-PFDA		82.4		70-130					1/16/20 9:35	
d5-NEtFOSAA		88.0		70-130					1/16/20 9:35	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0424-01 [16 Boylston Ave]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B
 Received By RLF Date 11/10/20 Time 1825
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8°C
 By Blank # _____ Actual Temp _____
 Was Custody Seal Intact? NA Were Samples Tampered with? NA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? NA MS/MSD? F
 Proper Media/Containers Used? F Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
February 28, 2020

Michael and Nancy Latka
16 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
16 Prospect Street, Princeton**

Dear Mr. and Mrs. Latka:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 16 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 22, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on January 22, 2020.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

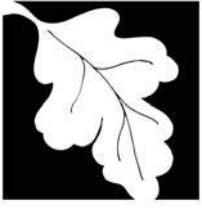
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

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NOTICE OF ENVIRONMENTAL SAMPLING

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

February 7, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: 16 Prospect St, Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1072

Enclosed are results of analyses for samples received by the laboratory on January 24, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style and is set against a light gray rectangular background.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 2/7/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1072

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

PROJECT LOCATION: 16 Prospect St, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
16 Prospect St	20A1072-01	Drinking Water		EPA 537.1	
TB-01232020	20A1072-02	Trip Blank 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.

Sample -01 was re-extracted due to Method Blank surrogate failure and high LFB recovery failure for PFOS. Re-extracted Sample had surrogate failures. Both results reported. Laboratory recommends resampling, analysis performed at no extra cost.

EPA 537.1**Qualifications:****L-01**

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

Analyte & Samples(s) Qualified:**Perfluorooctanesulfonic acid (PFO):**

B250869-BS1

S-26

Surrogate outside of control limits.

Analyte & Samples(s) Qualified:**13C-PFHxA**

B250869-BLK1

d5-NEtFOSAA

20A1072-01RE1[16 Prospect St]

M3HFPO-DA

B250869-BLK1

Z-01

Samples could not be re-extracted due to insufficient volume.

Analyte & Samples(s) Qualified:

20A1072-02[TB-01232020]

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

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



Tod E. Kopycinski
Laboratory Director

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

Project Location: 16 Prospect St, Princeton, MA

Sample Description:

Work Order: 20A1072

Date Received: 1/24/2020

Field Sample #: 16 Prospect St

Sampled: 1/22/2020 10:00

Sample ID: 20A1072-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:20	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/30/20	2/5/20 1:20	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	91.3	70-130	1/29/20 2:20
13C-PFHxA	81.2	70-130	2/5/20 1:20
M3HFPO-DA	87.0	70-130	1/29/20 2:20
M3HFPO-DA	74.2	70-130	2/5/20 1:20
13C-PFDA	106	70-130	1/29/20 2:20
13C-PFDA	71.9	70-130	2/5/20 1:20

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Project Location: 16 Prospect St, Princeton, MA

Sample Description:

Work Order: 20A1072

Date Received: 1/24/2020

Field Sample #: 16 Prospect St

Sampled: 1/22/2020 10:00

Sample ID: 20A1072-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
d5-NEtFOSAA		107		70-130				1/29/20	2:20	
d5-NEtFOSAA		68.3	*	70-130		S-26		2/5/20	1:20	

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Project Location: 16 Prospect St, Princeton, MA

Sample Description:

Work Order: 20A1072

Date Received: 1/24/2020

Field Sample #: TB-01232020

Sampled: 1/23/2020 00:00

Sample ID: 20A1072-02

Sample Matrix: Trip Blank Water

Sample Flags: Z-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/26/20	1/29/20 2:41	BLM

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	98.5	70-130	1/29/20 2:41
M3HFPO-DA	92.6	70-130	1/29/20 2:41
13C-PFDA	97.7	70-130	1/29/20 2:41
d5-NEtFOSAA	105	70-130	1/29/20 2:41

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Sample Extraction Data**Prep Method: EPA 537.1-EPA 537.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1072-01 [16 Prospect St]	B250869	250	1.00	01/26/20
20A1072-02 [TB-01232020]	B250869	250	1.00	01/26/20

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1072-01RE1 [16 Prospect St]	B251138	250	1.00	01/30/20

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250869 - EPA 537.1										
Blank (B250869-BLK1)										
Prepared: 01/26/20 Analyzed: 01/28/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	<i>13.4</i>		ng/L	40.0		33.4	* 70-130			S-26
Surrogate: M3HFPO-DA	<i>13.5</i>		ng/L	40.0		33.7	* 70-130			S-26
Surrogate: 13C-PFDA	<i>35.0</i>		ng/L	40.0		87.5	70-130			
Surrogate: d5-NEtFOSAA	<i>154</i>		ng/L	160		96.3	70-130			
LCS (B250869-BS1)										
Prepared: 01/26/20 Analyzed: 01/28/20										
Perfluorobutanesulfonic acid (PFBS)	2.28	2.0	ng/L	1.77		129	50-150			
Perfluorohexanoic acid (PFHxA)	2.36	2.0	ng/L	2.00		118	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.39	2.0	ng/L	1.82		131	50-150			
Perfluoroheptanoic acid (PFHpA)	2.16	2.0	ng/L	2.00		108	50-150			
Perfluorooctanoic acid (PFOA)	2.42	2.0	ng/L	2.00		121	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.90	2.0	ng/L	1.85		157	* 50-150			L-01
Perfluorononanoic acid (PFNA)	2.31	2.0	ng/L	2.00		116	50-150			
Perfluorodecanoic acid (PFDA)	2.52	2.0	ng/L	2.00		126	50-150			
N-EtFOSAA	2.36	2.0	ng/L	2.00		118	50-150			
Perfluoroundecanoic acid (PFUnA)	1.89	2.0	ng/L	2.00		94.7	50-150			
N-MeFOSAA	2.51	2.0	ng/L	2.00		125	50-150			
Perfluorododecanoic acid (PFDoA)	1.97	2.0	ng/L	2.00		98.7	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.71	2.0	ng/L	2.00		85.5	50-150			
Perfluorotetradecanoic acid (PFTA)	1.62	2.0	ng/L	2.00		81.1	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.06	2.0	ng/L	2.00		103	50-150			
11Cl-PF3OUdS (F53B Major)	2.14	2.0	ng/L	1.88		114	50-150			
9Cl-PF3ONS (F53B Minor)	2.12	2.0	ng/L	1.86		114	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.12	2.0	ng/L	2.00		106	50-150			
Surrogate: 13C-PFHxA	<i>39.7</i>		ng/L	40.0		99.2	70-130			
Surrogate: M3HFPO-DA	<i>39.0</i>		ng/L	40.0		97.4	70-130			
Surrogate: 13C-PFDA	<i>39.3</i>		ng/L	40.0		98.4	70-130			
Surrogate: d5-NEtFOSAA	<i>158</i>		ng/L	160		98.5	70-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251138 - EPA 537.1										
Blank (B251138-BLK1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.0		ng/L	40.0		87.5	70-130			
Surrogate: M3HFPO-DA	33.4		ng/L	40.0		83.5	70-130			
Surrogate: 13C-PFDA	36.4		ng/L	40.0		91.1	70-130			
Surrogate: d5-NEtFOSAA	148		ng/L	160		92.6	70-130			
LCS (B251138-BS1)										
Prepared: 01/30/20 Analyzed: 02/04/20										
Perfluorobutanesulfonic acid (PFBS)	2.12	2.0	ng/L	1.77		120	50-150			
Perfluorohexanoic acid (PFHxA)	1.61	2.0	ng/L	2.00		80.7	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.43	2.0	ng/L	1.82		134	50-150			
Perfluoroheptanoic acid (PFHpA)	1.68	2.0	ng/L	2.00		84.0	50-150			
Perfluorooctanoic acid (PFOA)	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.76	2.0	ng/L	1.85		149	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.80	2.0	ng/L	2.00		90.1	50-150			
N-EtFOSAA	2.07	2.0	ng/L	2.00		103	50-150			
Perfluoroundecanoic acid (PFUnA)	1.73	2.0	ng/L	2.00		86.7	50-150			
N-MeFOSAA	1.96	2.0	ng/L	2.00		98.2	50-150			
Perfluorododecanoic acid (PFDoA)	1.72	2.0	ng/L	2.00		86.1	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Perfluorotetradecanoic acid (PFTA)	1.48	2.0	ng/L	2.00		74.1	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.33	2.0	ng/L	2.00		66.7	50-150			
11Cl-PF3OUdS (F53B Major)	2.22	2.0	ng/L	1.88		118	50-150			
9Cl-PF3ONS (F53B Minor)	2.18	2.0	ng/L	1.86		117	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.49	2.0	ng/L	2.00		74.6	50-150			
Surrogate: 13C-PFHxA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: M3HFPO-DA	32.8		ng/L	40.0		82.0	70-130			
Surrogate: 13C-PFDA	36.0		ng/L	40.0		89.9	70-130			
Surrogate: d5-NEtFOSAA	150		ng/L	160		94.0	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
S-26	Surrogate outside of control limits.
Z-01	Samples could not be re-extracted due to insufficient volume.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

20A1072

Doc # 381 Rev 2_06262019



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com

http://www.contestlabs.com

39 Spruce Street
 East Longmeadow, MA 01028

Requested Turnaround Time
 7-Day PFAS 10-Day (std) 10-Day Due Date
 Rush-Approval Required
 1-Day 3-Day 4-Day
 2-Day Field Filtered Lab to Filter
 Orthophosphate Samples
 Field Filtered Lab to Filter

Format: PDF EXCEL
 Other:
 CLP Like Data Pkg Required:
 Email To:
 Fax To #:

Company Name: Tighe & Bond
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number:

Invoice Recipient: Tighe & Bond
 Sampled By: M. Scherer

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	16 Pecos St.	1/21/20	1000	GRAB	DW	U	2				
2	73-0123-2020				DI	U	1				

PFOS/PFOA 527.1

Client Comments:
 10 day TAT

Relinquished by: (signature)	Date/Time
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0814
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 1800
<i>[Signature]</i>	1/23/20 1800

Received by: (signature)	Date/Time
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0814
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 1800
<i>[Signature]</i>	1/23/20 1800

Relinquished by: (signature)	Date/Time
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0814
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 1800
<i>[Signature]</i>	1/23/20 1800

Received by: (signature)	Date/Time
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0814
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 1800
<i>[Signature]</i>	1/23/20 1800

Relinquished by: (signature)	Date/Time
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0814
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 0800
<i>[Signature]</i>	1/23/20 1800
<i>[Signature]</i>	1/23/20 1800

ANALYSIS REQUESTED

Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
DW	U	2				
DI	U	1				

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

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

Preservation Code
 Courier Use Only
 Total Number Of:
 VIALS _____
 GLASS _____
 PLASTIC _____
 BACTERIA _____
 ENCORE _____

Glassware in the fridge? Y / N
 Glassware in freezer? Y / N
 Prepackaged Cooler? Y / N
 *Contest is not responsible for missing samples from prepackaged coolers

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

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

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

MA MCP Required MA State DW Required
 MA Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 PWSID # _____

Project Entity
 Government Municipality WRTA
 Federal 21 J School
 City Brownfield MBTA

Other Chromatogram
 AIHA-LAP, LLC

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

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



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By [Signature] Date 1/29/20 Time 1800

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.4
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? T On COC? T
 Do all samples have the proper pH? Acid n/a Base n/a

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Stephen and Leslie Robichaud
17 Boylston Ave
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
17 Boylston Ave, Princeton**

Dear Mr. and Mrs. Robichaud:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 17 Boylston Ave as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water samples collected on January 8, 2020. A copy of the lab report is attached to this letter.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0421

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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B249867	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0421

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
17 Boylston Ave	20A0421-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0421

Date Received: 1/10/2020

Field Sample #: 17 Boylston Ave

Sampled: 1/8/2020 11:30

Sample ID: 20A0421-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:31	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		89.1		70-130					1/16/20 8:31	
M3HFPO-DA		82.0		70-130					1/16/20 8:31	
13C-PFDA		84.9		70-130					1/16/20 8:31	
d5-NEtFOSAA		87.0		70-130					1/16/20 8:31	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0421-01 [17 Boylston Ave]	B249867	250	1.00	01/13/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

20A0421



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com

Company Name: Tighe & Bond
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-7201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer

Con-Test Quote Name/Number:
 Invoice Recipient:
 Sampled By:

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
 East Longmeadow, MA 01028

Requested Turnaround Time: 7-Day 10-Day Field Filtered Lab to Filter

Rush Approval Required: 1-Day 3-Day 2-Day 4-Day Orthophosphate Samples Field Filtered Lab to Filter

Format: PDF EXCEL

CLP Like Data Pkg Required:

Ending Date/Time: 1/8/20 11:30

Matrix Code: DW

COMP/GRAB: G

Conc Code: -

VIALS: 2

GLASS: -

PLASTIC: -

BACTERIA: -

ENCORE: -

ANALYSIS REQUESTED

Preservation Code	Total Number Of:
VIALS	
GLASS	
PLASTIC	
BACTERIA	
ENCORE	

Glassware in the fridge? Y/N

Glassware in freezer? Y/N

Prepackaged Cooler? Y/N

*Contest is not responsible for missing samples from prepacked coolers

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

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

Client Comments:

Date/Time	Received by: (signature)
1/8/20 15:00	[Signature]
1/8/20 15:00	[Signature]
1/10/20 9:35	[Signature]
1/10/20 10:33	[Signature]
1/10/20 3:30	[Signature]

Special Requirements	MA MCP Required	MCP Certification Form Required	CT RCP Required	RCP Certification Form Required	MA State DWR Required
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Project Entity	Government	Federal	City	Municipality	Z1 J	Brownfield	AWRA School MBTA	WRTA	Other	Chromatogram	AHHA-LAP, LLC	Non Soxhlet
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 C
By Blank # _____ Actual Temp _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

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

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Louis Nelson
17 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
17 Prospect Street, Princeton**

Dear Mr. Nelson:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 17 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 2.8 ng/L in the water samples collected on January 8, 2020, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0422

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light gray rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0422

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
17 Prospect St	20A0422-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0422

Date Received: 1/10/2020

Field Sample #: 17 Prospect St

Sampled: 1/8/2020 10:00

Sample ID: 20A0422-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorooctanesulfonic acid (PFOS)	2.8	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:52	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		89.3		70-130					1/16/20 8:52	
M3HFPO-DA		84.0		70-130					1/16/20 8:52	
13C-PFDA		88.8		70-130					1/16/20 8:52	
d5-NEtFOSAA		94.0		70-130					1/16/20 8:52	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0422-01 [17 Prospect St]	B249867	250	1.00	01/13/20

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QUALITY CONTROL

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

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

Batch B249867 - EPA 537.1

Blank (B249867-BLK1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			

LCS (B249867-BS1)

Prepared: 01/13/20 Analyzed: 01/16/20

Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

20A0422

http://www.contestlabs.com

Doc # 381 Rev 2_06262019

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01608
Phone: 508-754-2201
Project Name: Princeton Residential Well Sampling
Project Location: Princeton, MA
Project Number: P-0534
Project Manager: M. Scherer
Con-Test Quote Name/Number:
Invoice Recipient: Tighe & Bond
Sampled By: M. Scherer

ANALYSIS REQUESTED

Requested Turnaround Time	Disinfectant Samples	Field Filtered Lab to Filter	Orthophosphate Samples	Field Filtered Lab to Filter
7-Day PFAS 10-Day (std)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10-Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Due Date:				
1-Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2-Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3-Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4-Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Format: PDF EXCEL

CLP Like Data Pkg Required:

Email To: _____

Fax To #: _____

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
01	17 RESIDENTIAL	11/8/20	1/20/20	GS		2				

Relinquished by (signature): *[Signature]* Date/Time: 11/8/20 1500

Received by (signature): *[Signature]* Date/Time: 11/8/20 1500

Relinquished by (signature): *[Signature]* Date/Time: 11/8/20 1500

Received by (signature): *[Signature]* Date/Time: 11/8/20 1500

Relinquished by (signature): *[Signature]* Date/Time: 11/8/20 1500

Received by (signature): *[Signature]* Date/Time: 11/8/20 1500

Client Comments:

Detection Limit Requirements: MA MA MCP Required CT CT RCP Required MA State DW Required

Special Requirements:

Project Entity: Government Municipality City Federal 21 J Brownfield

Other: WRTA AWRA School MBTA Chromatogram AIHA-LAP-LLC

PCB ONLY: Soxhlet Non Soxhlet

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

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

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

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client ITB

Received By RLF Date 11/10/20 Time 1825

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 C
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T MS/MSD? F

Were trip blanks received? F Is splitting samples required? F

Do all samples have the proper pH? _____ On COC? F

Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Martin Fuehrer
18 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
18 Mountain Road, Princeton**

Dear Mr. Fuehrer:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 18 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 10, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 217.4 ng/L in the water samples collected on January 10, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. It's our understanding that a point-of-entry treatment (POET) system was installed on February 11, 2020. This system will be sampled in accordance with MassDEP requirements, and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you have any questions regarding this information.

Very truly yours,

TIGHE & BOND, INC.

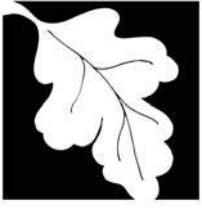


Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	18 Mountain Rd
Well Depth (feet)		UNKNOWN
Sampling Date		1/10/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		25
Perfluorohexanoic acid (PFHxA)		3.4
Perfluorohexanesulfonic acid (PFHxS)		150
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		6.4
Perfluorooctanesulfonic acid (PFOS)		61.0
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		245.8
Regulated Total	20	217.4

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 23, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0765

Enclosed are results of analyses for samples received by the laboratory on January 16, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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20A0765-01	5
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B250253	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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

REPORT DATE: 1/23/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0765

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
18 Mountain Rd	20A0765-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0765

Date Received: 1/16/2020

Field Sample #: 18 Mountain Rd

Sampled: 1/10/2020 14:00

Sample ID: 20A0765-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	25	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorohexanoic acid (PFHxA)	3.4	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorohexanesulfonic acid (PFHxS)	150	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorooctanoic acid (PFOA)	6.4	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorooctanesulfonic acid (PFOS)	61	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 20:12	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		90.4		70-130					1/21/20 20:12	
M3HFPO-DA		82.1		70-130					1/21/20 20:12	
13C-PFDA		80.5		70-130					1/21/20 20:12	
d5-NEtFOSAA		90.0		70-130					1/21/20 20:12	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0765-01 [18 Mountain Rd]	B250253	250	1.00	01/17/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

CHAIN OF CUSTODY RECORD
 39 Spruce Street
 East Longmeadow, MA 01028

con-test[®]
 ANALYTICAL LABORATORY
 JCH 20A0765
 Company Name: JCH 20A0765
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@con-testlabs.com
 Tighe & Bond
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number: Tighe & Bond
 Invoice Recipient: M. Scherer
 Sampled By: M. Scherer

Requested Turnaround Time		Dissolved Metals Samples		Orthophosphate Samples		Data Delivery				
7-Day	10-Day	Field Filtered	Lab to Filter	Field Filtered	Lab to Filter	PDF	EXCEL			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
PFAS 10-Day (std)		Due Date:		Rush-Approval Required						
1-Day	3-Day	Field Filtered	Lab to Filter	Field Filtered	Lab to Filter					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
2-Day	4-Day	Field Filtered	Lab to Filter	Field Filtered	Lab to Filter					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL										
Other: <input type="checkbox"/>										
CLP Like Data Pkg Required: <input type="checkbox"/>										
Email To: _____										
Fax To #: _____										
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	18 Mountain Rd	1/16/20	1/16/20	GRAB	DW	U		2		
Client Comments:										
Relinquished by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1700										
Received by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1700										
Relinquished by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1700										
Received by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1520										
Relinquished by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1815										
Received by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1815										
Relinquished by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1815										
Received by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1815										
Relinquished by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1815										
Received by: (signature) <i>[Signature]</i> Date/Time: 1/16/20 1815										

ANALYSIS REQUESTED

?	Preservation Code	?	Matrix Codes:
	Counter Use Only		GW = Ground Water
	Total Number Of:		WW = Waste Water
	VIALS _____		DW = Drinking Water
	GLASS _____		A = Air
	PLASTIC _____		S = Soil
	BACTERIA _____		SL = Sludge
	ENCORE _____		SOL = Solid
	Glassware in the fridge? Y/N		O = Other (please define)
	Glassware in freezer? Y/N		?
	Prepackaged Cooler? Y/N		Preservation Codes:
	*Contest is not responsible for missing samples from prepacked coolers		I = Iced
			H = HCL
			M = Methanol
			N = Nitric Acid
			S = Sulfuric Acid
			B = Sodium Bisulfate
			X = Sodium Hydroxide
			T = Sodium
			Thiosulfate
			O = Other (please define)

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

MA MCP Required MCF Certification Form Required CT RCP Required RCP Certification Form Required MA State DW Required PWSID # _____

Project Entity: Government Federal City Municipality 21 J Brownfield MWRA School MBTA WRTA Other Chromatogram AIMA-LAP, LLC Non Soxhlet Soxhlet PCB ONLY

Lab Comments: _____

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

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By [Signature] Date 11/16/20 Time 1815

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

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 5.3
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? F

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? n/a

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid n/a Base n/a

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Donna Brisbois
18 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
18 Prospect, Princeton**

Dear Ms. Brisbois:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 18 Prospect Street as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water samples collected on January 8, 2020. A copy of the lab report is attached to this letter.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

NOTES:

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

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0420

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light gray rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0420

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
18 Prospect St	20A0420-01	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0420

Date Received: 1/10/2020

Field Sample #: 18 Prospect St

Sampled: 1/8/2020 08:00

Sample ID: 20A0420-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 8:09	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		85.6		70-130					1/16/20 8:09	
M3HFPO-DA		80.4		70-130					1/16/20 8:09	
13C-PFDA		84.5		70-130					1/16/20 8:09	
d5-NEtFOSAA		95.4		70-130					1/16/20 8:09	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0420-01 [18 Prospect St]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T&B
 Received By RLF Date 11/01/20 Time 1825
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 °C
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? NA Were Samples Tampered with? NA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? NA MS/MSD? F
 Proper Media/Containers Used? F Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid NA Base NA

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

Unused Media

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

Comments:

S-1760
January 15, 2020

Mary Cadwallader
19 Hubbardston Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling**
19 Hubbardston Road, Princeton

Dear Ms. Caldwellader:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 19 Hubbardston Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 9.7 ng/L in the water samples collected on December 5, 2019, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

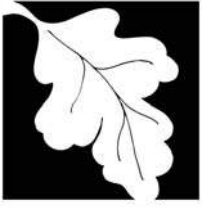
TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	19 Hubbardston Rd
Well Depth (feet)		340'
Sampling Date		12/5/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		2.9
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		9.7
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		12.6
Regulated Total	20	9.7

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

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

Bolded values exceed the proposed Method 1 Standard

December 13, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0339

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style and is set against a light gray rectangular background.

Jessica L. Hoffman
Project Manager

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Sample Summary	3
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19L0339-01	5
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B248078	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

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

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

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0339

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
19 Hubbardston Rd	19L0339-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Sample(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

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

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



Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0339

Date Received: 12/10/2019

Field Sample #: 19 Hubbardston Rd

Sampled: 12/5/2019 08:10

Sample ID: 19L0339-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	2.9	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorohexanesulfonic acid (PFHxS)	9.7	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 1:09	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		116		70-130					12/12/19 1:09	
M3HFPO-DA		106		70-130					12/12/19 1:09	
13C-PFDA		108		70-130					12/12/19 1:09	
d5-NEtFOSAA		120		70-130					12/12/19 1:09	

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

Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0339-01 [19 Hubbardston Rd]	B248078	250	1.00	12/11/19

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248078 - EPA 537										
Blank (B248078-BLK1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			
LCS (B248078-BS1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

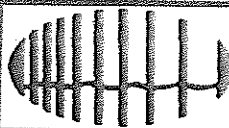
Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By AP Date 12/10/19 Time 20:30

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? N/A Acid _____ Base _____

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

Unused Media

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

Comments:

S-1760
February 19, 2020

Nichole Patterson
19 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
19 Mountain Road, Princeton**

Dear Ms. Patterson:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 19 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 10, 17, and 31, 2020 to monitor the granular activated carbon (GAC) point-of-entry treatment (POET) system that was installed in your home on January 10, 2020. The samples were submitted to Con-Test Analytical Laboratory (Con-Test) 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 sample dates 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 Standards (MCP, 310 CMR 40.0974)*.

Water quality results indicate that the POET system installed in your home is effectively removing PFAS from your drinking water, as there were no detections in the midfluent or effluent samples. Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you have any questions regarding this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

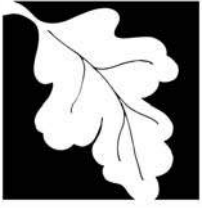
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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) |
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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

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

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

January 30, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0763

Enclosed are results of analyses for samples received by the laboratory on January 16, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/30/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0763

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
19 Mountain Rd INF	20A0763-01	Drinking Water		EPA 537.1	
19 Mountain Rd Mid	20A0763-02	Drinking Water		EPA 537.1	
19 Mountain Rd EFF	20A0763-03	Drinking Water		EPA 537.1	
19 Mountain Rd FB	20A0763-04	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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0763

Date Received: 1/16/2020

Field Sample #: 19 Mountain Rd INF

Sampled: 1/10/2020 15:00

Sample ID: 20A0763-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			MA	ORSG							
Perfluorobutanesulfonic acid (PFBS)	9.2	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorohexanesulfonic acid (PFHxS)	58	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorooctanoic acid (PFOA)	3.5	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorooctanesulfonic acid (PFOS)	48	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
N-EtFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
N-MeFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1		EPA 537.1	1/17/20	1/21/20 18:24	JFC
Surrogates		% Recovery	Recovery Limits				Flag/Qual				
13C-PFHxA		85.4	70-130							1/21/20 18:24	
M3HFPO-DA		75.2	70-130							1/21/20 18:24	
13C-PFDA		77.2	70-130							1/21/20 18:24	
d5-NEtFOSAA		87.9	70-130							1/21/20 18:24	

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Project Location: Princeton, MA

Sample Description:

Work Order: 20A0763

Date Received: 1/16/2020

Field Sample #: 19 Mountain Rd Mid

Sampled: 1/10/2020 15:00

Sample ID: 20A0763-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 18:46	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		87.9		70-130					1/21/20 18:46	
M3HFPO-DA		79.7		70-130					1/21/20 18:46	
13C-PFDA		77.7		70-130					1/21/20 18:46	
d5-NEtFOSAA		85.8		70-130					1/21/20 18:46	

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Project Location: Princeton, MA

Sample Description:

Work Order: 20A0763

Date Received: 1/16/2020

Field Sample #: 19 Mountain Rd EFF

Sampled: 1/10/2020 15:00

Sample ID: 20A0763-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:07	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	89.0	70-130	1/21/20 19:07
M3HFPO-DA	77.3	70-130	1/21/20 19:07
13C-PFDA	80.1	70-130	1/21/20 19:07
d5-NEtFOSAA	85.6	70-130	1/21/20 19:07

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Project Location: Princeton, MA

Sample Description:

Work Order: 20A0763

Date Received: 1/16/2020

Field Sample #: 19 Mountain Rd FB

Sampled: 1/10/2020 15:00

Sample ID: 20A0763-04

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:29	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	81.1	70-130	1/21/20 19:29
M3HFPO-DA	70.4	70-130	1/21/20 19:29
13C-PFDA	71.0	70-130	1/21/20 19:29
d5-NEtFOSAA	74.8	70-130	1/21/20 19:29

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0763-01 [19 Mountain Rd INF]	B250253	250	1.00	01/17/20
20A0763-02 [19 Mountain Rd Mid]	B250253	250	1.00	01/17/20
20A0763-03 [19 Mountain Rd EFF]	B250253	250	1.00	01/17/20
20A0763-04 [19 Mountain Rd FB]	B250253	250	1.00	01/17/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client T+B

Received By [Signature] Date 1/16/20 Time 1815

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

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 5.3
By Blank # _____ Actual Temp - _____

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

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

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? F

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? n/a

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? WRT

Acid n/a Base n/a

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

Unused Media

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

Comments:

January 30, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0981

Enclosed are results of analyses for samples received by the laboratory on January 22, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style and is set against a light gray rectangular background.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 1/30/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0981

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
19 Mountain Rd INF	20A0981-01	Drinking Water		EPA 537.1	
19 Mountain Rd MID	20A0981-02	Drinking Water		EPA 537.1	
19 Mountain Rd EFF	20A0981-03	Drinking Water		EPA 537.1	
19 Mountain Rd FB	20A0981-04	Drinking Water		EPA 537.1	
TB-01172020	20A0981-05	Trip Blank 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 the Con-Test Analytical Laboratory for testing.

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0981

Date Received: 1/22/2020

Field Sample #: 19 Mountain Rd INF

Sampled: 1/17/2020 15:00

Sample ID: 20A0981-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	28	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorohexanoic acid (PFHxA)	4.4	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorohexanesulfonic acid (PFHxS)	190	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluoroheptanoic acid (PFHpA)	2.3	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorooctanoic acid (PFOA)	8.9	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorooctanesulfonic acid (PFOS)	140	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:22	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		93.0		70-130					1/28/20 17:22	
M3HFPO-DA		90.0		70-130					1/28/20 17:22	
13C-PFDA		88.4		70-130					1/28/20 17:22	
d5-NEtFOSAA		94.1		70-130					1/28/20 17:22	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0981

Date Received: 1/22/2020

Field Sample #: 19 Mountain Rd MID

Sampled: 1/17/2020 15:00

Sample ID: 20A0981-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 17:44	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		94.7		70-130					1/28/20 17:44	
M3HFPO-DA		92.0		70-130					1/28/20 17:44	
13C-PFDA		87.4		70-130					1/28/20 17:44	
d5-NEtFOSAA		94.4		70-130					1/28/20 17:44	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0981

Date Received: 1/22/2020

Field Sample #: 19 Mountain Rd EFF

Sampled: 1/17/2020 15:00

Sample ID: 20A0981-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:05	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		97.4		70-130					1/28/20 18:05	
M3HFPO-DA		91.8		70-130					1/28/20 18:05	
13C-PFDA		91.2		70-130					1/28/20 18:05	
d5-NEtFOSAA		97.6		70-130					1/28/20 18:05	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0981

Date Received: 1/22/2020

Field Sample #: 19 Mountain Rd FB

Sampled: 1/17/2020 15:00

Sample ID: 20A0981-04

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:27	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		95.9		70-130					1/28/20 18:27	
M3HFPO-DA		93.7		70-130					1/28/20 18:27	
13C-PFDA		92.0		70-130					1/28/20 18:27	
d5-NEtFOSAA		94.1		70-130					1/28/20 18:27	

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0981

Date Received: 1/22/2020

Field Sample #: TB-01172020

Sampled: 1/22/2020 00:00

Sample ID: 20A0981-05

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/23/20	1/28/20 18:48	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		94.6		70-130					1/28/20 18:48	
M3HFPO-DA		90.9		70-130					1/28/20 18:48	
13C-PFDA		90.7		70-130					1/28/20 18:48	
d5-NEtFOSAA		95.1		70-130					1/28/20 18:48	

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0981-01 [19 Mountain Rd INF]	B250676	250	1.00	01/23/20
20A0981-02 [19 Mountain Rd MID]	B250676	250	1.00	01/23/20
20A0981-03 [19 Mountain Rd EFF]	B250676	250	1.00	01/23/20
20A0981-04 [19 Mountain Rd FB]	B250676	250	1.00	01/23/20
20A0981-05 [TB-01172020]	B250676	250	1.00	01/23/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250676 - EPA 537.1										
Blank (B250676-BLK1)										
Prepared: 01/23/20 Analyzed: 01/28/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	38.7		ng/L	40.0		96.9	70-130			
Surrogate: M3HFPO-DA	36.3		ng/L	40.0		90.8	70-130			
Surrogate: 13C-PFDA	37.6		ng/L	40.0		94.0	70-130			
Surrogate: d5-NEtFOSAA	159		ng/L	160		99.3	70-130			
LCS (B250676-BS1)										
Prepared: 01/23/20 Analyzed: 01/28/20										
Perfluorobutanesulfonic acid (PFBS)	9.40	2.0	ng/L	8.85		106	70-130			
Perfluorohexanoic acid (PFHxA)	9.62	2.0	ng/L	10.0		96.2	70-130			
Perfluorohexanesulfonic acid (PFHxS)	10.1	2.0	ng/L	9.10		111	70-130			
Perfluoroheptanoic acid (PFHpA)	10.3	2.0	ng/L	10.0		103	70-130			
Perfluorooctanoic acid (PFOA)	11.0	2.0	ng/L	10.0		110	70-130			
Perfluorooctanesulfonic acid (PFOS)	11.4	2.0	ng/L	9.25		123	70-130			
Perfluorononanoic acid (PFNA)	10.5	2.0	ng/L	10.0		105	70-130			
Perfluorodecanoic acid (PFDA)	10.7	2.0	ng/L	10.0		107	70-130			
N-EtFOSAA	12.0	2.0	ng/L	10.0		120	70-130			
Perfluoroundecanoic acid (PFUnA)	9.97	2.0	ng/L	10.0		99.7	70-130			
N-MeFOSAA	12.0	2.0	ng/L	10.0		120	70-130			
Perfluorododecanoic acid (PFDoA)	8.73	2.0	ng/L	10.0		87.3	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorotetradecanoic acid (PFTA)	7.77	2.0	ng/L	10.0		77.7	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	11.0	2.0	ng/L	10.0		110	70-130			
11Cl-PF3OUdS (F53B Major)	9.67	2.0	ng/L	9.40		103	70-130			
9Cl-PF3ONS (F53B Minor)	11.0	2.0	ng/L	9.30		118	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.56	2.0	ng/L	10.0		95.6	70-130			
Surrogate: 13C-PFHxA	37.1		ng/L	40.0		92.8	70-130			
Surrogate: M3HFPO-DA	36.0		ng/L	40.0		90.0	70-130			
Surrogate: 13C-PFDA	38.0		ng/L	40.0		95.1	70-130			
Surrogate: d5-NEtFOSAA	166		ng/L	160		104	70-130			

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B250676 - EPA 537.1

MRL Check (B250676-MRL1)

Prepared: 01/23/20 Analyzed: 01/28/20

Perfluorobutanesulfonic acid (PFBS)	1.95	2.0	ng/L	1.77		110	50-150			
Perfluorohexanoic acid (PFHxA)	2.26	2.0	ng/L	2.00		113	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.53	2.0	ng/L	1.82		139	50-150			
Perfluoroheptanoic acid (PFHpA)	2.16	2.0	ng/L	2.00		108	50-150			
Perfluorooctanoic acid (PFOA)	2.54	2.0	ng/L	2.00		127	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.34	2.0	ng/L	1.85		126	50-150			
Perfluorononanoic acid (PFNA)	2.39	2.0	ng/L	2.00		119	50-150			
Perfluorodecanoic acid (PFDA)	2.23	2.0	ng/L	2.00		112	50-150			
N-EtFOSAA	2.45	2.0	ng/L	2.00		123	50-150			
Perfluoroundecanoic acid (PFUnA)	1.99	2.0	ng/L	2.00		99.7	50-150			
N-MeFOSAA	2.40	2.0	ng/L	2.00		120	50-150			
Perfluorododecanoic acid (PFDoA)	1.76	2.0	ng/L	2.00		87.8	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.78	2.0	ng/L	2.00		88.9	50-150			
Perfluorotetradecanoic acid (PFTA)	1.67	2.0	ng/L	2.00		83.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.20	2.0	ng/L	2.00		110	50-150			
11Cl-PF3OUdS (F53B Major)	1.92	2.0	ng/L	1.88		102	50-150			
9Cl-PF3ONS (F53B Minor)	2.09	2.0	ng/L	1.86		112	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.97	2.0	ng/L	2.00		98.4	50-150			
Surrogate: 13C-PFHxA	38.7		ng/L	40.0		96.8	70-130			
Surrogate: M3HFPO-DA	37.3		ng/L	40.0		93.1	70-130			
Surrogate: 13C-PFDA	37.3		ng/L	40.0		93.3	70-130			
Surrogate: d5-NEtFOSAA	151		ng/L	160		94.7	70-130			

MRL Check (B250676-MRL2)

Prepared: 01/23/20 Analyzed: 01/28/20

Perfluorobutanesulfonic acid (PFBS)	2.22	2.0	ng/L	1.77		126	50-150			
Perfluorohexanoic acid (PFHxA)	2.21	2.0	ng/L	2.00		110	50-150			
Perfluorohexanesulfonic acid (PFHxS)	2.39	2.0	ng/L	1.82		131	50-150			
Perfluoroheptanoic acid (PFHpA)	2.39	2.0	ng/L	2.00		119	50-150			
Perfluorooctanoic acid (PFOA)	2.54	2.0	ng/L	2.00		127	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.62	2.0	ng/L	1.85		142	50-150			
Perfluorononanoic acid (PFNA)	2.36	2.0	ng/L	2.00		118	50-150			
Perfluorodecanoic acid (PFDA)	2.27	2.0	ng/L	2.00		114	50-150			
N-EtFOSAA	2.60	2.0	ng/L	2.00		130	50-150			
Perfluoroundecanoic acid (PFUnA)	2.00	2.0	ng/L	2.00		100	50-150			
N-MeFOSAA	2.57	2.0	ng/L	2.00		129	50-150			
Perfluorododecanoic acid (PFDoA)	1.78	2.0	ng/L	2.00		89.1	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.81	2.0	ng/L	2.00		90.4	50-150			
Perfluorotetradecanoic acid (PFTA)	1.65	2.0	ng/L	2.00		82.6	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	2.39	2.0	ng/L	2.00		120	50-150			
11Cl-PF3OUdS (F53B Major)	2.07	2.0	ng/L	1.88		110	50-150			
9Cl-PF3ONS (F53B Minor)	2.21	2.0	ng/L	1.86		119	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	2.05	2.0	ng/L	2.00		103	50-150			
Surrogate: 13C-PFHxA	38.5		ng/L	40.0		96.3	70-130			
Surrogate: M3HFPO-DA	36.2		ng/L	40.0		90.5	70-130			
Surrogate: 13C-PFDA	37.6		ng/L	40.0		93.9	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.3	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@con-test-labs.com



Company Name: **214 20A981**

Address: 120 Front Street, Worcester, MA 01608
Tighe & Bond
Princeton, MA

Project Name: Princeton Residential Well Sampling
Project Location: Princeton, MA

Project Number: P-0534
Project Manager: M. Scherer

Con-Test Quote Name/Number:
Invoice Recipient: Tighe & Bond
Sampled By: M. Scherer

ANALYSIS REQUESTED

Requested Turnaround Time: 7-Day 10-Day Field Filtered
 PFAS 10-Day (std) Due Date: Lab to Filter
 1-Day 3-Day Field Filtered
 2-Day 4-Day Lab to Filter
 Orthophosphate Samples

Data Delivery: PDF EXCEL

CLP Like Data Pkg Required:

Email To:

Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COM/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	19 Mountain Rd INF	1/17/20	1500	GRAB	DW	U			2		
2	19 Mountain Rd Mid								2		
3	19 Mountain Rd EFF								2		
4	19 Mountain Rd FB								1		
5	TB-0172020				DI				1		

Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*
 Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*
 Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*

Date/Time: 1/17/20 1700
 Date/Time: 1/17/20 1700
 Date/Time: 1/22/20 1300
 Date/Time: 1/22/20 1300
 Date/Time: 1/22/20 1525
 Date/Time: 1-22-2020

Special Requirements: MA MCP Required
 MCP Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 MA State DW Required

Detection Limit Requirements: MA CT Other

PWSID #

Project Entity: Government Municipality MWRA WRTA Other Chromatogram AHA-LAP, LLC School MBTA Non Soxhlet

PCB ONLY: Soxhlet Non Soxhlet

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

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

*Context is not responsible for missing samples from prepackaged coolers

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

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

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

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

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



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 - Rev 5 2017

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

Client T, B

Received By LR Date 1-22-2020 Time 1925

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -2.3
By Blank # _____ Actual Temp _____

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

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

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

Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? T On COC? T
Do all samples have the proper pH? NA Acid _____ Base _____

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

Unused Media

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

Comments:

February 7, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20B0055

Enclosed are results of analyses for samples received by the laboratory on February 3, 2020. 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, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 2/7/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0055

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

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
19 Mountain Rd INF	20B0055-01	Drinking Water		EPA 537.1	
19 Mountain Rd EFF	20B0055-02	Drinking Water		EPA 537.1	
19 Mountain Rd MID	20B0055-03	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Sample(s) Qualified:

Hexafluoropropylene oxide dimer :

S045369-CCV2, S045369-CCV3, S045369-CCV4, S045369-CCV5

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

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



Tod E. Kopycinski
Laboratory Director

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0055

Date Received: 2/3/2020

Field Sample #: 19 Mountain Rd INF

Sampled: 1/31/2020 15:30

Sample ID: 20B0055-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	6.3	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorohexanesulfonic acid (PFHxS)	38	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorooctanoic acid (PFOA)	3.0	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorooctanesulfonic acid (PFOS)	32	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:34	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	95.0	70-130	2/6/20 21:34
M3HFPO-DA	83.1	70-130	2/6/20 21:34
13C-PFDA	95.9	70-130	2/6/20 21:34
d5-NEtFOSAA	100	70-130	2/6/20 21:34

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0055

Date Received: 2/3/2020

Field Sample #: 19 Mountain Rd EFF

Sampled: 1/31/2020 15:30

Sample ID: 20B0055-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 21:55	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	95.9	70-130	2/6/20 21:55
M3HFPO-DA	84.0	70-130	2/6/20 21:55
13C-PFDA	98.5	70-130	2/6/20 21:55
d5-NEtFOSAA	104	70-130	2/6/20 21:55

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

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0055

Date Received: 2/3/2020

Field Sample #: 19 Mountain Rd MID

Sampled: 1/31/2020 15:30

Sample ID: 20B0055-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:17	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	95.6	70-130	2/6/20 22:17
M3HFPO-DA	83.5	70-130	2/6/20 22:17
13C-PFDA	92.3	70-130	2/6/20 22:17
d5-NEtFOSAA	91.6	70-130	2/6/20 22:17

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

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0055-01 [19 Mountain Rd INF]	B251512	250	1.00	02/04/20
20B0055-02 [19 Mountain Rd EFF]	B251512	250	1.00	02/04/20
20B0055-03 [19 Mountain Rd MID]	B251512	250	1.00	02/04/20

QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251512 - EPA 537.1										
Blank (B251512-BLK1)										
Prepared: 02/04/20 Analyzed: 02/06/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: M3HFPO-DA	36.0		ng/L	40.0		90.1	70-130			
Surrogate: 13C-PFDA	38.6		ng/L	40.0		96.6	70-130			
Surrogate: d5-NEtFOSAA	160		ng/L	160		99.8	70-130			
LCS (B251512-BS1)										
Prepared: 02/04/20 Analyzed: 02/06/20										
Perfluorobutanesulfonic acid (PFBS)	8.68	2.0	ng/L	8.85		98.0	70-130			
Perfluorohexanoic acid (PFHxA)	9.03	2.0	ng/L	10.0		90.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	9.15	2.0	ng/L	9.10		101	70-130			
Perfluoroheptanoic acid (PFHpA)	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorooctanoic acid (PFOA)	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.8	2.0	ng/L	9.25		117	70-130			
Perfluorononanoic acid (PFNA)	9.87	2.0	ng/L	10.0		98.7	70-130			
Perfluorodecanoic acid (PFDA)	9.13	2.0	ng/L	10.0		91.3	70-130			
N-EtFOSAA	9.36	2.0	ng/L	10.0		93.6	70-130			
Perfluoroundecanoic acid (PFUnA)	9.01	2.0	ng/L	10.0		90.1	70-130			
N-MeFOSAA	10.1	2.0	ng/L	10.0		101	70-130			
Perfluorododecanoic acid (PFDoA)	8.56	2.0	ng/L	10.0		85.6	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.27	2.0	ng/L	10.0		82.7	70-130			
Perfluorotetradecanoic acid (PFTA)	7.95	2.0	ng/L	10.0		79.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.42	2.0	ng/L	10.0		74.2	70-130			
11Cl-PF3OUdS (F53B Major)	8.83	2.0	ng/L	9.40		93.9	70-130			
9Cl-PF3ONS (F53B Minor)	9.58	2.0	ng/L	9.30		103	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.09	2.0	ng/L	10.0		80.9	70-130			
Surrogate: 13C-PFHxA	39.0		ng/L	40.0		97.6	70-130			
Surrogate: M3HFPO-DA	36.2		ng/L	40.0		90.6	70-130			
Surrogate: 13C-PFDA	37.1		ng/L	40.0		92.7	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.4	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

JLH 2000055

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http://www.contestlabs.com



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com

39 Spruce Street
 East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 10-Day 15-Day 20-Day
 Dissolved Metals Samples

Orthophosphate Samples

Company Name: Tighe & Bond
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer

7-Day PPSAS 10-Day (std) 10-Day 15-Day
 Rush Approval Required
 1-Day 3-Day 4-Day
 2-Day 4-Day
 Data Delivery: PDF EXCEL

Con-Test Quote Name/Number: Tighe & Bond
 Invoiced By: M. Scherer
 Sampled By: M. Scherer

Format: EXCEL
 Other:
 CLP Like Data Pkg Required:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP / GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	19 Mountain Rd INF	1/31/20	1/31/20	GRAB	DW	U			2		
2	19 Mountain Rd EFF								2		
3	19 Mountain Rd MID								2		

Relinquished by: (signature) *[Signature]* Date/Time: 2/3/20 0800
 Received by: (signature) *[Signature]* Date/Time: 2/4/20 0800
 Relinquished by: (signature) *[Signature]* Date/Time: 2/3/20 1415
 Received by: (signature) *[Signature]* Date/Time: 2/3/20 1115
 Relinquished by: (signature) *[Signature]* Date/Time: 2/7/20 1915
 Received by: (signature) *[Signature]* Date/Time: 2/7/20 1915

Detection Limit Requirements		Special Requirements	
MA	<input checked="" type="checkbox"/> MA MCP Required	MCP certification Form Required	<input type="checkbox"/>
CT	<input type="checkbox"/> CT RCP Required	CT RCP Required	<input type="checkbox"/>
Other:	<input type="checkbox"/> MA State DW Required	RCP certification Form Required	<input type="checkbox"/>
Project Entry	Government <input type="checkbox"/> Municipality <input type="checkbox"/> Federal <input type="checkbox"/> City <input type="checkbox"/>	AWRA <input type="checkbox"/> School <input type="checkbox"/> MBTA <input type="checkbox"/>	WRTA <input type="checkbox"/> Chromatogram <input type="checkbox"/> AFHA-LAP, LLC <input type="checkbox"/>

Client Comments:
 Preservation Codes:
 1 = Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)
 2 = Preservation Codes:
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)
 PCB ONLY
 Soxhlet
 Non Soxhlet
 Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown
 Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Tighe & Bond

Received By SA Date 2/3/2020 Time 1915

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

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 2.7
 By Blank # _____ Actual Temp - _____

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

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

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

Are Sample labels filled out and legible? T

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

Is there enough Volume? T

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

Do all samples have the proper pH? Acid F Base F

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

Unused Media

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

Comments:

S-1760
January 16, 2020

Nichole Patterson
19 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
19 Mountain Road, Princeton**

Dear Ms. Patterson:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 19 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 4, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 421 ng/L in the water samples collected on December 4, 2019, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. As you are aware, a point-of-entry treatment (POET) system was installed at your home to remove PFAS from your well water. This system will be sampled monthly and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)

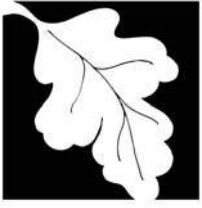
3. Description of property where sampling will be/has been conducted:

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.

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

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

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NOTICE OF ENVIRONMENTAL SAMPLING

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

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

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	19 Mountain Rd
Well Depth (feet)		UNKNOWN
Sampling Date		12/4/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		32
Perfluorohexanoic acid (PFHxA)		5.1
Perfluorohexanesulfonic acid (PFHxS)		220
Perfluoroheptanoic acid (PFHpA)		2.5
Perfluorooctanoic acid (PFOA)		11
Perfluorooctanesulfonic acid (PFOS)		190
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		460.6
Regulated Total	20	421

NOTES:

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

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

Bolded values exceed the proposed Method 1 Standard

December 13, 2019

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

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0338

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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

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

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0338

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
19 Mountain Rd	19L0338-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0338

Date Received: 12/10/2019

Field Sample #: 19 Mountain Rd

Sampled: 12/4/2019 15:10

Sample ID: 19L0338-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	32	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorohexanoic acid (PFHxA)	5.1	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorohexanesulfonic acid (PFHxS)	220	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluoroheptanoic acid (PFHpA)	2.5	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorooctanoic acid (PFOA)	11	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorooctanesulfonic acid (PFOS)	190	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	12/11/19	12/12/19 0:47	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		115		70-130					12/12/19 0:47	
M3HFPO-DA		103		70-130					12/12/19 0:47	
13C-PFDA		107		70-130					12/12/19 0:47	
d5-NEtFOSAA		126		70-130					12/12/19 0:47	

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Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0338-01 [19 Mountain Rd]	B248078	250	1.00	12/11/19

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248078 - EPA 537										
Blank (B248078-BLK1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			
LCS (B248078-BS1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,NY,NH,ME
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,NY,NH,ME
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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http://www.contestlabs.com

39 Spruce Street
East Longmeadow, MA 01028

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01608
Phone: 508-754-2201
Project Name: Princeton Residential Well Sampling
Project Location: Princeton, MA
Project Number: P-0534
Project Manager: M. Scherer
Con-Test Quote Name/Number: Tighe & Bond
Sampled By: M. Scherer

ANALYSIS REQUESTED

Requested Turnaround Time:
 7-Day
 10-Day
 14-Day
 30-Day
 60-Day
 90-Day
 120-Day
 180-Day
 240-Day
 300-Day
 360-Day
 420-Day
 480-Day
 540-Day
 600-Day
 660-Day
 720-Day
 780-Day
 840-Day
 900-Day
 960-Day
 1020-Day
 1080-Day
 1140-Day
 1200-Day
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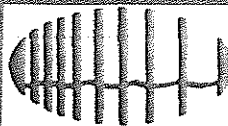
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I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B

Received By af Date 12/10/19 Time 20:30

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? N/A MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 19, 2020

Mary Hatch
20 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
20 Mountain Road, Princeton**

Dear Ms. Hatch:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 20 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 10, 2020 and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 86 ng/L in the water sample collected on January 10, 2020, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. It's our understanding that a point-of-entry treatment (POET) system was installed on February 11, 2020. This system will be sampled in accordance with MassDEP requirements, and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you have any questions regarding this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	20 Mountain Rd
Well Depth (feet)	UNKNOWN
Sampling Date	1/10/2020
EPA 537.1 (ng/L)	
Perfluorobutanesulfonic acid (PFBS)	12
Perfluorohexanoic acid (PFHxA)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)	60
Perfluoroheptanoic acid (PFHpA)	ND (2.0)
Perfluorooctanoic acid (PFOA)	3.5
Perfluorooctanesulfonic acid (PFOS)	22
Perfluorononanoic acid (PFNA)	ND (2.0)
Perfluorodecanoic acid (PFDA)	ND (2.0)
N-EtFOSAA	ND (2.0)
Perfluoroundecanoic acid (PFUnA)	ND (2.0)
N-MeFOSAA	ND (2.0)
Perfluorododecanoic acid (PFDoA)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)	ND (2.0)
Total (All Compounds)	97.5
Regulated Total	86

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated list.
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Containment Level

January 23, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0764

Enclosed are results of analyses for samples received by the laboratory on January 16, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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20A0764-01	5
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Semivolatile Organic Compounds by - LC/MS-MS	7
B250253	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/23/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0764

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
20 Mountain Rd	20A0764-01	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0764

Date Received: 1/16/2020

Field Sample #: 20 Mountain Rd

Sampled: 1/10/2020 14:20

Sample ID: 20A0764-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	12	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorohexanesulfonic acid (PFHxS)	60	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorooctanoic acid (PFOA)	3.5	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorooctanesulfonic acid (PFOS)	22	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/21/20 19:50	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.6	70-130	1/21/20 19:50
M3HFPO-DA	76.9	70-130	1/21/20 19:50
13C-PFDA	73.0	70-130	1/21/20 19:50
d5-NEtFOSAA	78.9	70-130	1/21/20 19:50

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0764-01 [20 Mountain Rd]	B250253	250	1.00	01/17/20

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B
 Received By [Signature] Date 1/16/20 Time 1815
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 5.3
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? F
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid n/a Base n/a

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 19, 2020

Robert and Paula Leary
21 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
21 Mountain Road, Princeton**

Dear Mr. and Mrs. Leary:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 21 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 24, 31, and February 7, 2020 to monitor the granular activated carbon (GAC) point-of-entry treatment (POET) system that was installed in your home on January 21, 2020. The samples were submitted to Con-Test Analytical Laboratory (Con-Test) 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 sample dates 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 Standards (MCP, 310 CMR 40.0974)*.

Water quality results indicate that the POET system installed in your home is effectively removing PFAS from your drinking water, as there were no detections in the midfluent or effluent samples. Tighe & Bond will continue to monitor the system in accordance with MassDEP requirements.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you have any questions regarding this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
 POET System Monitoring
 Princeton, Massachusetts
 RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	21 Mountain Rd										
		NA	NA	161			3,726			5,410		
		12/5/2020	1/21/2020	1/24/2020			1/31/2020			2/7/2020		
Flow Meter Reading (gallons)												
Sampling Date												
Notes			POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/l)												
Perfluorobutanesulfonic acid (PFBS)		8.2		7.5	ND (2.0)	ND (2.0)	5.5	ND (2.0)	ND (2.0)	4.3	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		2.4		2.0	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		53		47	ND (2.0)	ND (2.0)	37	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.4		4.6	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	5.4	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		44		37	ND (2.0)	ND (2.0)	35	ND (2.0)	ND (2.0)	26	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTTrDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		113		98.1	ND (2.0)	ND (2.0)	85.4	ND (2.0)	ND (2.0)	69.0	ND (2.0)	ND (2.0)
Regulated Total	20	102.4		88.6	ND (2.0)	ND (2.0)	77.7	ND (2.0)	ND (2.0)	61.5	ND (2.0)	ND (2.0)

NOTES:
 Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Containment Level

January 30, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1171

Enclosed are results of analyses for samples received by the laboratory on January 27, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
 120 Front St.
 Worcester, MA 01608-2303
 ATTN: Jeff Arps

REPORT DATE: 1/30/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1171

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
21 Mountain Rd INF	20A1171-01	Drinking Water		EPA 537.1	
21 Mountain Rd MID	20A1171-02	Drinking Water		EPA 537.1	
21 Mountain Rd EFF	20A1171-03	Drinking Water		EPA 537.1	
21 Mountain Rd FB	20A1171-04	Drinking Water		EPA 537.1	
TB-01212020	20A1171-05	Trip Blank 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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1171

Date Received: 1/27/2020

Field Sample #: 21 Mountain Rd INF

Sampled: 1/24/2020 09:30

Sample ID: 20A1171-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	7.5	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorohexanoic acid (PFHxA)	2.0	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorohexanesulfonic acid (PFHxS)	47	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorooctanoic acid (PFOA)	4.6	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorooctanesulfonic acid (PFOS)	37	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:06	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		85.6		70-130					1/29/20 22:06	
M3HFPO-DA		81.3		70-130					1/29/20 22:06	
13C-PFDA		82.6		70-130					1/29/20 22:06	
d5-NEtFOSAA		87.2		70-130					1/29/20 22:06	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1171

Date Received: 1/27/2020

Field Sample #: 21 Mountain Rd MID

Sampled: 1/24/2020 09:30

Sample ID: 20A1171-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:28	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		92.8		70-130					1/29/20 22:28	
M3HFPO-DA		85.9		70-130					1/29/20 22:28	
13C-PFDA		86.3		70-130					1/29/20 22:28	
d5-NEtFOSAA		83.4		70-130					1/29/20 22:28	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1171

Date Received: 1/27/2020

Field Sample #: 21 Mountain Rd EFF

Sampled: 1/24/2020 09:30

Sample ID: 20A1171-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 22:49	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		87.0		70-130					1/29/20 22:49	
M3HFPO-DA		83.7		70-130					1/29/20 22:49	
13C-PFDA		85.1		70-130					1/29/20 22:49	
d5-NEtFOSAA		89.4		70-130					1/29/20 22:49	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1171

Date Received: 1/27/2020

Field Sample #: 21 Mountain Rd FB

Sampled: 1/24/2020 09:30

Sample ID: 20A1171-04

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 23:11	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		84.3		70-130					1/29/20 23:11	
M3HFPO-DA		79.5		70-130					1/29/20 23:11	
13C-PFDA		78.9		70-130					1/29/20 23:11	
d5-NEtFOSAA		85.1		70-130					1/29/20 23:11	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1171

Date Received: 1/27/2020

Field Sample #: TB-01212020

Sampled: 1/24/2020 00:00

Sample ID: 20A1171-05

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 23:54	BLM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		86.4	70-130					1/29/20 23:54	
M3HFPO-DA		82.5	70-130					1/29/20 23:54	
13C-PFDA		84.1	70-130					1/29/20 23:54	
d5-NEtFOSAA		90.8	70-130					1/29/20 23:54	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1171-01 [21 Mountain Rd INF]	B250967	250	1.00	01/28/20
20A1171-02 [21 Mountain Rd MID]	B250967	250	1.00	01/28/20
20A1171-03 [21 Mountain Rd EFF]	B250967	250	1.00	01/28/20
20A1171-04 [21 Mountain Rd FB]	B250967	250	1.00	01/28/20
20A1171-05 [TB-01212020]	B250967	250	1.00	01/28/20

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250967 - EPA 537.1										
Blank (B250967-BLK1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.6		ng/L	40.0		89.1	70-130			
Surrogate: M3HFPO-DA	34.9		ng/L	40.0		87.2	70-130			
Surrogate: 13C-PFDA	34.3		ng/L	40.0		85.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			
LCS (B250967-BS1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	9.55	2.0	ng/L	8.85		108	70-130			
Perfluorohexanoic acid (PFHxA)	9.83	2.0	ng/L	10.0		98.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	10.5	2.0	ng/L	9.10		116	70-130			
Perfluoroheptanoic acid (PFHpA)	10.7	2.0	ng/L	10.0		107	70-130			
Perfluorooctanoic acid (PFOA)	10.9	2.0	ng/L	10.0		109	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.7	2.0	ng/L	9.25		115	70-130			
Perfluorononanoic acid (PFNA)	10.5	2.0	ng/L	10.0		105	70-130			
Perfluorodecanoic acid (PFDA)	9.78	2.0	ng/L	10.0		97.8	70-130			
N-EtFOSAA	11.4	2.0	ng/L	10.0		114	70-130			
Perfluoroundecanoic acid (PFUnA)	9.44	2.0	ng/L	10.0		94.4	70-130			
N-MeFOSAA	11.8	2.0	ng/L	10.0		118	70-130			
Perfluorododecanoic acid (PFDoA)	8.07	2.0	ng/L	10.0		80.7	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.04	2.0	ng/L	10.0		80.4	70-130			
Perfluorotetradecanoic acid (PFTA)	7.35	2.0	ng/L	10.0		73.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.4	2.0	ng/L	10.0		124	70-130			
11Cl-PF3OUdS (F53B Major)	9.50	2.0	ng/L	9.40		101	70-130			
9Cl-PF3ONS (F53B Minor)	10.6	2.0	ng/L	9.30		114	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.75	2.0	ng/L	10.0		97.5	70-130			
Surrogate: 13C-PFHxA	33.7		ng/L	40.0		84.3	70-130			
Surrogate: M3HFPO-DA	32.6		ng/L	40.0		81.4	70-130			
Surrogate: 13C-PFDA	33.1		ng/L	40.0		82.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06262019

http://www.con-testlabs.com

20A1171

Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@con-testlabs.com



Company Name: Tighe & Bond
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number: Tighe & Bond
 Invoice Recipient: Tighe & Bond
 Sampled By: M. Scherer

39 Spruce Street
 East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Requested: 7-Day PFAS 10-Day (std) 10-Day Field Filtered Lab to Filter 3-Day Field Filtered Lab to Filter 4-Day Field Filtered Lab to Filter Orthophosphate Samples

Request: Dissolved Metals Samples
 Due Date: Rush-Approval Required Data Delivery
 Format: PDF EXCEL

CLP Like Data Pkg Required:
 Email To: _____
 Fax To #: _____

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	Analysis Requested
1	21 Mountain rd INF	1/20/20	0930	GRAB	DW	U			2			X
2	21 Mountain rd MID								2			X
3	21 Mountain rd EFF								2			X
4	21 Mountain rd FB								1			X
5	TB-01242020								1			X

Relinquished by: (signature) _____ Date/Time: 1/20/20 1100
 Received by: (signature) _____ Date/Time: 1/20/20 1100
 Relinquished by: (signature) _____ Date/Time: _____
 Received by: (signature) _____ Date/Time: 1/27/20 1545
 Relinquished by: (signature) _____ Date/Time: 1/27/20 1500
 Received by: (signature) _____ Date/Time: 1/27/20 1500
 Relinquished by: (signature) _____ Date/Time: 1/27/20 1840
 Received by: (signature) _____ Date/Time: _____

Client Comments: _____
 MA MCP Required
 MA State DW Required
 MA Certification Form Required
 CT RCP Required
 RCP Certification Form Required
 PWSID # _____

Special Requirements: _____
 Government Municipality WRTA Other
 Federal City School MBTA Chromatogram
 Non Soxhlet Non Soxhlet AIHA-LAP, LLC

Lab Comments: _____
 Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B
 Received By mf Date 1/27/20 Time 18:00

How were the samples received?
 In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.9
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? N/A MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? RPT On COC? RPT
 Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

February 7, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20B0057

Enclosed are results of analyses for samples received by the laboratory on February 3, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 2/7/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0057

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
21 Mountain Rd INF	20B0057-01	Drinking Water		EPA 537.1	
21 Mountain Rd MID	20B0057-02	Drinking Water		EPA 537.1	
21 Mountain Rd EFF	20B0057-03	Drinking Water		EPA 537.1	
TB-01312020	20B0057-04	Trip Blank 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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Sample(s) Qualified:

Hexafluoropropylene oxide dimer :

S045369-CCV2, S045369-CCV3, S045369-CCV4, S045369-CCV5

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopycinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0057

Date Received: 2/3/2020

Field Sample #: 21 Mountain Rd INF

Sampled: 1/31/2020 15:00

Sample ID: 20B0057-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	5.5	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorohexanoic acid (PFHxA)	2.2	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorohexanesulfonic acid (PFHxS)	37	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorooctanoic acid (PFOA)	5.7	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorooctanesulfonic acid (PFOS)	35	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 22:38	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	92.0	70-130	2/6/20 22:38
M3HFPO-DA	83.6	70-130	2/6/20 22:38
13C-PFDA	95.8	70-130	2/6/20 22:38
d5-NEtFOSAA	96.3	70-130	2/6/20 22:38

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0057

Date Received: 2/3/2020

Field Sample #: 21 Mountain Rd MID

Sampled: 1/31/2020 15:00

Sample ID: 20B0057-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:21	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	96.1	70-130	2/6/20 23:21
M3HFPO-DA	86.3	70-130	2/6/20 23:21
13C-PFDA	98.9	70-130	2/6/20 23:21
d5-NEtFOSAA	100	70-130	2/6/20 23:21

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0057

Date Received: 2/3/2020

Field Sample #: 21 Mountain Rd EFF

Sampled: 1/31/2020 15:00

Sample ID: 20B0057-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/4/20	2/6/20 23:43	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	97.4	70-130	2/6/20 23:43
M3HFPO-DA	85.6	70-130	2/6/20 23:43
13C-PFDA	100	70-130	2/6/20 23:43
d5-NEtFOSAA	95.7	70-130	2/6/20 23:43

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0057

Date Received: 2/3/2020

Field Sample #: TB-01312020

Sampled: 1/31/2020 00:00

Sample ID: 20B0057-04

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	2/4/20	2/7/20 0:04	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	103	70-130	2/7/20 0:04
M3HFPO-DA	92.9	70-130	2/7/20 0:04
13C-PFDA	107	70-130	2/7/20 0:04
d5-NEtFOSAA	109	70-130	2/7/20 0:04

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0057-01 [21 Mountain Rd INF]	B251512	250	1.00	02/04/20
20B0057-02 [21 Mountain Rd MID]	B251512	250	1.00	02/04/20
20B0057-03 [21 Mountain Rd EFF]	B251512	250	1.00	02/04/20
20B0057-04 [TB-01312020]	B251512	250	1.00	02/04/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251512 - EPA 537.1										
Blank (B251512-BLK1)										
Prepared: 02/04/20 Analyzed: 02/06/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: M3HFPO-DA	36.0		ng/L	40.0		90.1	70-130			
Surrogate: 13C-PFDA	38.6		ng/L	40.0		96.6	70-130			
Surrogate: d5-NEtFOSAA	160		ng/L	160		99.8	70-130			
LCS (B251512-BS1)										
Prepared: 02/04/20 Analyzed: 02/06/20										
Perfluorobutanesulfonic acid (PFBS)	8.68	2.0	ng/L	8.85		98.0	70-130			
Perfluorohexanoic acid (PFHxA)	9.03	2.0	ng/L	10.0		90.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	9.15	2.0	ng/L	9.10		101	70-130			
Perfluoroheptanoic acid (PFHpA)	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorooctanoic acid (PFOA)	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.8	2.0	ng/L	9.25		117	70-130			
Perfluorononanoic acid (PFNA)	9.87	2.0	ng/L	10.0		98.7	70-130			
Perfluorodecanoic acid (PFDA)	9.13	2.0	ng/L	10.0		91.3	70-130			
N-EtFOSAA	9.36	2.0	ng/L	10.0		93.6	70-130			
Perfluoroundecanoic acid (PFUnA)	9.01	2.0	ng/L	10.0		90.1	70-130			
N-MeFOSAA	10.1	2.0	ng/L	10.0		101	70-130			
Perfluorododecanoic acid (PFDoA)	8.56	2.0	ng/L	10.0		85.6	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.27	2.0	ng/L	10.0		82.7	70-130			
Perfluorotetradecanoic acid (PFTA)	7.95	2.0	ng/L	10.0		79.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.42	2.0	ng/L	10.0		74.2	70-130			
11Cl-PF3OUdS (F53B Major)	8.83	2.0	ng/L	9.40		93.9	70-130			
9Cl-PF3ONS (F53B Minor)	9.58	2.0	ng/L	9.30		103	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.09	2.0	ng/L	10.0		80.9	70-130			
Surrogate: 13C-PFHxA	39.0		ng/L	40.0		97.6	70-130			
Surrogate: M3HFPO-DA	36.2		ng/L	40.0		90.6	70-130			
Surrogate: 13C-PFDA	37.1		ng/L	40.0		92.7	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.4	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Tighe & Bond

Received By SA Date 2/3/2020 Time 1915

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 2.7
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? T On COC? T

Do all samples have the proper pH? Acid F Base F

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

February 18, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20B0429

Enclosed are results of analyses for samples received by the laboratory on February 11, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 2/18/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0429

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
21 Mountain Rd. INF	20B0429-01	Drinking Water		EPA 537.1	
21 Mountain Rd. MID	20B0429-02	Drinking Water		EPA 537.1	
21 Mountain Rd. EFF	20B0429-03	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0429

Date Received: 2/11/2020

Field Sample #: 21 Mountain Rd. INF

Sampled: 2/7/2020 15:30

Sample ID: 20B0429-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	4.3	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorohexanoic acid (PFHxA)	3.2	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorohexanesulfonic acid (PFHxS)	28	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluoroheptanoic acid (PFHpA)	2.1	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorooctanoic acid (PFOA)	5.4	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorooctanesulfonic acid (PFOS)	26	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:20	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	82.2	70-130	2/14/20 4:20
M3HFPO-DA	77.2	70-130	2/14/20 4:20
13C-PFDA	88.9	70-130	2/14/20 4:20
d5-NEtFOSAA	85.9	70-130	2/14/20 4:20

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Project Location: Princeton, MA

Sample Description:

Work Order: 20B0429

Date Received: 2/11/2020

Field Sample #: 21 Mountain Rd. MID

Sampled: 2/7/2020 15:30

Sample ID: 20B0429-02

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 4:42	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	90.3	70-130	2/14/20 4:42
M3HFPO-DA	84.9	70-130	2/14/20 4:42
13C-PFDA	84.2	70-130	2/14/20 4:42
d5-NEtFOSAA	79.9	70-130	2/14/20 4:42

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Project Location: Princeton, MA

Sample Description:

Work Order: 20B0429

Date Received: 2/11/2020

Field Sample #: 21 Mountain Rd. EFF

Sampled: 2/7/2020 15:30

Sample ID: 20B0429-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:03	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	91.4	70-130	2/14/20 5:03
M3HFPO-DA	83.5	70-130	2/14/20 5:03
13C-PFDA	84.4	70-130	2/14/20 5:03
d5-NEtFOSAA	80.7	70-130	2/14/20 5:03

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0429-01 [21 Mountain Rd. INF]	B252068	250	1.00	02/12/20
20B0429-02 [21 Mountain Rd. MID]	B252068	250	1.00	02/12/20
20B0429-03 [21 Mountain Rd. EFF]	B252068	250	1.00	02/12/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B252068 - EPA 537.1

Blank (B252068-BLK1)

Prepared: 02/12/20 Analyzed: 02/14/20

Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	33.6		ng/L	40.0		84.0	70-130			
Surrogate: M3HFPO-DA	32.4		ng/L	40.0		81.0	70-130			
Surrogate: 13C-PFDA	35.7		ng/L	40.0		89.2	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.3	70-130			

LCS (B252068-BS1)

Prepared: 02/12/20 Analyzed: 02/14/20

Perfluorobutanesulfonic acid (PFBS)	16.5	2.0	ng/L	17.7		93.2	70-130			
Perfluorohexanoic acid (PFHxA)	18.9	2.0	ng/L	20.0		94.4	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.8	2.0	ng/L	18.2		97.6	70-130			
Perfluoroheptanoic acid (PFHpA)	18.9	2.0	ng/L	20.0		94.6	70-130			
Perfluorooctanoic acid (PFOA)	20.2	2.0	ng/L	20.0		101	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.3	2.0	ng/L	18.5		93.5	70-130			
Perfluorononanoic acid (PFNA)	19.9	2.0	ng/L	20.0		99.5	70-130			
Perfluorodecanoic acid (PFDA)	19.0	2.0	ng/L	20.0		95.0	70-130			
N-EtFOSAA	21.7	2.0	ng/L	20.0		108	70-130			
Perfluoroundecanoic acid (PFUnA)	18.6	2.0	ng/L	20.0		93.0	70-130			
N-MeFOSAA	19.2	2.0	ng/L	20.0		96.0	70-130			
Perfluorododecanoic acid (PFDoA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Perfluorotridecanoic acid (PFTrDA)	16.8	2.0	ng/L	20.0		84.1	70-130			
Perfluorotetradecanoic acid (PFTA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	17.0	2.0	ng/L	20.0		84.9	70-130			
11Cl-PF3OUdS (F53B Major)	16.0	2.0	ng/L	18.8		85.2	70-130			
9Cl-PF3ONS (F53B Minor)	17.3	2.0	ng/L	18.6		93.0	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.3	2.0	ng/L	20.0		86.5	70-130			
Surrogate: 13C-PFHxA	36.0		ng/L	40.0		90.0	70-130			
Surrogate: M3HFPO-DA	35.2		ng/L	40.0		88.0	70-130			
Surrogate: 13C-PFDA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: d5-NEtFOSAA	132		ng/L	160		82.6	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

Doc # 381 Rev 2_06/26/2019

http://www.contestlabs.com

Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com



Company Name: **JLH 2080425**
 Address: 120 Front Street, Worcester, MA 01608
 Phone: 508-754-2201
 Project Name: Princeton Residential Well Sampling
 Project Location: Princeton, MA
 Project Number: P-0534
 Project Manager: M. Scherer
 Con-Test Quote Name/Number:
 Invoice Recipient: Tighe & Bond
 Sampled By: M. Scherer

39 Spruce Street
 East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 7-Day 10-Day 15-Day

Due Date: 1-Day 3-Day 4-Day

Format: PDF EXCEL

CLP Like Data Pkg Required:

Email To:

Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	21 MOUNTAIN RD W/F	2/7/20	1530	GRAB	DW	U			2		
2	21 MOUNTAIN RD Mid								2		
3	21 MOUNTAIN RD EFF								2		

Relinquished by: (signature) *[Signature]* Date/Time: 2/7/20 1700
 Received by: (signature) *[Signature]* Date/Time: 2/7/20 1700
 Relinquished by: (signature) *[Signature]* Date/Time: 2/11/2020 1800
 Received by: (signature) *[Signature]* Date/Time: 2/11/2020 1800
 Relinquished by: (signature) *[Signature]* Date/Time: 2-11-2020 1800
 Received by: (signature) *[Signature]* Date/Time: 2-11-2020 1800

Client Comments:

Detection Limit Requirements: MA MA MCP Required
 CT MCP Certification Form Required
 Other: CT RCP Required
 RCP Certification Form Required
 MA State DW Required

Special Requirements: WRTA MWRA School MBTA MBTA

Project Entity: Government Municipality 21 J Federal Brownfield City

Other: Chromatogram ALPHA-LAP, LLC Non Soxhlet

1 Preservation Code: Counter Use Only
 Total Number Of: VIALS _____ GLASS _____ PLASTIC _____ BACTERIA _____ ENCORE _____
 Glassware in the fridge? Y/N _____
 Glassware in freezer? Y/N _____
 Prepackaged Cooler? Y/N _____
 *Contest is not responsible for missing samples from prepackaged coolers
 1 Matrix Codes: GW = Ground Water, WW = Waste Water, DW = Drinking Water, A = Air, S = Soil, SL = Sludge, SOL = Solid, O = Other (please define)
 2 Preservation Codes: I = Iced, H = HCL, M = Methanol, N = Nitric Acid, S = Sulfuric Acid, B = Sodium Bisulfate, X = Sodium Hydroxide, T = Sodium Thiosulfate, O = Other (please define)
 PCB ONLY: Soxhlet, Non Soxhlet
 Please use the following codes to indicate possible sample concentration within the Conc Code column above: H - High, M - Medium, L - Low; C - Clean; U - Unknown
 Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B

Received By U Date 2-11-2020 Time 1850

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -4.9
By Blank # _____ Actual Temp _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? NA

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid _____ Base _____

Vials	Containers			
Unp-	1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-	500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-	Other Glass		Other Plastic	Encore
Thiosulfate-	SOC Kit		Plastic Bag	Frozen:
Sulfuric-	Perchlorate		Ziplock	

Unused Media

Vials	Containers			
Unp-	1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-	500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-	Other Plastic		Other Glass	Encore
Thiosulfate-	SOC Kit		Plastic Bag	Frozen:
Sulfuric-	Perchlorate		Ziplock	

Comments:

S-1760
January 15, 2020

Robert and Paula Leary
21 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
21 Mountain Road, Princeton**

Dear Mr. & Mrs. Leary:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 21 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on December 5, 2019, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 102.4 ng/L in the water samples collected on December 5, 2019, which is above the MassDEP proposed MCL of 20 ng/L.

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

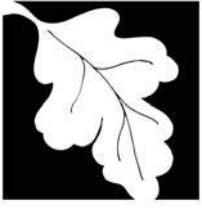
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan Proposed GW-1 Standard	21 Mountain Rd
Well Depth (feet)		490'
Sampling Date		12/5/2019
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		8.2
Perfluorohexanoic acid (PFHxA)		2.4
Perfluorohexanesulfonic acid (PFHxS)		53
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		5.4
Perfluorooctanesulfonic acid (PFOS)		44
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		113.0
Regulated Total	20	102.4

NOTES:

Gray colored cells indicate those compounds included in regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

December 13, 2019

Michael Scherer
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 19L0331

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. 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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19L0331-01	5
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B248078	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Michael Scherer

REPORT DATE: 12/13/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0331

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
21 Mountain Rd	19L0331-01	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.

EPA 537.1

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Sample(s) Qualified:

N-EtFOSAA

S043701-CCV1, S043701-CCV2

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 19L0331

Date Received: 12/10/2019

Field Sample #: 21 Mountain Rd

Sampled: 12/5/2019 12:00

Sample ID: 19L0331-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
			MA	ORSG					Prepared	Analyzed	
Perfluorobutanesulfonic acid (PFBS)	8.2	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorohexanoic acid (PFHxA)	2.4	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorohexanesulfonic acid (PFHxS)	53	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorooctanoic acid (PFOA)	5.4	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorooctanesulfonic acid (PFOS)	44	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
N-EtFOSAA	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
N-MeFOSAA	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1		EPA 537.1	12/11/19	12/11/19 21:55	BLM
Surrogates		% Recovery	Recovery Limits				Flag/Qual				
13C-PFHxA		110	70-130						12/11/19	21:55	
M3HFPO-DA		98.2	70-130						12/11/19	21:55	
13C-PFDA		102	70-130						12/11/19	21:55	
d5-NEtFOSAA		111	70-130						12/11/19	21:55	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19L0331-01 [21 Mountain Rd]	B248078	250	1.00	12/11/19

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248078 - EPA 537										
Blank (B248078-BLK1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	45.5		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.4		ng/L	40.0		106	70-130			
Surrogate: 13C-PFDA	40.6		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	185		ng/L	160		116	70-130			
LCS (B248078-BS1)										
Prepared & Analyzed: 12/11/19										
Perfluorobutanesulfonic acid (PFBS)	21.0	2.0	ng/L	20.0		105	70-130			
Perfluorohexanoic acid (PFHxA)	23.7	2.0	ng/L	20.0		119	70-130			
Perfluorohexanesulfonic acid (PFHxS)	20.7	2.0	ng/L	18.2		114	70-130			
Perfluoroheptanoic acid (PFHpA)	22.1	2.0	ng/L	20.0		111	70-130			
Perfluorooctanoic acid (PFOA)	23.1	2.0	ng/L	20.0		115	70-130			
Perfluorooctanesulfonic acid (PFOS)	22.0	2.0	ng/L	18.5		119	70-130			
Perfluorononanoic acid (PFNA)	22.6	2.0	ng/L	20.0		113	70-130			
Perfluorodecanoic acid (PFDA)	23.2	2.0	ng/L	20.0		116	70-130			
N-EtFOSAA	25.2	2.0	ng/L	20.0		126	70-130			
Perfluoroundecanoic acid (PFUnA)	24.4	2.0	ng/L	20.0		122	70-130			
N-MeFOSAA	22.9	2.0	ng/L	20.0		114	70-130			
Perfluorododecanoic acid (PFDoA)	22.1	2.0	ng/L	20.0		110	70-130			
Perfluorotridecanoic acid (PFTTrDA)	22.0	2.0	ng/L	20.0		110	70-130			
Perfluorotetradecanoic acid (PFTA)	20.9	2.0	ng/L	20.0		105	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.5	2.0	ng/L	20.0		102	70-130			
11Cl-PF3OUdS (F53B Major)	20.5	2.0	ng/L	18.8		109	70-130			
9Cl-PF3ONS (F53B Minor)	20.8	2.0	ng/L	18.6		112	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	21.8	2.0	ng/L	20.0		109	70-130			
Surrogate: 13C-PFHxA	45.7		ng/L	40.0		114	70-130			
Surrogate: M3HFPO-DA	42.0		ng/L	40.0		105	70-130			
Surrogate: 13C-PFDA	45.4		ng/L	40.0		114	70-130			
Surrogate: d5-NEtFOSAA	193		ng/L	160		120	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,NY,NH,ME
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,NY,NH,ME
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B

Received By ap Date 12/10/19 Time 20:30

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 3.6
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Who was notified? _____

Are there Lab to Filters? F

Who was notified? _____

Are there Rushes? F

Who was notified? _____

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? N/A

MS/MSD? F

Proper Media/Containers Used? T

Is splitting samples required? F

Were trip blanks received? F

On COC? F

Do all samples have the proper pH? N/A

Acid _____ Base _____

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 28, 2020

Philip and Leslie Kenney
21 Prospect Street
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
21 Prospect Street, Princeton**

Dear Mr. and Mrs. Kenney:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 21 Prospect Street 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 5, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on February 5, 2020.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

	-	
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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	21 Prospect St
Well Depth (feet)		UNKNOWN
Sampling Date		2/5/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

February 14, 2020

Joe Laughton
Massachusetts DEP - Worcester
8 New Bond Street
Worcester, MA 01606

Project Location: Princeton, MA
Client Job Number:
Project Number: 101979.00
Laboratory Work Order Number: 20B0263

Enclosed are results of analyses for samples received by the laboratory on February 6, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kaitlyn A. Feliciano
Project Manager

Table of Contents

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B251884	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Massachusetts DEP - Worcester
8 New Bond Street
Worcester, MA 01606
ATTN: Joe Laughton

REPORT DATE: 2/14/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 101979.00

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0263

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
21 Prospect St.	20B0263-01	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0263

Date Received: 2/6/2020

Field Sample #: 21 Prospect St.

Sampled: 2/5/2020 10:00

Sample ID: 20B0263-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/10/20	2/11/20 22:45	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		102		70-130					2/11/20 22:45	
M3HFPO-DA		104		70-130					2/11/20 22:45	
13C-PFDA		89.0		70-130					2/11/20 22:45	
d5-NEtFOSAA		89.9		70-130					2/11/20 22:45	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0263-01 [21 Prospect St.]	B251884	250	1.00	02/10/20

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B251884 - EPA 537.1										
Blank (B251884-BLK1)										
Prepared: 02/10/20 Analyzed: 02/11/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	40.3		ng/L	40.0		101	70-130			
Surrogate: M3HFPO-DA	41.3		ng/L	40.0		103	70-130			
Surrogate: 13C-PFDA	39.4		ng/L	40.0		98.6	70-130			
Surrogate: d5-NEtFOSAA	165		ng/L	160		103	70-130			
LCS (B251884-BS1)										
Prepared: 02/10/20 Analyzed: 02/11/20										
Perfluorobutanesulfonic acid (PFBS)	7.49	2.0	ng/L	8.85		84.6	70-130			
Perfluorohexanoic acid (PFHxA)	8.66	2.0	ng/L	10.0		86.6	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.20	2.0	ng/L	9.10		90.2	70-130			
Perfluoroheptanoic acid (PFHpA)	8.72	2.0	ng/L	10.0		87.2	70-130			
Perfluorooctanoic acid (PFOA)	8.83	2.0	ng/L	10.0		88.3	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.21	2.0	ng/L	9.25		88.8	70-130			
Perfluorononanoic acid (PFNA)	8.82	2.0	ng/L	10.0		88.2	70-130			
Perfluorodecanoic acid (PFDA)	8.35	2.0	ng/L	10.0		83.5	70-130			
N-EtFOSAA	9.55	2.0	ng/L	10.0		95.5	70-130			
Perfluoroundecanoic acid (PFUnA)	8.39	2.0	ng/L	10.0		83.9	70-130			
N-MeFOSAA	10.0	2.0	ng/L	10.0		100	70-130			
Perfluorododecanoic acid (PFDoA)	8.05	2.0	ng/L	10.0		80.5	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.15	2.0	ng/L	10.0		81.5	70-130			
Perfluorotetradecanoic acid (PFTA)	7.65	2.0	ng/L	10.0		76.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	9.15	2.0	ng/L	10.0		91.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.03	2.0	ng/L	9.40		85.4	70-130			
9Cl-PF3ONS (F53B Minor)	8.36	2.0	ng/L	9.30		89.9	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.05	2.0	ng/L	10.0		80.5	70-130			
Surrogate: 13C-PFHxA	41.2		ng/L	40.0		103	70-130			
Surrogate: M3HFPO-DA	41.5		ng/L	40.0		104	70-130			
Surrogate: 13C-PFDA	39.6		ng/L	40.0		99.0	70-130			
Surrogate: d5-NEtFOSAA	166		ng/L	160		104	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 - Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Mass Dep
 Received By [Signature] Date 2/16/20 Time 1615
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp 3.1
 By Blank # _____ Actual Temp _____
 Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? T
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? n/a MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid n/a Base n/a

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 19, 2020

Nabil Roufail
Manaro Realty Trust
7 Deer Run
Charlton, Massachusetts 01507

Re: **Public Water Supply Sampling
23 Hubbardston, Princeton**

Dear Mr. Roufail:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the public water supply well located at 23 Hubbardston Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the public water supply samples on January 10 and January 27, 2020 and Con Test Analytical Laboratory (Con-Test) of East Longmeadow, Massachusetts analyzed the samples for per-and polyfluoroalkyl substances (PFAS). Con-Test is a Massachusetts certified environmental laboratory.

A copy of the lab report for each sample date is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 9.0 and 8.7 ng/L, in the water samples collected on January 10 and 27, 2020, respectively, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
Paul Varney, Sr., Certified Water Operator, PO Box 339, Barre, MA 01005
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

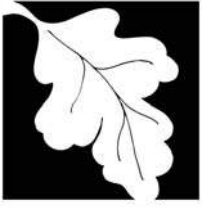
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	23 Hubbardston Rd	
		UNKNOWN	
Well Depth (feet)			
Sampling Date		1/10/2020	1/27/2020
EPA 537.1 (ng/L)			
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		4.9	5.0
Perfluorooctanesulfonic acid (PFOS)		4.1	3.7
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)
Total (All Compounds)		9.0	8.7
Regulated Total	20	9.0	8.7

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 23, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton Residential Well Sampling
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0578

Enclosed are results of analyses for samples received by the laboratory on January 13, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping underline.

Jessica L. Hoffman
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/23/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0578

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton Residential Well Sampling

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
23 Hubbardston Rd	20A0578-01	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton Residential Well Sampl

Sample Description:

Work Order: 20A0578

Date Received: 1/13/2020

Field Sample #: 23 Hubbardston Rd

Sampled: 1/10/2020 13:40

Sample ID: 20A0578-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorooctanoic acid (PFOA)	4.9	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorooctanesulfonic acid (PFOS)	4.1	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/17/20	1/22/20 19:44	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.6	70-130	1/22/20 19:44
M3HFPO-DA	79.6	70-130	1/22/20 19:44
13C-PFDA	83.2	70-130	1/22/20 19:44
d5-NEtFOSAA	83.7	70-130	1/22/20 19:44

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0578-01 [23 Hubbardston Rd]	B250253	250	1.00	01/17/20

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250253 - EPA 537.1										
Blank (B250253-BLK1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	34.7		ng/L	40.0		86.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.4	70-130			
Surrogate: 13C-PFDA	34.0		ng/L	40.0		84.9	70-130			
Surrogate: d5-NEtFOSAA	161		ng/L	160		101	70-130			
LCS (B250253-BS1)										
Prepared: 01/17/20 Analyzed: 01/22/20										
Perfluorobutanesulfonic acid (PFBS)	1.64	2.0	ng/L	1.77		92.9	50-150			
Perfluorohexanoic acid (PFHxA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	1.99	2.0	ng/L	1.82		109	50-150			
Perfluoroheptanoic acid (PFHpA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorooctanoic acid (PFOA)	1.90	2.0	ng/L	2.00		95.0	50-150			
Perfluorooctanesulfonic acid (PFOS)	1.63	2.0	ng/L	1.85		88.2	50-150			
Perfluorononanoic acid (PFNA)	1.70	2.0	ng/L	2.00		85.1	50-150			
Perfluorodecanoic acid (PFDA)	1.56	2.0	ng/L	2.00		78.2	50-150			
N-EtFOSAA	2.28	2.0	ng/L	2.00		114	50-150			
Perfluoroundecanoic acid (PFUnA)	1.61	2.0	ng/L	2.00		80.7	50-150			
N-MeFOSAA	1.74	2.0	ng/L	2.00		86.8	50-150			
Perfluorododecanoic acid (PFDoA)	1.31	2.0	ng/L	2.00		65.6	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.40	2.0	ng/L	2.00		70.0	50-150			
Perfluorotetradecanoic acid (PFTA)	1.21	2.0	ng/L	2.00		60.4	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	1.72	2.0	ng/L	2.00		86.0	50-150			
11Cl-PF3OUdS (F53B Major)	1.46	2.0	ng/L	1.88		77.5	50-150			
9Cl-PF3ONS (F53B Minor)	1.46	2.0	ng/L	1.86		78.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	1.37	2.0	ng/L	2.00		68.5	50-150			
Surrogate: 13C-PFHxA	34.3		ng/L	40.0		85.9	70-130			
Surrogate: M3HFPO-DA	32.2		ng/L	40.0		80.5	70-130			
Surrogate: 13C-PFDA	31.6		ng/L	40.0		79.1	70-130			
Surrogate: d5-NEtFOSAA	145		ng/L	160		90.6	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Tight & Bond
 Received By SA Date 1/13 Time 2000

How were the samples received?
 In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.8
 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
 Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name F
 Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____

Is there enough Volume? T
 Is there Headspace where applicable? NA MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? _____ On COC? F
 Do all samples have the proper pH? Acid NA Base NA

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

January 30, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1148

Enclosed are results of analyses for samples received by the laboratory on January 27, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style and is set against a light gray rectangular background.

Jessica L. Hoffman
Project Manager

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Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/30/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1148

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
23 Hubbardston Rd	20A1148-01	Drinking Water		EPA 537.1	
TB-01272020	20A1148-02	Trip Blank 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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1148

Date Received: 1/27/2020

Field Sample #: 23 Hubbardston Rd

Sampled: 1/27/2020 09:30

Sample ID: 20A1148-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorooctanoic acid (PFOA)	5.0	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorooctanesulfonic acid (PFOS)	3.7	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:23	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		84.4		70-130					1/29/20 21:23	
M3HFPO-DA		80.8		70-130					1/29/20 21:23	
13C-PFDA		79.4		70-130					1/29/20 21:23	
d5-NEtFOSAA		84.2		70-130					1/29/20 21:23	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1148

Date Received: 1/27/2020

Field Sample #: TB-01272020

Sampled: 1/27/2020 00:00

Sample ID: 20A1148-02

Sample Matrix: Trip Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	1/28/20	1/29/20 21:45	BLM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
13C-PFHxA		86.4	70-130					1/29/20 21:45	
M3HFPO-DA		82.6	70-130					1/29/20 21:45	
13C-PFDA		84.4	70-130					1/29/20 21:45	
d5-NEtFOSAA		93.7	70-130					1/29/20 21:45	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1148-01 [23 Hubbardston Rd]	B250967	250	1.00	01/28/20
20A1148-02 [TB-01272020]	B250967	250	1.00	01/28/20

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250967 - EPA 537.1										
Blank (B250967-BLK1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.6		ng/L	40.0		89.1	70-130			
Surrogate: M3HFPO-DA	34.9		ng/L	40.0		87.2	70-130			
Surrogate: 13C-PFDA	34.3		ng/L	40.0		85.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			
LCS (B250967-BS1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	9.55	2.0	ng/L	8.85		108	70-130			
Perfluorohexanoic acid (PFHxA)	9.83	2.0	ng/L	10.0		98.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	10.5	2.0	ng/L	9.10		116	70-130			
Perfluoroheptanoic acid (PFHpA)	10.7	2.0	ng/L	10.0		107	70-130			
Perfluorooctanoic acid (PFOA)	10.9	2.0	ng/L	10.0		109	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.7	2.0	ng/L	9.25		115	70-130			
Perfluorononanoic acid (PFNA)	10.5	2.0	ng/L	10.0		105	70-130			
Perfluorodecanoic acid (PFDA)	9.78	2.0	ng/L	10.0		97.8	70-130			
N-EtFOSAA	11.4	2.0	ng/L	10.0		114	70-130			
Perfluoroundecanoic acid (PFUnA)	9.44	2.0	ng/L	10.0		94.4	70-130			
N-MeFOSAA	11.8	2.0	ng/L	10.0		118	70-130			
Perfluorododecanoic acid (PFDoA)	8.07	2.0	ng/L	10.0		80.7	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.04	2.0	ng/L	10.0		80.4	70-130			
Perfluorotetradecanoic acid (PFTA)	7.35	2.0	ng/L	10.0		73.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.4	2.0	ng/L	10.0		124	70-130			
11Cl-PF3OUdS (F53B Major)	9.50	2.0	ng/L	9.40		101	70-130			
9Cl-PF3ONS (F53B Minor)	10.6	2.0	ng/L	9.30		114	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.75	2.0	ng/L	10.0		97.5	70-130			
Surrogate: 13C-PFHxA	33.7		ng/L	40.0		84.3	70-130			
Surrogate: M3HFPO-DA	32.6		ng/L	40.0		81.4	70-130			
Surrogate: 13C-PFDA	33.1		ng/L	40.0		82.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B

Received By [Signature] Date 1/27/20 Time 18:00

How were the samples received? In Cooler T No Cooler _____ On Ice + No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.4
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F Were samples received within holding time? T

Is COC in ink/ Legible? T Did COC include all pertinent Information? Client T Project T
Analysis ID's T Sampler Name T Collection Dates/Times T

Are Sample labels filled out and legible? T Who was notified? _____
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F

Is there enough Volume? T MS/MSD? F
Is there Headspace where applicable? N/A Is splitting samples required? F
Proper Media/Containers Used? T On COC? Fu/T
Were trip blanks received? Fu/T Acid _____ Base _____
Do all samples have the proper pH? N/A

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 19, 2020

June Davenport
24 Boylston Ave
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
24 Boylston Ave, Princeton**

Dear Ms. Davenport:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 24 Boylston Ave as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 9, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water samples collected on January 9, 2020.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup



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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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) |
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	24 Boylston Ave
Well Depth (feet)		~200'
Sampling Date		1/9/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total
 ND = Not detected above the lab reporting limits shown in parentheses.
 Bolded values exceed the proposed Method 1 Standard
 MMCL is Massachusetts Maximum Containment Level

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0423

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light gray rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman
Project Manager

Table of Contents

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B249867	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0423

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
24 Boylston Ave	20A0423-01	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0423

Date Received: 1/10/2020

Field Sample #: 24 Boylston Ave

Sampled: 1/9/2020 10:10

Sample ID: 20A0423-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/13/20	1/16/20 9:14	JFC
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
13C-PFHxA		86.8	70-130						1/16/20 9:14	
M3HFPO-DA		81.8	70-130						1/16/20 9:14	
13C-PFDA		81.3	70-130						1/16/20 9:14	
d5-NEtFOSAA		87.3	70-130						1/16/20 9:14	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0423-01 [24 Boylston Ave]	B249867	250	1.00	01/13/20

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
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Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
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11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T & B

Received By RLF Date 11/10/20 Time 1825

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 C
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T MS/MSD? F

Were trip blanks received? F Is splitting samples required? F

Do all samples have the proper pH? _____ On COC? F

Acid NA Base NA

Vials	#	Containers	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	2	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

S-1760
February 19, 2020

Timothy and Sherry Corcoran
29 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
29 Mountain Road, Princeton**

Dear Mr. and Mrs. Corcoran:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 6 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 8, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS) and Total Petroleum Hydrocarbons (TPH). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L) or parts per trillion (ppt) for the combined total of six specific PFAS compounds.

Your laboratory results indicate total regulated PFAS concentrations were reported at a concentration of 117.3 ng/L in the water samples collected on January 8, 2020, which is above the MassDEP proposed MCL of 20 ng/L. TPH was not detected in your samples

Based on the PFAS concentration detected in your well, MassDEP has determined that your water supply should not be used in the long-term without treatment. Therefore, MassDEP is requiring the Town of Princeton to provide you with bottled water temporarily while we work with you to install a point-of-entry treatment (POET) system that will remove PFAS from your well water. This system will be sampled monthly following installation and the sampling schedule may be modified based on system performance. It is our understanding that your POET will be installed on February 24, 2020.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, if you wish to discuss this information.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ Zip Code: _____

C. This notice is being given to inform its recipient (the party listed in Section B):

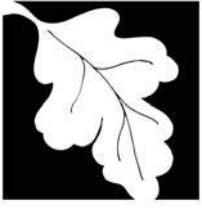
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	29 Mountain Rd	
		500'	
Well Depth (feet)			
Sampling Date		1/8/2020	1/8/2020
			FIELD BLANK
EPA 537.1 (ng/L)			
Perfluorobutanesulfonic acid (PFBS)		9.6	ND (2.0)
Perfluorohexanoic acid (PFHxA)		2.5	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		59	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.3	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		53	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)
Total (All Compounds)		129.4	ND (2.0)
Regulated Total	20	117.3	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 17, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0411

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. 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
Case Narrative	4
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20A0411-01	5
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QC Data	7
Petroleum Hydrocarbons Analyses	7
B250048	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/17/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0411

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
29 Mountain Road	20A0411-01	Drinking Water		SW-846 8015C	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8015C

Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0411

Date Received: 1/10/2020

Field Sample #: 29 Mountain Road

Sampled: 1/8/2020 09:20

Sample ID: 20A0411-01

Sample Matrix: Drinking Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diesel Range Organics	ND	0.25	mg/L	1		SW-846 8015C	1/15/20	1/16/20 19:14	RDD
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	70.4		40-140					1/16/20 19:14	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0411-01 [29 Mountain Road]	B250048	790	1.00	01/15/20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250048 - SW-846 3510C										
Blank (B250048-BLK1)										
					Prepared: 01/15/20 Analyzed: 01/16/20					
Diesel Range Organics	ND	0.20	mg/L							
Surrogate: 2-Fluorobiphenyl	0.0740		mg/L	0.100		74.0	40-140			
LCS (B250048-BS1)										
					Prepared: 01/15/20 Analyzed: 01/16/20					
Diesel Range Organics	0.625	0.20	mg/L	1.00		62.5	40-140			
Surrogate: 2-Fluorobiphenyl	0.0668		mg/L	0.100		66.8	40-140			
LCS Dup (B250048-BSD1)										
					Prepared: 01/15/20 Analyzed: 01/16/20					
Diesel Range Organics	0.554	0.20	mg/L	1.00		55.4	40-140	12.0		
Surrogate: 2-Fluorobiphenyl	0.0599		mg/L	0.100		59.9	40-140			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>SW-846 8015C in Soil</i>	
Diesel Range Organics	NY,VA,NH,NC
<i>SW-846 8015C in Water</i>	
Diesel Range Organics	NY,VA,NH,NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

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AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
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RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
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FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
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VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

20A0411

Doc # 381 Rev 2_06262019

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

http://www.contestlabs.com

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com



JUKI

Requested Turnaround Time: 7-Day 10-Day 15-Day 30-Day Rush Approval Required 3-Day 4-Day 5-Day 7-Day 10-Day (std) Due Date: _____

Requested Analysis: Field Filtered Lab to Filter Orthophosphate Samples Field Filtered Lab to Filter Dissolved Metals Samples Orthophosphate Samples

Format: PDF EXCEL Data Delivery

Other: _____

CLP Like Data Pkg Required:

Email To: _____

Fax To #: _____

Company Name: _____

Address: 120 Front Street, Worcester, MA 01608

Phone: 508-754-2201

Project Name: Princeton Residential Well Sampling

Project Location: Princeton, MA

Project Number: P-0534

Project Manager: M. Scherer

Con-Test Quote Name/Number: Tighe & Bond

Invoice Recipient: M. Scherer

Sampled By: M. Scherer

Client Sample ID / Description: 29 MONTANA Rd

Beginning Date/Time: 1/8/20 0920

Ending Date/Time: _____

COMP/GRAM: CR

Matrix Code: PW

Conc Code: _____

VIALS: 1

GLASS: _____

PLASTIC: _____

BACTERIA: _____

ENCORE: _____

1- Day 2- Day 3- Day 4- Day 5- Day 7- Day 10- Day (std) Due Date: _____

Field Filtered Lab to Filter Orthophosphate Samples Field Filtered Lab to Filter

Format: PDF EXCEL Data Delivery

Other: _____

CLP Like Data Pkg Required:

Email To: _____

Fax To #: _____

Company Name: _____

Address: 120 Front Street, Worcester, MA 01608

Phone: 508-754-2201

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Fax To #: _____

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COMP/GRAM: CR

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Project Location: Princeton, MA

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GLASS: _____

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ENCORE: _____

1- Day 2- Day 3- Day 4- Day 5- Day 7- Day 10- Day (std) Due Date: _____

Field Filtered Lab to Filter Orthophosphate Samples Field Filtered Lab to Filter

Format: PDF EXCEL Data Delivery

Other: _____

CLP Like Data Pkg Required:

Email To: _____

Fax To #: _____

Company Name: _____

Address: 120 Front Street, Worcester, MA 01608

Phone: 508-754-2201

Project Name: Princeton Residential Well Sampling

Project Location: Princeton, MA

Project Number: P-0534

Project Manager: M. Scherer

Con-Test Quote Name/Number: Tighe & Bond

Invoice Recipient: M. Scherer

Sampled By: M. Scherer

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B

Received By [Signature] Date 11/10/20 Time 1825

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 38
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T (limited)

Is there Headspace where applicable? n/a

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid n/a Base n/a

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.	1	1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

January 21, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A0418

Enclosed are results of analyses for samples received by the laboratory on January 10, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/21/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0418

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
29 Mountain Road	20A0418-01	Drinking Water		EPA 537.1	
29 Mountain Road FB	20A0418-02	Field Blank		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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0418

Date Received: 1/10/2020

Field Sample #: 29 Mountain Road

Sampled: 1/8/2020 09:10

Sample ID: 20A0418-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			MA	ORSG							
Perfluorobutanesulfonic acid (PFBS)	9.6	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorohexanoic acid (PFHxA)	2.5	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorohexanesulfonic acid (PFHxS)	59	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorooctanoic acid (PFOA)	5.3	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorooctanesulfonic acid (PFOS)	53	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorononanoic acid (PFNA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
N-EtFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
N-MeFOSAA	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0			ng/L	1		EPA 537.1	1/13/20	1/16/20 7:05	JFC
Surrogates		% Recovery	Recovery Limits				Flag/Qual				
13C-PFHxA		90.9	70-130							1/16/20 7:05	
M3HFPO-DA		83.3	70-130							1/16/20 7:05	
13C-PFDA		89.4	70-130							1/16/20 7:05	
d5-NEtFOSAA		96.8	70-130							1/16/20 7:05	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A0418

Date Received: 1/10/2020

Field Sample #: 29 Mountain Road FB

Sampled: 1/8/2020 09:10

Sample ID: 20A0418-02

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
N-EtFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
N-MeFOSAA	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L	1		EPA 537.1	1/13/20	1/16/20 7:26	JFC

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	88.8	70-130	1/16/20 7:26
M3HFPO-DA	83.0	70-130	1/16/20 7:26
13C-PFDA	90.8	70-130	1/16/20 7:26
d5-NEtFOSAA	94.2	70-130	1/16/20 7:26

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0418-01 [29 Mountain Road]	B249867	250	1.00	01/13/20
20A0418-02 [29 Mountain Road FB]	B249867	250	1.00	01/13/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249867 - EPA 537.1										
Blank (B249867-BLK1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	36.4		ng/L	40.0		90.9	70-130			
Surrogate: M3HFPO-DA	34.1		ng/L	40.0		85.2	70-130			
Surrogate: 13C-PFDA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		98.1	70-130			
LCS (B249867-BS1)										
Prepared: 01/13/20 Analyzed: 01/16/20										
Perfluorobutanesulfonic acid (PFBS)	8.34	2.0	ng/L	8.85		94.2	70-130			
Perfluorohexanoic acid (PFHxA)	8.69	2.0	ng/L	10.0		86.9	70-130			
Perfluorohexanesulfonic acid (PFHxS)	8.60	2.0	ng/L	9.10		94.5	70-130			
Perfluoroheptanoic acid (PFHpA)	9.12	2.0	ng/L	10.0		91.2	70-130			
Perfluorooctanoic acid (PFOA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorooctanesulfonic acid (PFOS)	8.87	2.0	ng/L	9.25		95.9	70-130			
Perfluorononanoic acid (PFNA)	9.09	2.0	ng/L	10.0		90.9	70-130			
Perfluorodecanoic acid (PFDA)	9.50	2.0	ng/L	10.0		95.0	70-130			
N-EtFOSAA	11.2	2.0	ng/L	10.0		112	70-130			
Perfluoroundecanoic acid (PFUnA)	9.23	2.0	ng/L	10.0		92.3	70-130			
N-MeFOSAA	10.4	2.0	ng/L	10.0		104	70-130			
Perfluorododecanoic acid (PFDoA)	8.34	2.0	ng/L	10.0		83.4	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.10	2.0	ng/L	10.0		81.0	70-130			
Perfluorotetradecanoic acid (PFTA)	7.68	2.0	ng/L	10.0		76.8	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.95	2.0	ng/L	10.0		89.5	70-130			
11Cl-PF3OUdS (F53B Major)	8.65	2.0	ng/L	9.40		92.0	70-130			
9Cl-PF3ONS (F53B Minor)	9.09	2.0	ng/L	9.30		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	8.53	2.0	ng/L	10.0		85.3	70-130			
Surrogate: 13C-PFHxA	37.5		ng/L	40.0		93.8	70-130			
Surrogate: M3HFPO-DA	36.5		ng/L	40.0		91.3	70-130			
Surrogate: 13C-PFDA	39.0		ng/L	40.0		97.5	70-130			
Surrogate: d5-NEtFOSAA	162		ng/L	160		101	70-130			

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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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

20A0418

http://www.contestlabs.com

Doc # 381 Rev 2_06/2019

CHAIN OF CUSTODY RECORD
39 Spruce Street
East Longmeadow, MA 01028

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

Company Name: Tighe & Bond
Address: 120 Front Street, Worcester, MA 01608
Phone: 508-754-2201
Project Location: Princeton Residential Well Sampling, Princeton, MA
Project Number: P-0534
Project Manager: M. Scherer
Con-Test Quote Name/Number:
Invoice Recipient: Tighe & Bond
Sampled By: M. Scherer

Requested Turnaround Time:
7-Day PFAS 10-Day (std) 10-Day
Rush Approval Required:
1-Day 2-Day 3-Day 4-Day
Format: PDF EXCEL
Other: EXCEL
CLP Like Data Pkg Required:
Email To:
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	CDMP/GRAS	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
01	29 MOUNTAIN Rd	11/8/20	0910	G	DW	-				3	
02	29 MOUNTAIN Rd FS	11/8/20	0910	G	DW	-				3	

2 Preservation Code
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y/N
Glassware in freezer? Y/N
Prepackaged Cooler? Y/N
*Context is not responsible for missing samples from prepackaged coolers

1 Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
SL = Sludge
SOL = Solid
O = Other (please define)

2 Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Client Comments:

Date/Time: 11/8/20
Date/Time: 11/8/20
Date/Time: 11/8/20
Date/Time: 11/8/20
Date/Time: 11/8/20
Date/Time: 11/8/20

Detection Limit Requirements
MA MA MCP Required
MA MCP Certification Form Required
CT CT RCP Required
CT RCP Certification Form Required
MA State DW Required

Project Entity
Government
Federal
City
Municipality
21 J
Brownfield
MWRA
School
MBTA
WRMA
Chromatogram
AIMA-LAP, LLC
Non Soxhlet

Other
Chromatogram
AIMA-LAP, LLC
Non Soxhlet

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T&B

Received By RLF Date 11/10/20 Time 1825

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -3.8 °C
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? _____

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid NA Base NA

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 28, 2020

Daniel and Cheryl Ervin
30 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
30 Mountain Road, Princeton**

Dear Mr. and Mrs. Ervin:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 30 Mountain Road as part of environmental monitoring required by the Massachusetts Department of Environmental Protection (MassDEP).

Tighe & Bond personnel collected the residential well water samples on January 27, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that the total regulated PFAS concentration was reported at 16 ng/L in the water samples collected on January 27, 2020, which is below the MassDEP proposed MCL of 20 ng/L.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	30 Mountain Rd
Well Depth (feet)		UNKNOWN
Sampling Date		1/27/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		<2.0
Perfluorohexanoic acid (PFHxA)		<2.0
Perfluorohexanesulfonic acid (PFHxS)		4.4
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		6.1
Perfluorooctanesulfonic acid (PFOS)		5.4
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		15.9
Regulated Total	20	16

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

January 30, 2020

Jeff Arps
Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303

Project Location: Princeton, MA
Client Job Number:
Project Number: P-0534
Laboratory Work Order Number: 20A1146

Enclosed are results of analyses for samples received by the laboratory on January 27, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping tail on the letter "n".

Jessica L. Hoffman
Project Manager

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B250967	7
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Tighe & Bond, Inc. - Worcester
120 Front St.
Worcester, MA 01608-2303
ATTN: Jeff Arps

REPORT DATE: 1/30/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A1146

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30 Mountain Rd	20A1146-01	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20A1146

Date Received: 1/27/2020

Field Sample #: 30 Mountain Rd

Sampled: 1/27/2020 10:00

Sample ID: 20A1146-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorohexanesulfonic acid (PFHxS)	4.4	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorooctanoic acid (PFOA)	6.1	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorooctanesulfonic acid (PFOS)	5.4	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	1/28/20	1/29/20 21:02	BLM
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		89.2		70-130					1/29/20 21:02	
M3HFPO-DA		83.8		70-130					1/29/20 21:02	
13C-PFDA		87.0		70-130					1/29/20 21:02	
d5-NEtFOSAA		94.8		70-130					1/29/20 21:02	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A1146-01 [30 Mountain Rd]	B250967	250	1.00	01/28/20

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	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250967 - EPA 537.1										
Blank (B250967-BLK1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	35.6		ng/L	40.0		89.1	70-130			
Surrogate: M3HFPO-DA	34.9		ng/L	40.0		87.2	70-130			
Surrogate: 13C-PFDA	34.3		ng/L	40.0		85.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			
LCS (B250967-BS1)										
Prepared: 01/28/20 Analyzed: 01/29/20										
Perfluorobutanesulfonic acid (PFBS)	9.55	2.0	ng/L	8.85		108	70-130			
Perfluorohexanoic acid (PFHxA)	9.83	2.0	ng/L	10.0		98.3	70-130			
Perfluorohexanesulfonic acid (PFHxS)	10.5	2.0	ng/L	9.10		116	70-130			
Perfluoroheptanoic acid (PFHpA)	10.7	2.0	ng/L	10.0		107	70-130			
Perfluorooctanoic acid (PFOA)	10.9	2.0	ng/L	10.0		109	70-130			
Perfluorooctanesulfonic acid (PFOS)	10.7	2.0	ng/L	9.25		115	70-130			
Perfluorononanoic acid (PFNA)	10.5	2.0	ng/L	10.0		105	70-130			
Perfluorodecanoic acid (PFDA)	9.78	2.0	ng/L	10.0		97.8	70-130			
N-EtFOSAA	11.4	2.0	ng/L	10.0		114	70-130			
Perfluoroundecanoic acid (PFUnA)	9.44	2.0	ng/L	10.0		94.4	70-130			
N-MeFOSAA	11.8	2.0	ng/L	10.0		118	70-130			
Perfluorododecanoic acid (PFDoA)	8.07	2.0	ng/L	10.0		80.7	70-130			
Perfluorotridecanoic acid (PFTTrDA)	8.04	2.0	ng/L	10.0		80.4	70-130			
Perfluorotetradecanoic acid (PFTA)	7.35	2.0	ng/L	10.0		73.5	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	12.4	2.0	ng/L	10.0		124	70-130			
11Cl-PF3OUdS (F53B Major)	9.50	2.0	ng/L	9.40		101	70-130			
9Cl-PF3ONS (F53B Minor)	10.6	2.0	ng/L	9.30		114	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	9.75	2.0	ng/L	10.0		97.5	70-130			
Surrogate: 13C-PFHxA	33.7		ng/L	40.0		84.3	70-130			
Surrogate: M3HFPO-DA	32.6		ng/L	40.0		81.4	70-130			
Surrogate: 13C-PFDA	33.1		ng/L	40.0		82.6	70-130			
Surrogate: d5-NEtFOSAA	146		ng/L	160		91.4	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test[®]
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client T+B
 Received By [Signature] Date 1/27/20 Time 18:00
 How were the samples received? In Cooler T No Cooler _____ On Ice + No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.4
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? N/A MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

S-1760
February 28, 2020

O'Neill Mazyk
33 Mountain Road
Princeton, Massachusetts 01541

Re: **Residential Well Sampling
33 Mountain Road, Princeton**

Dear Mr. Mazyk:

Enclosed is a copy of the laboratory analytical results for the groundwater samples collected from the residential well located at 33 Mountain Road 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 7, 2020, and Con Test Analytical Laboratory (Con Test) of East Longmeadow, Massachusetts analyzed the samples for per- and polyfluoroalkyl substances (PFAS). Con Test is a Massachusetts certified environmental laboratory.

A copy of the lab report is attached to this letter. Analytical results have been compared to MassDEP's proposed drinking water Maximum Contaminant Level (MCL) of 20 nanograms per liter (ng/L), or parts per trillion (ppt), for the combined total of six specific PFAS compounds.

Your laboratory results indicate that PFAS was not reported above laboratory reporting limits in the water sample collected on February 7, 2020.

Please call the Princeton Town Administrator, Sherry Patch, at (978) 464-2102 or the undersigned at (413) 572-3227, with any questions.

Very truly yours,

TIGHE & BOND, INC.



Jeffrey L. Arps, LSP
Director, Remediation & Field Services

Enclosures

Copy: Sherry Patch, Princeton Town Administrator
MassDEP, Bureau of Waste Site Cleanup





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

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: _____
City/Town: _____ Zip Code: _____

B. This notice is being provided to the following party:

1. Name: _____
2. Street Address: _____
City/Town: _____ 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:

1. Street Address: _____
City/Town: _____ 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)
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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

TABLE 1
PFAS Drinking Water Summary
Princeton, Massachusetts
RTN 2-21072

Parameter	Massachusetts Contingency Plan GW-1 Standard & Proposed MMCL	33 Mountain Rd
Well Depth (feet)		UNKNOWN
Sampling Date		2/7/2020
EPA 537.1 (ng/L)		
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)
N-EtFOSAA		ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)
N-MeFOSAA		ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

NOTES:

Gray colored cells indicate those 6 compounds included in the regulated PFAS Total

ND = Not detected above the lab reporting limits shown in parentheses.

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

February 14, 2020

Joe Laughton
Massachusetts DEP - Worcester
8 New Bond Street
Worcester, MA 01606

Project Location: Princeton, MA
Client Job Number:
Project Number: 101979.00
Laboratory Work Order Number: 20B0430

Enclosed are results of analyses for samples received by the laboratory on February 11, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Kaitlyn A. Feliciano". The signature is fluid and cursive, with a prominent initial "K".

Kaitlyn A. Feliciano
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Massachusetts DEP - Worcester
8 New Bond Street
Worcester, MA 01606
ATTN: Joe Laughton

REPORT DATE: 2/14/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 101979.00

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0430

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
33 Mountain Rd.	20B0430-01	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 the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive style with a large, sweeping initial "T".

Tod E. Kopycinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Princeton, MA

Sample Description:

Work Order: 20B0430

Date Received: 2/11/2020

Field Sample #: 33 Mountain Rd.

Sampled: 2/7/2020 15:00

Sample ID: 20B0430-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	MCL/SMCL		Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
		RL	MA ORSG							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	2/12/20	2/14/20 5:25	JFC
Surrogates		% Recovery		Recovery Limits		Flag/Qual				
13C-PFHxA		89.6		70-130					2/14/20 5:25	
M3HFPO-DA		81.9		70-130					2/14/20 5:25	
13C-PFDA		85.0		70-130					2/14/20 5:25	
d5-NEtFOSAA		80.7		70-130					2/14/20 5:25	

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Sample Extraction Data

Prep Method: EPA 537.1-EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0430-01 [33 Mountain Rd.]	B252068	250	1.00	02/12/20

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B252068 - EPA 537.1										
Blank (B252068-BLK1)										
Prepared: 02/12/20 Analyzed: 02/14/20										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
N-EtFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
N-MeFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	33.6		ng/L	40.0		84.0	70-130			
Surrogate: M3HFPO-DA	32.4		ng/L	40.0		81.0	70-130			
Surrogate: 13C-PFDA	35.7		ng/L	40.0		89.2	70-130			
Surrogate: d5-NEtFOSAA	141		ng/L	160		88.3	70-130			
LCS (B252068-BS1)										
Prepared: 02/12/20 Analyzed: 02/14/20										
Perfluorobutanesulfonic acid (PFBS)	16.5	2.0	ng/L	17.7		93.2	70-130			
Perfluorohexanoic acid (PFHxA)	18.9	2.0	ng/L	20.0		94.4	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.8	2.0	ng/L	18.2		97.6	70-130			
Perfluoroheptanoic acid (PFHpA)	18.9	2.0	ng/L	20.0		94.6	70-130			
Perfluorooctanoic acid (PFOA)	20.2	2.0	ng/L	20.0		101	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.3	2.0	ng/L	18.5		93.5	70-130			
Perfluorononanoic acid (PFNA)	19.9	2.0	ng/L	20.0		99.5	70-130			
Perfluorodecanoic acid (PFDA)	19.0	2.0	ng/L	20.0		95.0	70-130			
N-EtFOSAA	21.7	2.0	ng/L	20.0		108	70-130			
Perfluoroundecanoic acid (PFUnA)	18.6	2.0	ng/L	20.0		93.0	70-130			
N-MeFOSAA	19.2	2.0	ng/L	20.0		96.0	70-130			
Perfluorododecanoic acid (PFDoA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Perfluorotridecanoic acid (PFTTrDA)	16.8	2.0	ng/L	20.0		84.1	70-130			
Perfluorotetradecanoic acid (PFTA)	16.0	2.0	ng/L	20.0		80.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	17.0	2.0	ng/L	20.0		84.9	70-130			
11Cl-PF3OUdS (F53B Major)	16.0	2.0	ng/L	18.8		85.2	70-130			
9Cl-PF3ONS (F53B Minor)	17.3	2.0	ng/L	18.6		93.0	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.3	2.0	ng/L	20.0		86.5	70-130			
Surrogate: 13C-PFHxA	36.0		ng/L	40.0		90.0	70-130			
Surrogate: M3HFPO-DA	35.2		ng/L	40.0		88.0	70-130			
Surrogate: 13C-PFDA	36.1		ng/L	40.0		90.2	70-130			
Surrogate: d5-NEtFOSAA	132		ng/L	160		82.6	70-130			

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 is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
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
<i>EPA 537.1 in Drinking Water</i>	
Perfluorobutanesulfonic acid (PFBS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanoic acid (PFHxA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorohexanesulfonic acid (PFHxS)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroheptanoic acid (PFHpA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorooctanoic acid (PFOA)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorooctanesulfonic acid (PFOS)	VT-DW,NJ,CT,ME,NY,NH,PA
Perfluorononanoic acid (PFNA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorodecanoic acid (PFDA)	NH-P,VT-DW,NJ,CT,ME,PA
N-EtFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluoroundecanoic acid (PFUnA)	NH-P,VT-DW,NJ,CT,ME,PA
N-MeFOSAA	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorododecanoic acid (PFDoA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotridecanoic acid (PFTrDA)	NH-P,VT-DW,NJ,CT,ME,PA
Perfluorotetradecanoic acid (PFTA)	NH-P,VT-DW,NJ,CT,ME,PA
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,VT-DW,NJ,CT,ME,PA
11Cl-PF3OUdS (F53B Major)	NH-P,VT-DW,NJ,CT,ME,PA
9Cl-PF3ONS (F53B Minor)	NH-P,VT-DW,NJ,CT,ME,PA
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,VT-DW,NJ,CT,ME,PA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples _____



con-test
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client MD

Received By UC Date 2-11-2020 Time 1850

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp -4.9
By Blank # _____ Actual Temp _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? NA Acid _____ Base _____

Media	1	Containers	2	3	4	5
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	2	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Media	1	Containers	2	3	4	5
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments: